

**RELATIONSHIP BETWEEN FIRM SIZE AND FINANCIAL
PERFORMANCE OF DEPOSIT TAKING SAVINGS AND CREDIT
COOPERATIVE SOCIETIES IN KENYA**

BY

FAITH KARUGA

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DECLARATION

This research project is my original work that has never been submitted before for the award of degree/certificate in any other university or college.

Signature _____

Date _____

Name: Faith Wacera Karuga

Reg. No.: D61/82210/2015

Supervisor Approval

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

Signature _____

Date _____

Mr. James Ng'ang'a

Department of Finance and Accounting,

School of Business,

University of Nairobi

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DEDICATION

I dedicate this project to my loving parents Hezron Karuga and Millicent Muthoni. You gave me a stepping stone to get to where I am today.

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LIST OF ABBREVIATIONS

BOSA	-	Back Office Service Activity
DTSs	-	Deposit Taking SACCOs
EPS	-	Earnings per Share
FOSA	-	Front Office Service Activity
ICA	-	International Cooperative Alliance
KUSCCO	-	Kenya Union of Savings and credit Cooperative Societies
ROA	-	Return on Assets
ROE	-	Return on Equity
ROI	-	Return on Investment
SACCOs	-	Savings and Credit Cooperative Societies
SASRA	-	Sacco Society Regulatory Authority

ABSTRACT

The SACCO industry contributes an average of 45% of Kenya gross domestic product (GDP). This contribution is noticeably high hence needs to be maintained. The key factors that contribute to this good performance also need to be identified and documented so that other industries can also borrow a leaf. Several studies have been carried out evaluating factors that contribute to financial performance; some of these factors include size, credit risk, management efficiency and operational efficiency. Most of these studies have resulted to contradicting results on the relationship that exists between firm size and financial performance. This study aimed to establish whether there exists a relationship between firm size and financial performance. Regression analysis was used in the analysis to establish the relationship between the variables. Y was the return on asset while the X was the firm size, liquidity, capital adequacy and age of the firm. Descriptive design was adopted to establish the relationship. The study used 5 years secondary data for the period between year 2012 and 2016, a sample size of 39 SACCOs was taken from the 176 licensed by SASRA as at 31 December 2016. The regression analysis results established that, if all the other factors are held constant, the return on asset will be 15.9%. A unit change in firm size will change the return on asset by 8%: A unit change in liquidity will change return on asset by 1.1%, while unit change in capital adequacy will change the return on assets by 11.6% and a unit change of age does not change the return on asset. This implied that capital adequacy had the highest influence on return on asset followed by firm size then liquidity. The study concludes that: Capital adequacy, firm size; liquidity and age have a positive relationship with financial performance although only capital adequacy and firm size have a significant relationship.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A firm is a business unit that sells goods or services to make profit. Firm size can be defined in terms of the total assets (Pandey, 2004). It can also be defined in term of the number of employees, total sales and market capitalization. According to Abiodun (2013), firm size is a key aspect in determining the relationship enjoyed by the firm outside and within its operating environment. Size also determines the influence the firm has to the stakeholders. The role of size can be seen in the growth of the multinational corporations and conglomerates. In a market economy, firms vary widely in sizes. Large firms are perceived to have better financial performance than small firms. Baumol (1967) stated that large firms have good performance because they benefit from access to capital. Some studies have shown that good financial performance leads to growth. In the contrary a study by Francis, et al (2011) highlighted that studies that have investigated firm dynamics have established that small firms grow at a faster rate than large ones.

Financial performance is the organization's ability to achieve a competitive advantage by gaining and managing its resource (Iswatia, 2007). Murigu & Mwangi (2015) defined financial performance as "a measure of a firm's earnings, profits, appreciations in value as evidenced by the rise in the entity's share price". Some theories argue that the relationship between financial performance and firm size is positive, while others argue the relationship is negative. The economic theory has been backbone to the perspective

that large firms perform better than small ones. This theory suggests that large firms are able to enjoy some benefits like efficiencies in production, large discounts, hire professionals and they get good interest rates. In the contrary, large firms can suffer from the diseconomies of scale, if these happens then then a poor performance is expected.

SACCOs are financial institutions owned by members through shares and deposits. They aid in financial intermediation. SACCOs receive savings from members in form of shares or deposits, put the deposits together and then use the deposits to issue loans to its members (Wache, 2010). The other players in the financial sector include banks, insurance companies, building societies, and non-banking financial institutions. Cooperative movements have been promoted in majority of the African countries because of their role in poverty alleviation (Wanyama, 2014). In Kenya since independence, different legislations have been developed to support cooperative movements in line with vision 2030 that promotes financial inclusion in the country. For the county to achieve economic growth, SACCOs are expected to report good performance. According to KUSCCO (2016) SACCOs contributed 45% of the gross domestic product. Therefore SACCO performance cannot be ignored when looking at Kenya's economic growth.

1.1.1 Firm Size

A firm is a business unit that sells goods or services to make profit. The size of a firm can be defined by total assets, number of employees, and total sales. Firm size is perceived to be a key factor that leads to efficiency in production. It may affect goodwill, customer loyalty and stakeholder responsiveness (Foyeke, Odianonsen& Aanu, 2015). Besides, it

has the capacity to predict the future stock price of a firm (Li, Simerly & Mingfang, 2000). Abiodun (2013) claims that firm size is a key factor that influences the relationship that a firm enjoys in the environment it operates in.

In the modern society, large scale production is considered to be economical. Large firms can easily obtain financial resources (Gonenc, 2005). They can also diversify; they have high collateral value and less bankruptcy risk which gives them higher chances of qualifying for external borrowing. Therefore, they can grab higher investment opportunities when they arise (Dittmar, 2004).

Firm size can be measured using sales or value of assets (William, Varun, Subashish & Albert, 1994). There is no single measure that can reflect the size of all type of firms, because firms are different in nature. Therefore different researchers use different measures or a combination of measures. Sanad, Glenn, and Miah (2006) used the total loan value, total deposits and total assets to measure firm size. Park andPennacchi (2007) used total deposits as a measure of size. Marriott (1949) used the number of employees while Mahoney (1981) used financial assets.

1.1.2 Financial Performance

Financial performance is a measure of how well a firm uses assets to generate revenue. All firms need to have good performance to ensure growth and survival. A firm with poor performance cannot easily attract capital; similarly, it cannot withstand the competitive environment. Therefore firms need to earn sufficient profits so as to maintain their

business operations (Pandey, 1999). Due to increasing failure of corporation both locally and internationally, researchers, investors and general public have become more concerned with firms financial performance.

Several parameters can be used in evaluating firm's financial performance. These include: Profit after tax, Earnings per share (EPS), Return on Assets (ROA), Return on Investment (ROI) and Return on Equity (ROE). A high level of ROA is an indication of firms' efficiency in assets utilization. ROE measures the profitability of a firm from its ability to utilize the shareholders' investment. A firm with high return on equity has a high capacity to generate cash internally. Net income is divided by shareholders equity to get the ROE. Cohen, Chang and Ledford (1997), Indicated that ROA measures the efficiency of asset in generating income. It is the most commonly used measure of financial performance. Sebhatu (2011) used ROA to evaluate the profitability of SACCOs in Ethiopia. Athanasoglou, Brissimis and Delis (2005) used ROA and ROE to evaluate bank's profitability.

1.1.3 Firm Size and Financial Performance

Studies have been carried out to establish whether there exist a relationship between financial performance and firm size but there is no conclusion on whether this relationship exists. One school of thought argues that the relationship between firm size and financial performance is positive (Penrose, 1959; Majumdar, 1997). It argues that bigger firms, due to economies of scale are more competitive and also have a bigger market share which gives them a strategic position for more profits. Furthermore, since

large firms have more capital, they can grab profitable opportunities in the market. Majumdar (1997) concluded that large firms have higher profitability than small ones. Dittmar (2004) highlighted that profits interact with size; the small firms are more exposed to bankruptcy because they tend to be less diversified than large firms.

The other school of thought argues that, as firms grow in size they may experience diseconomies of scale due to some rigidity and unnecessary bureaucracies. Where urgent decisions are required, bureaucracies may cause the firm to miss some profitable opportunities leading to a negative impact on the firm's profitability. Goddard et al., (2005) supports that size may have a negative relationship with profitability due to diseconomies of scale. Another theory that supports negative relationship is the agency theory which purport that large firms are controlled by manager who pursue their own interest and as a result, profit maximization ceases to be the key goal of the firm, therefore firms' profitability reduces. In such scenario a negative relationship between profitability and firm size is expected. Schneider (1991) established a negative relationship between firm size and financial performance.

1.1.4 Deposit Taking SACCO in Kenya

By definition, SACCOs are the financial institutions, which are owned by members through shares and deposits. SACCOs collect funds from members in form of shares or deposits, create a pool and then use these funds to serve the credit needs of their members through personal loans (Wache, 2010). In Kenya, SACCOs form a major part of the larger cooperative society. Cooperatives societies are broadly categorized as financial

Co-operatives which are referred to as “SACCOs” and non-financial Cooperatives which include produce marketing, housing, transport and investment cooperatives. The SACCO sub sector comprises, both Deposit Taking (DTs) those that operate front office activities (FOSA) and Non -Deposit Taking. The DTs are licensed and regulated by the Sacco Societies Regulatory Authority (SASRA). SACCOs promote personal development of their members as well as that of small and micro enterprises (SASRA Annual report, 2011). As financial intermediaries, SACCOs also play a critical role in economic development. In the year 2016 they contributed 45% of the Kenya gross domestic product (KUSCCO 2016).

As of December 2015, there were 176 licensed deposits taking SACCOs. They were classified into three broad categories based on the Asset size. The first category comprised of SACCOs with assets above Ksh 5 billion, there were 15 SACCOs which held above Kshs 5 billion worth of assets which accounted for 51.9% of the total asset in the DTs system. The second category comprised of SACCOs whose assets were more than Ksh. 1 billion but less than Ksh. 5 billion, there were 58 SACCOs in this category with asset size of 10.50% in terms of total assets portfolio. The third Category comprised of SACCOs with asset base of less than Ksh. 1 billion, there were 103 SACCOs in this category representing 37.6% of the entire asset portfolio of the DTs system (The Sacco Supervision Report, 2015). It is necessary to note that the 161 DTs share only 48.1% of the total assets portfolio while 15 SACCOs hold 51.9% of the total assets.

Financial performance is a measure of how well a firm uses assets to generate revenue. The major asset of the SACCO is the loans issued while the major income comes from interest on loans. The key parameter used while monitoring the performance and growth trends of DTSS include the deposits, assets, loans, capital reserves and membership. The 2015 SACCOs supervision report analysis on the distribution of assets and deposits among the DTSS show that, majority of the DTSS were actually very small in terms of their relative asset or deposit sizes which remain below the Ksh 1 billion mark. This is deemed to have an impact on their relative efficiency and sustainability. This is because it is perceived that the larger the assets base of the DTSS, the more efficient and profitable the DTSS. The analysis also brought to fore the policy question of whether there were just too many very small DTSS in the system, and whether it was the high time for a policy called for the consolidation and merger of some of the very small DTSS in order to increase their efficiency and sustainability (Sacco supervision report, 2015). From the year 2012, The SACCO authority adopted CAEL (Capital adequacy, Asset quality, Earnings and Liquidity) rating model to monitor financial conditions, soundness and performance of DTSS.

1.2 Research Problem

In recent years, SACCOs industry regulators have raised concerns relating to performance of small SACCOS, there has been argument that merging the small SACCOs would improve their performance. Similarly in the general business world, the issue of financial performance has received a lot of attention from different stakeholders. This is because financial performance is critical for any organizational health and

survival. Similarly, the health of a financial system has an economic development role in any country (Drzik, 2005). Similarly a numbers of scholars have argued that large firms are able to compete effectively with their competitors. They are particularly able to edge out small firms that compete with them if their products are the same. They are also able to exploit business opportunities that require huge capital because of their huge capital resources. In relation to this fact, large firms are at an advantage because they can exploit profitable opportunities with little or no competition (Bayyurt, 2007). More importantly, they take advantage of the economies of scale which enable them to produce more efficiently thereby enjoying greater bargaining power over suppliers and buyers (Akbas & Karaduman, 2012). The benefits enjoyed by the large firms lead to good performance hence growth. Research has shown that good performance results to growth, If large size results to good financial performance of a firm and good financial performance results to firm growth, why then do we have instances where small firms grow at a higher rate than the large firms?

Apart from commercial banks and micro finance institutions, SACCOS also play a major role in financial intermediation; therefore they contribute to the economic growth. Good financial performance lead to economic growth while poor performance lead to decline in economic growth (Agiobenebo & Ezirim 2002) In the year 2016 SACCOs contributed 45% of Kenya's GDP (KUSCCO, 2017). Apart from contributing to countries' economic growth, SACCOs also contribute to the economic wellbeing of their members and their dependents. As at year 2016, over thirty million Kenyans, which amount to sixty seven percent of the entire population depended on cooperatives either directly or indirectly for

their livelihoods (Akeyo, 2016). Similar to all other firms, SACCOs are expected to report good financial performance which is critical for their health, growth and survival.

There is a general conception that the relationship between firm size and profitability is positive. There is also a general observation that most people who want to join SACCOs prefer to join large and well established SACCOs as opposed to the SACCOs that are small in size. In the Sacco supervision report (2015), there was an observation that the DTSS that were small in size were performing poorly than the large DTSS. Out of this observation a policy issue was raised by SASRA whether the small DTSS should be consolidated or merged in order to increase their size to enable them attain efficiency and sustainability. These had led to my research question; is there a relationship between firm size and financial performance of deposit taking SACCOs in Kenya?

A number of studies have been done both locally and across the globe to establish whether this relationship exists. Two studies conducted in the USA show a positive relationship between firm size and financial performance (Lee, 2009). Stierwald (2009) studied factors that influence profitability in 960 firms operating in Australia. The study found that size affects profits positively. A study by Becker et al (2010) however showed a negative relationship between size and profitability.

Kioko (2013) who based his study on commercial banks concluded that total deposits and total loans had a stronger effect on financial performance. However, he found a weaker relationship between the number of employees and financial performance. Kagecha

(2015) who sought to establish the impact of bank size on their performances, the study concluded that profitability is not determined by firm size thus no relationship between the two variables. However, he established that GDP growth and inflation had substantial effect on their profitability.

Analysis of past studies shows that most researchers have not come to a common conclusion on the relationship between firm size and financial performance. Some studies support positive relationship between profitability and firm size, others support a negative relationship while others conclude that there is no relationship. Basically, the existing literature lacks a consensus on this issue calling for more studies to be conducted. Besides the varied results, majority of the previous studies focused their attention on other sectors like commercial banks and insurance companies. Similarly more recent studies on deposit taking SACCOs in Kenya are missing; the available study was done by Kioko (2013) which covered a period of 1998-2012. This study aimed to fill the gap therefore it covered a period from 2012 to 2016. This study will try to answer the question; is there a relationship between firm size and financial performance of Deposit taking SACCOs in Kenya?

1.3 Research Objective

To establish the relationship between firm size and financial performance of deposit taking SACCOs in Kenya.

1.4 Value of the Study

This research will contribute to both practice and theory. The findings and conclusion of this research will give baseline information to the regulatory authority and policy makers in formulating policies which will help to enhance financial performance of SACCO industry in Kenya.

The outcome of this research will also provide information to the SACCO management who will gain an understanding of whether firm size, liquidity, leverage and age of SACCO affect financial performance. This will help them to identify the areas that they need to improve on so as to improve their performance. Studies have shown that people join cooperatives for various reasons which include; economic, social or political reasons. Those people that wish to join the SACCO for economic reason will find this study relevant when making the decision on the size of SACCO to join.

From literature, it is clear that, few studies have been done relating to firm size and financial performance in particular those that relate to DTSS in Kenya. On this fact, the findings for this study will contribute towards enriching the current literature. Similarly, at the end of this study, research gaps and areas of further studies will be identified; this will provide direction for future studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter highlights the theories and concepts applied in the study. It also reviews the empirical studies that have been conducted in the area of focus.

2.2 Theoretical Framework

Theoretical framework supports the theoretical basis of a research study by describing it. As a consequence, the selection of the theory should depend on its appropriateness and ease of application. The framework links researchers to the existing knowledge.

2.2.1 Economies of Scale Theory

Amadeo, (1994) stated that “economy of scale is an economics term that describe competitive advantages that large entities have over smaller entities”. This is the benefit enjoyed by large firms due to the reduced unit production cost. Economies of scale theory supports that large business performs better than the smaller ones even if they operate in the same industry. Large firms have an advantage because they can access capital market (Baumol, 1967). Fiegenbaum & Karnani (1991) support that large firms have advantages in terms of bargaining power over both suppliers and distributors.

The Economies of scale theory has been challenged by Shepherd (1972) who argues that size may have no impact on profitability or it may have a negative impact. Goddard et al.,

(2005) argues that size may have a negative impact on profitability due to diseconomies of scale. Diseconomy of scale is a situation where the company grows large in an effort to chase the economies of scale, until size becomes a disadvantage.

In summary, economies of scale theory supports a positive relationship between firm size and financial performance. The theory concludes those large firms have better performance than small firms. Large firms enjoy benefits such as efficiencies in production, large discounts and lower interests. On the other hand this theory has been challenged by scholars who concluded that large firm may suffer diseconomies of scale. Therefore there is no conclusion on whether firm size has a relationship with financial performance.

2.2.2 Agency Theory

The agency theory was formalized by Horol Demsets in the 1970s but was a build on the works of Berle and Means (1932) Enlargement of business has led to corporations which have necessitated separation of ownership and wealth control. Although the owners of business would want to manage these corporations so as to gain maximum value from their business, it becomes difficult because of the increased demands. The agency theory exists when the principle who cannot manage his business on his/her own delegates the authority to an agent (Jensen & Meckling, 1976). Agency problem exist either when the goal of the agent and the principle conflict or where there is information asymmetry.

In the case of goal conflict, the managers are hired to pursue the goal of the firm, but instead they pursue their own interests. The principals are forced to incur agency cost in the effort to make the agents act in the principle's interest (Jensen 1976). One way to reduce agency cost is by ensuring that managers have more ownership in terms of common stock and that their interests are aligned with shareholders' interests (Jensen & Meckling, 1976). The second agency problem comes about when the agent is unable to verify what the principle is doing, this leads to information asymmetry. Where there is information asymmetry the agent (directors and the managers) may pursue interest that may hurt the shareholder. This theory was supported by Ross (1973) and Fama (1980). It was also criticized by some scholars like Perrow (1986) who based his argument on the fact that this theory is one sided since it has neglected workers contribution. It has also been criticized by Donaldson & Davis (1991) using the stewardship theory.

In summary, agency theory supports a negative relationship between firm size and financial performance on the account that when firm sizes increase, the owners of the firm delegate the duty of making decisions to directors. The directors in return prioritize on their personal interests rather than pursuing shareholders interests. As a consequence, the shareholders are forced to incur agency cost in the effort to ensure that the agents act in their interests. The additional cost reduces profit and in return affect the financial performance of a firm.

2.2.3 Stewardship Theory

This theory propagated mostly by Donaldson & Davis (1991) comes from psychology and sociology. In view of Donaldson and Davis, steward's interest aligns with that of the principle. Stewardship theory offers contrasting expectations about an effective board. The stewardship theory view the manager as a "steward" rather than agent who completely seeks self-interest. The steward theory argues that managers act as stewards to serve the interest of the shareholders and work hard to attain high performance. Donaldson and Davis (1994) highlight that when managers are empowered to exercise authority and responsibility it leads to maximization of corporate profit and shareholders' value. Boyd (1995) stated that "managers are trustworthy and competent administrators of corporate resources and are best positioned to maximize the interest of shareholders since they are most familiar with the intricacies of corporate strength, weakness and opportunities and threats".

The stewardship theory supports a positive relationship between firm size and financial performance on the account that managers act as steward and therefore serve the interest of shareholders. In serving the interest of the shareholder the general financial performance of the firm is improved, leading to a positive relationship between firm size and financial performance.

2.2.4 The Shift-Ability Theory

The shift ability theory of bank liquidity was put forward by H.G. Moulton in 1918. This theory suggests that the liquidity of the bank is maintained if the bank holds assets

that could be transferred to other lenders or investors for cash quickly when liquidity need arises without much loss. The theory mostly works well with short term market investments, such as bills of exchange and treasury bills which can be sold within a short period whenever necessary to raise funds by banks (Botoe, 2012). This theory suggests that banks should have this nature of assets that can be easily shifted to the central bank during financial crisis (Ibe, 2013). The necessity of holding large amount of idle cash has been reduced by the shift- ability theory.

With the help of shift ability theory the probability of more income can be increased and the probability of risk can be reduced. Due to the fact that lending institutions can quickly transfer assets into cash without capital losses, they may not need to maintain a high level of liquidity. High level of liquidity may lead to idle cash which is not profitable; therefore the shift ability theory is seen to support negative relationship between liquidity and profitability.

2.2.5 Pecking order theory

In 1984, Myers put forward the pecking order theory. The major assumption in this theory is that managers have more information that concerns the company than the investors; this situation is referred to as information asymmetry. Information asymmetry affects the choice between external and internal source of financing and also between issuance of equity or debt. If all factors are held constant, the managers will issue debt when they are expecting good business and they will issue equity when they are uncertain

of business prospects. Myers (2001) argues that when a firm takes a loan, they commit to pay both the principle and the fixed amount of interest; this can be seen as an indication that a firm expects a stable cash flow. Issue of equity indicates that current share price is overvalued (Frank and Goyal, 2003).

Firms use internal finance first if it is when available; if external financing is required they issue debt before issuing new equity. In this theory there is no well-defined debt to equity target that is why the theory is called the pecking order theory. The internal and the external equity are placed at different levels of the pecking order, the internal equity taking the top position while the external equity takes the bottom position of the pecking order. Since internal financing has no transaction cost and no taxes paid, makes it cheaper and easier to use than the external equity. Myers (2001) argued that, firms with higher amount of internal finance rarely go for leverage financing because of management preference for internal financing over external financing. In this logic, the relationship between internal resource and debt is inverse (Haris and Raviv, 2003).

2.3 Determinants of Financial Performance

Burca & Batrinca (2014) quoted that factors that affect firms financial performance can be both external and internal, the external factors include; economic factors, political factors, cultural factors, legal factors and macroeconomic factors. External factors cannot be controlled by the firm and therefore the firm has to adapt to these factors. The internal factors include; management, leverage, liquidity, age, number of employees and size.

2.3.1 Firm Size

Firm size can be defined in terms of total assets, number of employees or capitalization. Firm size plays a critical role in the determination of profitability of a firm (Tracy 1980). It also helps large firms to exploit the economies of scale thereby enables them to be more efficient than small firms (Kasharma, 1998). The large firms produce at lower cost because most of the times they buy raw materials in large quantities therefore qualifying for discounts from suppliers. Good performance is experienced in large firm because they have access to capital; hence they are able to take advantage of business opportunities that arise in the market. Access to capital also helps them grow their businesses by targeting more customers. Most studies support a positive relationship between profitability and firm size these include: Yong & Jang (2005), Dogan (2013), Abiodun (2013), Kinyua (2013). Studies that support a negative relationship base their arguments on agency theory. They argue that the conflict between shareholders and managers leads to increased agency cost or information asymmetry. Among the studies that support negative relationship are; Treacy (1980), Bhuta & Hassan (2013).

2.3.2 Liquidity

Liquidity denotes the degree to which debts coming due in the 12 months can be paid from liquid cash or from easily convertible assets. The IFRS (2006) define liquidity as the cash that is available in the near future once financial obligations of a given period are taken into account. Liquidity ratio of a firm is computed by dividing the current assets by the current liabilities. Dufera (2010) mentioned that firm liquidity is crucial because it helps firms to avoid defaulting their financial responsibilities. Some degree of liquidity is

necessary for the firm, but a high ratio will mean that the firm will be holding idle cash which could be put into investment to bring forth some income. Low levels of liquidity can result into increasing financial costs and affect firms' capacity to settle its financial obligations (Yahaya & Lamidi, 2015).

Firms are at liberty of to use liquid assets to finance their business activities when they cannot access external funding. Liquidity, therefore, helps firms to deal with unforeseen financial crises during the low seasons (Liargovas & Skandalia, 2008). In this respect, liquidity may have weighty impact on the profitability of a firm (Almajali et al., 2012). A study by Lartey, et al (2013) concluded that there is a positive but weak relationship between profitability and liquidity, while Anjanthan (2013) found a positive significant relationship between the two variables.

2.3.3 Capital adequacy

The statutory minimum reserves which banks and other financial institutions are required to hold is known as capital adequacy. It is used as an indicator of the strength and stability of a financial institution. Capital adequacy ratio is achieved by dividing core capital either: total assets or total deposits or by dividing institutional capital by total assets. The Sacco regulators require DTSs to maintain a core capital of KSh. 10 million at all times. During financial crisis, firm with higher capital adequacy level will be expected to report higher level of profit than those with low ratio; this is because the firms with high ratio will not experience great financial hardship. A study by Onuoga (2014) concluded that capital adequacy has a positive relationship with bank performance.

2.3.4 Age of the Firm

Older firms benefit from the experience they gain over time. They may gain experience in production areas, handling customers, understanding employees and their needs as well as dealing with various stakeholders (Sulub, 2014). They may also benefit from reputation effect (Yugi, 2007). Their experiences in the business field and reputational effect give them a competitive advantage over new and upcoming firms. As a consequence, older firms may be expected to perform better than new and upcoming firms. Some studies such as Murigu (2015) support this argument. However, some older firms have been accused of bureaucracy and resistance to change leading to a negative relationship between performance and firm age of the firm (Demerguc- Kunt & Maksimovic, 1998). Other studies that have evaluated the relationship between firm age and performances have resulted to contradicting results. Some show a positive relationship whereas others show a negative relationship. Malik (2011) found positive relationship between profitability and firm size as well as firm age. (Majudmdar, 1997; Salman & Yazdanfar, 2012; Dogan, 2013) found no relationship between performance and age of the firm.

2.4 Empirical Literature Review

The empirical literature review is a review of studies done by other scholars in the related area of study. It enables researchers to show the importance of their studies in their fields of study. Studies that evaluated the relationship between firm sizes, and profitability are many and they date as early as 1962 (Simon, 1962; Hall& Weiss, 1967; Shepherd, 1972;

Scherer, 1973). Majority of them show a positive relationship between firm size and profitability. A few studies, however, show a negative relationship or no relationship between the two factors. Most of these studies use the number of employees, liquidity, total sales and firm age as the indicators of firm size.

Njoroge (2016) evaluated the effects of firm characteristics on the profitability of SACCOs based in Murang'a County. He used 36 SACCOs registered with the Ministry of Cooperatives in Murang'a County that were operational between 2011 and 2015. The study established a positive relationship between financial performance and both liquidity and capital adequacy. The study also found that management efficiency and asset quality related negatively with financial performance.

Kagecha (2015) studied the impact of bank size on commercial bank performance In Kenya. In his study he used unbalanced panel data of Kenya commercial banks, for the period 2007 to 2014. The study concluded that size does not matter in determining bank profitability but GDP growth and inflation were all significant effect on profitability.

Abebe (2014) studied both internal and external determinants of financial performance of Ethiopia's banks using panel data of banks for a period between the year 2002 and the 2013. The study employed the fixed effect regression model. The regression results established that capital structure, income diversification and operating cost had a significant negative relationship with performance while bank size had a positive significant relationship with profitability.

Kioko (2013) used a total of forty three Kenyan banks to evaluate the relationship between size and the financial performance of the Kenyan banks. He used the panel data for the period between 1998 and 2012. The secondary data obtained from the Central bank and individual banks was used. The size indicators used were the number of employees, total deposits and total loans. Financial performance was measured using ROA. The data was analyzed using multiple regression and correlation analysis methods. Total deposits and total loans were found to have a stronger effect on the profitability of the banks, but a weak relationship was found between the number of employees and the profitability of the Kenyan banks.

Kinyua (2013) evaluated the relationship between the financial performance and firm size of the Kenyan DTSSs. The study covered the period between 2009 and 2012, and used a sample size of 30 out of the 124 licensed deposit taking SACCOs registered in Kenya. ROA was used to measure financial performance and total assets, deposits and turnover to measure firm size. The study established a strong positive relationship between financial performance and the sizes of DTSSs. It also established that deposits played a key role in determining financial performance of banks in Kenya.

Babalola (2013) analyzed manufacturing companies listed in the Nigeria Stock exchange using a data from 80 non-financial quoted firms for the period between 2000 and 2009. By focusing his attention on the effect of firm size on firm's profitability, he used random sampling method to select the firms that participated in his study. He also used ROA to

measure the profitability of the firms and measured firm size using total assets and sales. Like other studies done before, he established a positive relationship between profitability and size.

Dogan (2013) reviewed a total of two hundred companies that were listed on the Istanbul Stock Exchange. He used the number of employees, total sales and assets as the indicators of firm sizes and ROA as the profitability indicator. The control variables of his study included firm age, liquidity and leverage rate. The multiple regression model and correlation were used to evaluate the effect. The study established an affirming correlation between firm size and profitability. It also established a positive relationship between liquidity and profitability, but a negative relationship between profitability and firm age as well as leverage.

Salim (2012) evaluated the relationship between firm size and the financial performance of the Kenyan banks. He also evaluated the relationship between financial performance and branch network. He used a sample of forty-three banks in Kenya and collected data between 2000 and 2011. He used total assets, total loans and total deposits as the size indicators. The study adopted a descriptive design and utilized multiple regression and correlation to analyze the data that was collected from the banks' financial statements. The study established a positive, but weak relationship between firm size and profitability. The study did not establish any relationship between performance and branch network.

Whittington (1990) who conducted a similar study in the United Kingdom covered a period of ten year between 1978 and 1987. His research data came from 83 sectors. He concluded that profitability was independent of firm size thereby showed a negative correlation between firm size and profitability. Majumdar (1997) carried out a study on the impact of firm age and size on the performance of Indian firms. A sample size of 1020 firms was used for a seven year period ranging from 1988 to 1994. The study established that older firms tend to be productive, but less profitable whereas large firms tend to be profitable, but less productive.

2.5 Conceptual Framework

This study aimed to establish whether there is a relationship between firm size and financial performance of the DTSSs in Kenya. Total Assets in a SACCOs were be used as size indicator. The control variables were; liquidity, leverage and age of the firm. The expected relationship between these variables was:

2.5.1 Firm Size and Financial performance

Large firms take advantage of the economies of scale which enable them to produce at lower cost per unit than the smaller ones (Akbas & Karaduman, 2012). They are also able are able to compete effectively with their competitors. They can also exploit profitable opportunities with little or no competition (Bayyurt, 2007). Due to economies of scale firm size may be seen to be positively related to financial performance. When there is a diseconomy of scale a negative relationship is expected.

2.5.2 Liquidity and Financial Performance

Shift-ability theory supports reduced necessity for holding reserve of huge amount of idle cash balance. Instead it supports for financial institutions to arrange portfolio in such a way that it can have desired liquidity, keep most investment in money market securities in terms of treasury bills commercial papers and securities so that liquidity can be achieved with only an insignificant amount of loss of value. In addition bank can get cash from central bank in case of difficulty simply by keeping the instruments as security. The more the liquidity level the lower the financial performance due to idle time funds are kept without being invested. The shift-ability theory supports low liquidity therefore the expected relationship between liquidity and financial performance of DTSs is positive. If the liquidity level maintained is high, there will be chances of having idle cash; this may lead to a negative relationship between firm size and financial performance.

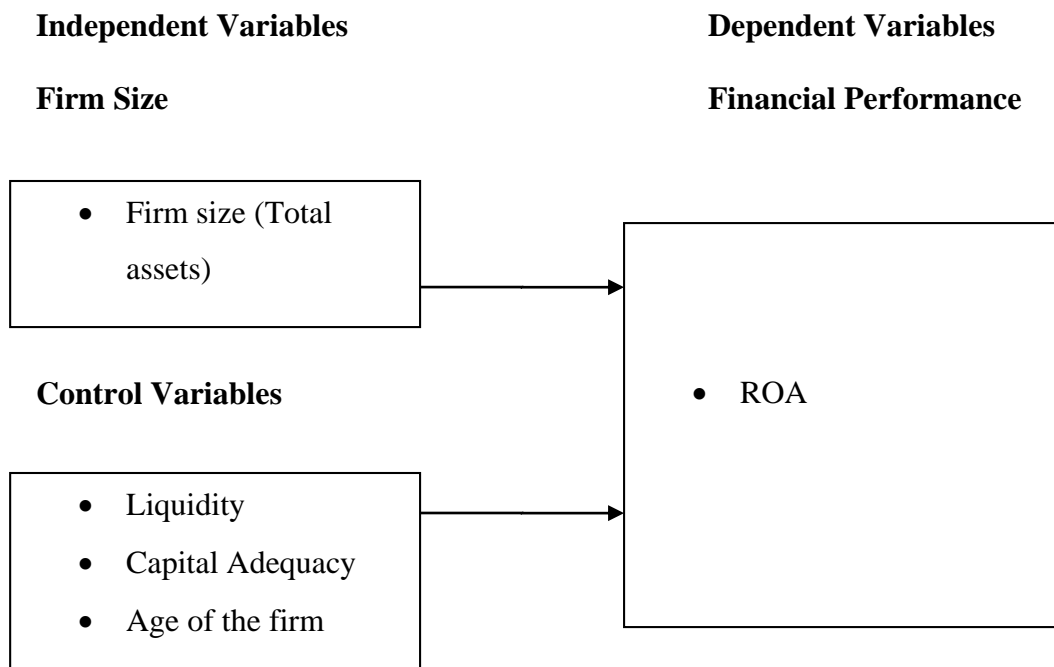
2.5.3 Capital Adequacy and Financial Performance

Pecking order theory postulates that management uses the internal equity before they go for external financing. Myers (2001) argued that, since the managers' prefer the internal financing, those firms with higher amount of internal financing resort to leverage less frequently than those with a lower level of internal financing. Therefore if a firm is performing well it will not look for external financing, hence having a high capital adequacy ratio may be seen as a sign of good performance, therefore the expected relationship between firms with high capital adequacy ratio and financial performance will be positive.

2.5.4 Age of the Firm and Financial Performance

Some empirical studies have supported that there is a positive relationship between age of the firm and financial performance. They argue that older firms benefit from the experience and reputation gained over time. The other studies support a negative relationship, they argue that older firms have bureaucracies and are resistant to change leading to a negative relationship. The expected relationship between financial performance and age is a positive. This is because people seem to have more confidence in older firms than new firms thus the older firm would be expected to perform better than new firms. A negative relationship may also be expected where large firms have bureaucracies or are resistance to change.

Figure 2.1: Conceptual Model



2.6 Summary of Literature Review

From Empirical studies, most of the studies reviewed demonstrate a positive relationship between firm size and financial performance. However, some studies have demonstrated negative or no relationship between the two factors. From previous studies, there is no consensus as to whether there exists a relationship between firm size and financial performance. This study aimed to bridge the gap by establishing the relationship between firm size and financial performance of the deposit taking SACCOs in Kenya. From theoretical review, the economies of scale theory suggest that large firms are able to enjoy some benefits like efficiencies in production, large discounts, can hire professionals; the unit cost production cost is lower and can also get good interest rates. If this happens it leads to a positive relationship between firm size and financial performance. But large firms can also suffer from the diseconomies of scale, if there is diseconomies of scale the firm size may have a negative relationship with financial performance.

Agency theory brings the aspect of management which can contribute negatively to the financial performance of the organization in case they pursue their interest as opposed to the interest of the shareholders. The stewardship theory does not support the agency theory, it postulates that management may contribute to positive performance of the organization if they act as stewards, this will lead to positive relationship between size and profitability. In conclusion there is a contradiction between the economy theory, agency theory and the stewardship theory. Economy and stewardship theory support a positive relationship between firm size and financial performance while the agency

theory supports a negative relationship between the two variables. The gaps identified by both the empirical and theoretical reviews, provided the motivation to my research. This research aimed to establish the relationship between firm size and financial performance of deposit taking SACCOs in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter details the research methodology. It specifies the research design, target population, sample design employed, data collection method, data analysis and presentation. Kombo, & Tromp (2009) stated that research methodology describes the approach taken when undertaking the research.

3.2 Research Design

A descriptive research design was adopted for this study. The aim of the study was to establish the relationship between firm size and financial performance of DTSs in Kenya. Descriptive design was adopted since the study was concerned with making accurate assessment of statistical inferences distribution and relationship of the phenomenon. Descriptive study is used to describe the characteristics of the variable (Kombo & Orodho, 2002).

3.3 Population

The study population was 176 licensed DTS in Kenya as at end of December 2016.

3.4 Sample Design

A sample of 39 DTSs was drawn from the target population of 176 DTSs. The study utilized stratified sampling method. 3 strata were created based on the total assets base

(Those with assets base that is above 5 billion; those with asset base above 1 billion but below 5 billion and those with asset base that is below 1 billion). To select samples from each stratum, a simple random sampling method was then applied. A sample size of 39 was arrived at by statistically calculating using a sample size calculator using; Population size of 176 SACCOs, confidence level of 95% and confidence interval (margin of error) of 15%.

3.5 Data Collection

Secondary data was obtained from the Audited financial statements of the SACCOs; few financial statements were obtained from individual SACCO's website, a lot of data was missing from the individual SACCO websites and therefore most data was collected from SASRA office in Upper hill Nairobi. Five years financial data for the years 2012-2016 was be obtained.

3.6 Data Analysis

Analysis of data was carried out through descriptive statistic techniques, correlation analysis and the multiple linear regressions. Descriptive statistics gives the mean value, standard deviation, minimum and maximum value. Correlation and regression analysis were used to ascertain the degree of association and relationship respectively. SPSS was used to aid in data analysis.

3.6.1 Diagnostic Test

The study carried out autocorrelation and normality test. Autocorrelation (serial test) was carried out to detect whether the error terms were independent or correlated (Error terms should not be correlated). Durbin Watson test was used to detect autocorrelation. Normality was tested using skewness and kurtosis.

3.6.2 Analytical Model

The multiple regression model used in the study is:

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

Table 3.1: Description of Variables to be used in the analysis

Variables	Description
Dependent Variable	
Return on Asset (ROA)_Y	Net Profit After Tax/Total Assets
Independent Variables	
Firm Size (Size_TA)_X ₁	Natural log of Total Assets
Control Variables	
Liquidity _X ₂	Current Assets/Current Liabilities
Capital Adequacy_X ₃	Core capital/ total assets
Age_X ₄	Number of year the SACCO has been in operation

Where

α - = constant and represents the value of Y when X is zero.

β_1 - β_4 Represent the slope.

ϵ = Error Term

3.7 Test of Significance

The statistical significance of regression equation was tested using the F test. The level of significance used was 0.05 which means that the confidence level was 95%.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the analyzed data. The results are presented in form of tables and graphs. The chapter captures the response rate, data reliability and descriptive statistics, correlation analysis results, regression analysis results and the interrelation of the study findings.

4.2 Response Rate

The study targeted a sample 39 deposit taking SACCO Kenya. Five years data (2012-2015) was obtained for the targeted 39 SACCOs but the data obtained was not 100 % complete due to some missing financial information. The data obtained amounted to 98.97% response rate, which was considered representative of the sample size.

4.3 Data Validity

Financial data was collected from licensed SACCO's audited financial statements; these statements were audited by independent auditors and counter checked by regulators. This assured the researcher of data validity.

4.4 Descriptive Statistics

Descriptive statistics was utilized to summarize data collected in terms of mean, standard deviation, maximum values and minimum values. Table 4.1 shows the results

Table 4.1 Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Performance	193	-.171	.481	.025	.061
SIZE	193	7.568	10.573	9.143	.625
Liquidity	193	-.085	.460	.1415	.101
Capital Adequacy	193	-.076	.900	.1474	.109
AGE	193	7	49	30.02	11.958
Valid N (listwise)	193				

Source: Research findings

The minimum performance was -0.1707 which translates to -17.07 % loss on asset, The maximum value is at 0.4813 this means that ever shilling investment leads to an average return of investment of 48.13 %. However the mean return on investment is 2.5 % return on Asset. The minimum capital adequacy of the sector is -7.6%, with a mean of 14.74% which is slightly below the recommended ratio of 15%. The minimum liquidity in the data set was -8.5 % with a maximum liquidity ratio of 46 % and an average of 14.15%. The average age of the SACCO is 30. The SACCO with the lowest age has been in operation for 7 years and the oldest SACCO is 49 years.

Table 4.2: Test of Normality

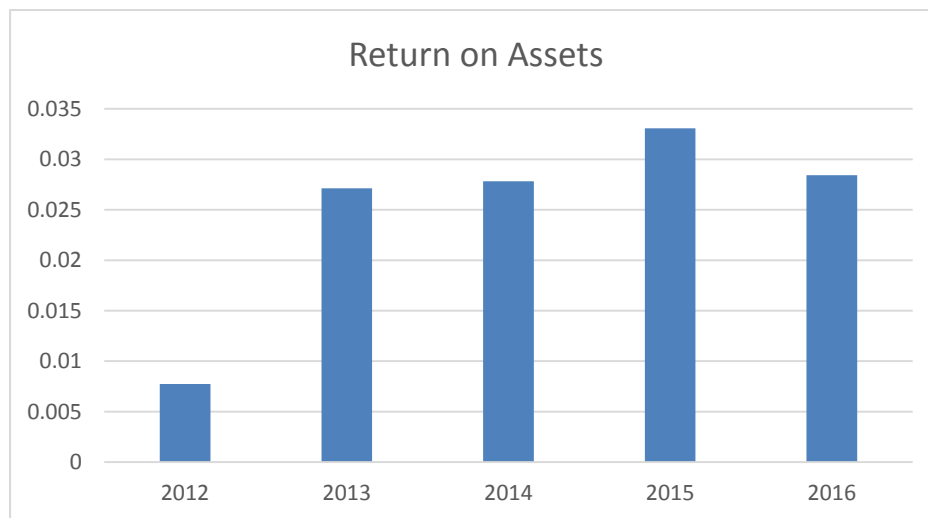
	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Performance	193	4.268	.175	31.043	.348
SIZE	193	-.329	.175	.066	.348
Liquidity	193	.842	.175	.367	.348
Capital Adequacy	193	3.189	.175	18.544	.348
AGE	193	-.350	.175	-1.427	.348
Valid N (listwise)	193				

Source; Research findings

Performance, liquidity and capital adequacy exhibit a normal distribution because the static value is larger than three times the standard errors.

4.4.1: Graphical representation

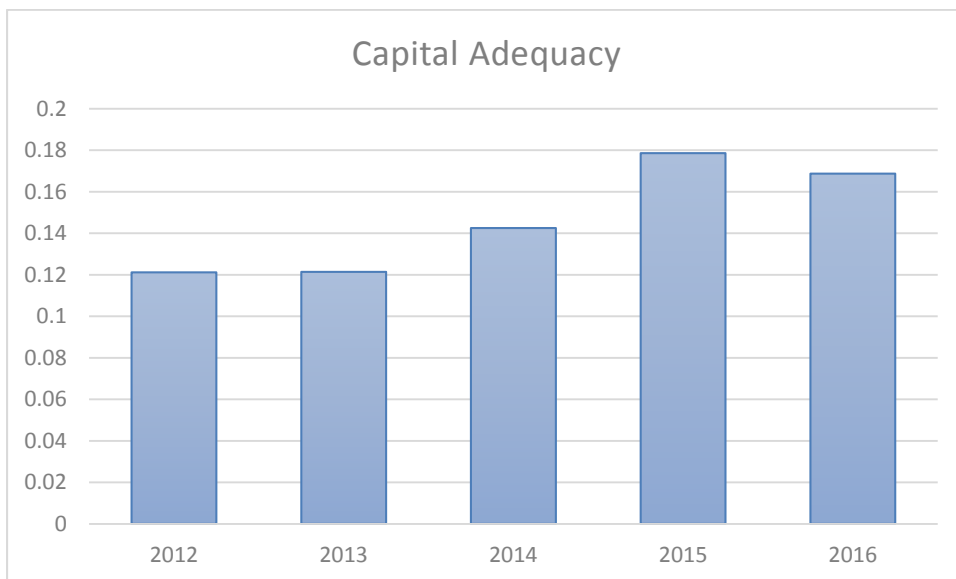
Figure 4.1: Return on Assets



Source: Research findings

The average return on investment has been on the rise for the industry; however the performance of 2012 is an outlier since it was way below compared to the other years. The increase in the performance from 2012 to 2013 indicates a 250% growth rate. In 2013 the average industry performance grew by 3% and in 2013 it grew by 19%, however there was a decline in 2016 where the average returns declined by 19%.

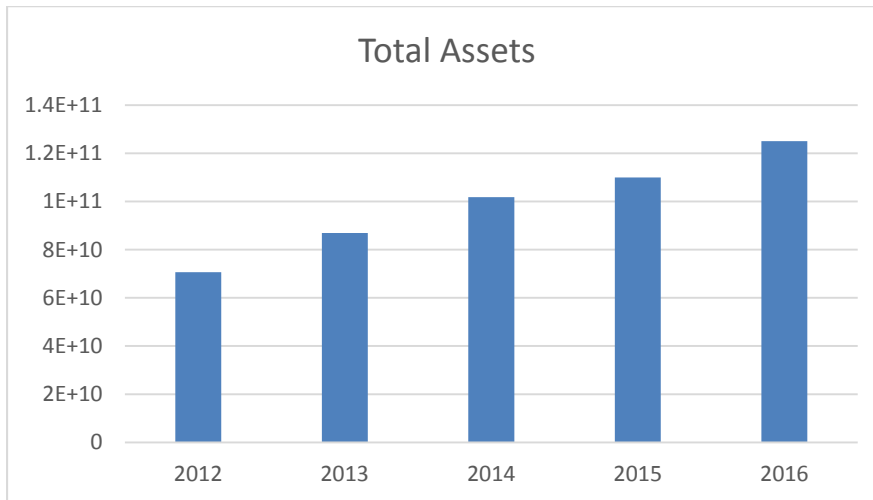
Figure 4.2: Capital Adequacy



Source: Research findings

The statistical results show that there has been an improvement on the capital adequacy ratio in the Sacco sector. There was a slight growth in the capital adequacy ratio of 0.2%, 17% and 25% from the years 2013-2015. However the ratio reduced by 1% in 2016. However, from year 2012-2014 the industry operated below the recommended threshold of 15%, but this improved in 2015, where the rate increased to 16.75%.

Figure 4.3: Total Assets



Source: Research findings

There has been a continuous growth in the amount of total assets as demonstrated by the graph above. In 2013 there was a 23% growth rate, in 2014 there was a 17% growth rate, in 2015 there was 8% growth rate and a 14% growth rate in 2016. This growth rate could be attributable to the increased underwriting standards in the banking sector and an improved financial sector deepening.

4.5 Pearson Correlation

Table 4.3: Pearson Correlation

		Performance	Liquidity	Capital Adequacy	AGE	SIZE
Performance	Pearson Correlation	1	.027	.185**	-.084	.039
	Sig. (2-tailed)		.707	.010	.246	.588
	N	193	193	193	193	193

Source: Research findings

Table 4.3 displays the correlation analysis between the firm's financial performance and firm size, liquidity, capital adequacy, and age. The results indicate that the performance is positively correlated with liquidity capital adequacy and size. Conversely age and is negatively correlated with the performance. However only capital adequacy has a statistically significant correlation with performance with a coefficient of 0.185. The relationship means that capital adequacy and performance move in the same direction.

4.5.1 Diagnostic tests

Table 4.4: Model Summary

Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.344 ^a	.119	.095	.0582	2.131

Source: Research findings

The model has an R square of 0.119 which indicate that, Independent variable explain 11.9% of the variation in dependent variable.

Durbin Watson test; tests whether the error terms are correlated meaning that there is no serial correlation between the independent variables. The values run from 2 to 4 with higher figures indicating correlation between the error terms of 2.131 is nearer to 2 and hence we can conclude that the error terms were not related.

4.5.2 Analysis of variance

Table 4.5: Anova Analysis

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.085	5	.017	5.036	.000 ^b
	Residual	.632	187	.003		
	Total	.717	192			

Source research findings

The ANOVA table 4.5 indicate that the model is statistically significant in explaining the movements in the performance of SACCOs. The significance level is 0.000 which is less than 0.05.

4.6 Regression Analysis and Hypothesis Testing

To examine the relationship between firm size and financial performance the ordinary least square method of regression was used. The hypothesis that was tested was a null hypothesis: There is no relationship between financial performance and the other variables (firm size, capital adequacy, liquidity and age). The null hypothesis was to be rejected if the significance level was below 0.05 and in that case the independent variables were to be adjudged significant. If the P value was greater than 0.05 the null was to be accepted. In this case the coefficient of the independent variables was assumed to be similar to zero.

4.6.1 Hypothesis testing for the Independent variables

Table 4.6: Regression Analysis

Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.159	.065		2.436	.016
	Liquidity	.011	.015	.053	.733	.464
	Capital Adequacy	.116	.039	.208	2.966	.003
	AGE	.000	.000	.024	.303	.762
	SIZE	.080	.021	.907	3.886	.000

Source Research Findings

$$Y = 0.159 + 0.080X_1 + 0.011X_2 + 0.116X_3 + 0.000X_4$$

From the above obtained regression model, if all the other factors are held constant, the ROA will be 0.159. A unit change in firm size will change the ROA by 0.080: A unit change in liquidity will change ROA by 0.011, while unit change in capital adequacy will change the ROA by 0.116 and a unit change of age does not change the ROA. This implied that capital adequacy had the highest influence on ROA followed by firm size then liquidity. The regression equation obtained further shows that there was a direct relationship between ROA, capital adequacy and size.

A 5% significance level was used in the analysis. The corresponding independent variable probability obtained were compared against $\alpha=0.05$, to establish whether these variable were significant. The independent variable was deemed significant when the probability was less than α but if it was greater than 0.05 it was concluded to be

insignificant. Both size and capital adequacy was positively related with performance of the SACCOs. They were also significant as per the model as their corresponding probabilities were 0.000 and 0.003 respectively which was less than 0.05.

Age of the firm and liquidity are also positively related however the null hypothesis is not rejected because the probability of their coefficient being zero is greater than 0.05. This is demonstrated by the significance value of 0.464 and 0.762 for liquidity and age respectively. These values mean that there is a 46.4 % chance that the coefficient of liquidity in the model is not different from zero. On the other hand there is a 76.2% chance that the coefficient of age is not different from zero. Because these probabilities are high it is therefore concluded that these variables are not statistically significant.

4.7 Discussion of Research Findings

The results indicate a positive relationship between firm size and financial performance. The coefficient of 0.08 means that for every shilling investment in the SACCO leads to an increase in the return on investment by 8%. This relationship has a sig value of 0.000 which indicates that the probability of the coefficient being zero is 0.00% which means that the variable is significant. This finding is in line with the assumptions of the economies of scale theory which postulates that large firms enjoy the efficiencies in operations and they can hire professionals to run their business thus contributing to the good performance.

Capital adequacy was found to have a statistically significant positive relationship with performance. Capital adequacy ratio measures the risk of insolvency of the SACCO and as such it indicates the stability of the SACCO. This means that a 1% increase in the stability of the bank leads to 11.6 % increase in performance. The increase in stability of the SACCO attracts more membership, it also means that the SACCO can get access to loans easily and cheaply which they can then use to lend to their members.

The constant is also positively related with the performance this relationship is significant at 95% confidence level. It means that holding all other factors constant there will be a 15.9 % return on asset. This could be attributable to investments in the treasury bills which do not require any managerial supervision. There is no relationship between age and the performance of the SACCO. The coefficient is zero which means that age does not explain the movements in the performance. Liquidity has a positive relationship with performance; however this variable is not statistically significant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The chapter presents a summary of the research findings. It also makes conclusions of the study and gives recommendations based on the research outcomes. The chapter also provides the limitations of the study and makes suggestions on probable areas of future study.

5.2 Summary

This study aimed to establish the relationship between firm size and financial performance of DTS in Kenya. Financial performance was the dependent variable; firm size was the independent variable while capital adequacy, liquidity and age of the firm were the control variables. The theories that were reviewed were the study reviewed the economies of scale theory, stewardship theory, shift-ability theory, agency theory, and Pecking order theory. A sample of 39 SACCOS was taken from the 176 licensed SACCOs as at end of December 2016. Financial and non-financial data was collected from SACCOs audited financial statement for a period of 5 years (2012-2016).

The descriptive analysis results indicate that there has been a continuous growth in total assets. In 2013, the SACCOs experienced the highest growth rate of 23% followed by a 17% growth rate in 2014 and a 14% growth rate in 2016. This is attributable to stability in the industry and an increase in the non-banked population. The improved regulation and monitoring from SASRA has contributed significantly to the growth in the loan able

funds. This is evidenced the increase in capital adequacy ratio from 8% in 2013 to 12% in 2014. The most recent industry average of capital adequacy is 14% which is slightly less than the recommended 15%. The return on investment has also improved over the years from 3% growth rate to 19% in 2016.

The study concluded that the relationship between firm size and financial performance is a positive. It also established that firm size and capital adequacy had a positive significant relationship with performance while liquidity and age have a positive but insignificant relationship.

5.3 Conclusions

This research concluded that there is a positive relationship between financial performance and firm size of DTSSs in Kenya. Any additional asset in a SACCO leads to increased return on Asset of 8%. This could be attributable to better corporate governance and professionalism in funds management. Big SACCOs can hire professional who will bring in their expertise and managerial competence. Similarly the bigger the SACCO the better the chances of getting loans from other financial institutions, they can then use these funds to give more loans, which will in turn increase their income and hence their performance.

5.4 Policy Recommendation

Based on the findings it is recommendable for SACCOs to improve their investments in core assets at the same time reduce the credit risk by advancing loans to good paymasters. Maintaining an acceptable capital adequacy ratio will be instrumental in protecting depositors and the SACCO industry as a whole. Moreover the ratios indicate stability and higher figures can attract investments and consequently increase the total loans advanced by SACCOs. The regulator SASRA should therefore put stringent measures to monitor the changes in the capital adequacy to protect depositors. It is also recommended to invest in SACCOs because of the positive return on equity. The results also indicate that it is safer to invest in big SACCOs as opposed to small SACCOs. This is because performance is positively related with capital adequacy and size.

5.5 Limitations of the Study

Availability and access to data was the key limiting factor for this study. The financial information maintained by SASRA in hard copied (printed booklet) which means that the researcher had to do manual search of data from individual financial statements. The Individual SACCOs also do not upload financial information into their own websites; therefore getting the information was time consuming. Moreover SASRA's data is limited to licensed SACCOs yet the bulk of the non-regulated SACCOs form a larger proportion of the industry.

5.6 Suggestion for Further Studies

The research looked at the relationship between size and performance of SACCOS. I suggest that a similar study be conducted but within the context of Africa. In this case the research will take into the account the country effect in the analysis. A similar study can also be conducted in Kenya with a specific focus on the non-regulated SACCOs.

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APPENDICES

Appendix 1: Data Collection Sheet

Name of the SACCO	Total Assets	Co-Capital	Current Assets	Current Liability	No of years in operation
1					
2					
2					
.					
.					
39					

Appendix II: List of SACCOS

	Name of the SACCO	Year	Performance	SIZE	Liquidity	Capital Adequacy	AGE
1	Mwalimu National	2012	0.03	10.34	0.70	0.08	38.00
2	Kenya Police	2012	0.01	9.96	0.70	0.09	40.00
3	Afya Sacco	2012	0.00	10.04	0.71	0.32	41.00
4	United Nations	2012	0.01	9.82	0.12	0.06	37.00
5	Unitas	2012	0.04	9.59	0.46	0.20	19.00
6	Ukulima SACCO	2012	0.01	9.81	0.02	0.07	40.00
7	Imarika/Kilifi teachers SACCo	2012	0.03	9.38	0.24	0.08	38.00
8	Boresha	2012	0.01	9.49	0.19	0.84	36.00
9	Magereza	2012	0.01	9.57	0.14	-0.02	42.00
10	Kwetu/Masaku teachers SACCO	2012	0.00	9.27	0.13	-0.08	45.00
11	K-Unity	2012	0.02	9.24	0.14	0.11	38.00
12	Taifa	2012	0.01	9.18	0.41	0.17	14.00
13	Egerton University	2012	0.00	9.12	0.93	0.05	37.00
14	Capital	2012	0.02	9.20	0.70	0.02	7.00
15	Kenya Highlands	2012	0.05	9.11	0.10	0.21	21.00
16	Nation	2012	0.02	8.87	0.11	0.06	37.00
17	Wanaanga	2012	0.01	8.96	0.17	0.04	33.00
18	Elimu	2012	0.00	8.80	0.60	-0.01	37.00
19	mentor	2012	0.01	9.35	1.23	0.07	35.00
20	Safaricom Sacco	2012	0.01	9.03	0.20	0.05	11.00
21	Ushuru SACCO	2012	0.00	9.24	0.13	0.04	42.00
22	Fortune SACCO	2012	0.03	9.07	0.76	0.30	11.00
23	Tembo SACCO	2012	0.03	8.83	0.22	0.08	40.00
24	Mwito	2012	0.00	8.80	0.08	0.06	33.00
25	Dimkes	2012	-0.03	8.34	0.19	0.05	13.00
26	Sukari	2012	0.01	9.01	0.13	0.08	39.00
27	Biashara	2012	0.06	8.55	0.21	0.15	21.00
28	Baraton	2012	0.03	7.75	0.17	0.17	20.00
29	Fariiii	2012	-0.17	7.96	0.36	0.13	35.00
30	Daima	2012	0.01	8.63	0.48	0.19	21.00
31	Magadi	2012	0.01	8.56	0.29	0.08	35.00
32	All churches	2012	-0.10	7.57	1.16	0.18	8.00
33	Mid land	2012	0.04	7.86	1.57	0.04	32.00
34	Universal traders	2012	0.02	8.59	0.19	0.22	21.00
35	Trans national times	2012	0.01	9.18	0.88	0.08	19.00
36	Mwalimu National	2013	0.02	10.39	0.15	0.15	39.00
37	Kenya Police	2013	0.01	10.06	0.36	0.14	41.00
38	Afya SACCO	2013	0.00	10.07	0.64	0.08	42.00

39	United Nations	2013	0.01	9.88	0.17	0.06	38.00
40	Unitas	2013	0.04	9.74	0.26	0.26	20.00
41	Ukulima SACCO	2013	0.00	9.87	0.05	0.06	41.00
42	Imarika	2013	0.03	9.47	0.11	0.17	39.00
43	Boresha	2013	0.01	9.53	0.13	0.09	37.00
44	Magereza	2013	0.01	9.64	0.08	-0.06	42.00
45	Kwetu	2013	0.00	9.28	0.08	0.02	45.00
46	Taifa	2013	0.01	9.19	0.31	0.17	14.00
47	Egerton University	2013	0.00	9.15	0.72	0.09	37.00
48	Capital	2013	0.01	9.23	0.27	0.11	8.00
49	Kenya Highlands	2013	0.04	9.18	1.23	0.23	22.00
50	Nation	2013	0.04	8.97	0.19	0.10	38.00
51	Wanaanga	2013	0.01	8.99	0.20	0.04	34.00
52	Elimu	2013	0.04	8.89	0.17	0.08	38.00
53	Tower SACCO	2013	0.02	9.36	0.70	0.11	13.00
54	mentor	2013	0.03	9.43	0.18	0.17	36.00
55	Safaricom Sacco	2013	0.02	9.19	0.25	0.05	12.00
56	Ushuru SACCO	2013	0.00	9.30	0.19	0.04	43.00
57	Fortune SACCO	2013	0.07	9.12	0.65	0.36	12.00
58	Tembo SACCO	2013	0.04	8.97	0.22	0.08	41.00
59	Mwito	2013	0.01	8.86	0.05	0.06	34.00
60	Dimkes	2013	0.03	8.66	0.09	0.04	14.00
61	Sukari	2013	0.01	9.03	0.17	0.08	40.00
62	Biashara	2013	0.05	8.71	0.17	0.20	22.00
63	Baraton	2013	0.03	7.82	0.22	0.16	20.00
64	Fariji	2013	-0.16	8.04	0.31	0.04	36.00
65	Daima	2013	0.00	8.71	0.57	0.19	22.00
66	Airports	2013	0.02	8.62	1.20	0.11	36.00
67	Magadi	2013	0.01	8.61	0.21	0.07	9.00
68	Agro Chem	2013	0.00	7.88	0.28	0.19	33.00
69	All churches	2013	0.00	7.59	0.71	0.19	22.00
70	Midland	2013	0.48	8.11	0.31	0.26	20.00
71	Transnational	2013	0.02	8.82	0.14	0.12	22.00
72	Universal traders	2013	0.03	8.67	0.19	0.21	20.00
73	Trans national times	2013	0.04	9.23	0.02	0.11	20.00
74	Mwalimu National	2014	0.02	10.45	0.23	0.19	40.00
75	Kenya Police	2014	0.02	10.20	0.36	0.19	42.00
76	Afya Sacco	2014	0.00	10.10	0.42	0.01	43.00
77	United Nations	2014	0.04	9.95	0.24	0.11	39.00
78	Unitas	2014	0.04	9.84	0.28	0.35	21.00
79	Ukulima SACCO	2014	0.01	9.92	0.05	0.07	42.00

80	Imarika	2014	0.04	9.57	0.16	0.20	40.00
81	Boresha	2014	0.02	9.58	0.09	0.11	38.00
82	Magereza	2014	0.01	9.65	0.11	0.06	44.00
83	Kwetu	2014	0.01	9.46	0.08	0.02	47.00
84	K-Unity	2014	0.03	9.36	0.37	0.11	40.00
85	Jamii	2014	0.03	9.33	0.16	0.17	20.00
86	Taifa	2014	0.01	9.27	0.35	0.15	16.00
87	Egerton University	2014	0.00	9.25	0.18	0.09	39.00
88	Capital	2014	-0.02	9.29	0.08	0.10	9.00
89	Kenya Highlands	2014	0.04	9.19	1.28	0.26	23.00
90	Nation	2014	0.03	9.04	0.12	0.12	39.00
91	Wanaanga	2014	0.01	9.03	0.22	0.06	35.00
92	Elimu	2014	0.03	8.96	0.05	0.19	39.00
93	Tower sacco	2014	0.01	9.50	0.69	0.13	13.00
94	Mentor	2014	0.03	9.52	0.16	0.16	37.00
95	Safaricom Sacco	2014	0.02	9.34	0.05	0.07	13.00
96	Ushuru SACCO	2014	0.01	9.36	0.27	0.07	44.00
97	Fortune SACCO	2014	0.06	9.21	0.38	0.34	13.00
98	Tembo Sacco	2014	0.05	9.04	0.15	0.12	42.00
99	Mwito	2014	0.02	9.00	-0.02	0.07	35.00
100	Dimkes	2014	0.01	8.84	0.09	0.09	15.00
101	Simba Chai	2014	0.05	8.92	0.15	0.13	20.00
102	Sukari	2014	0.00	8.95	0.03	0.15	41.00
103	Biashara	2014	0.10	8.80	0.16	0.24	23.00
104	Fariji	2014	-0.17	8.01	-0.08	0.11	37.00
105	Daima	2014	0.00	8.70	0.49	0.22	23.00
106	Airports	2014	0.01	8.70	1.20	0.10	13.00
107	Magadi	2014	0.02	8.59	0.26	0.09	37.00
108	Baraton	2014	0.03	7.93	0.22	0.15	18.00
109	Agro Chem	2014	0.04	7.96	0.28	0.20	22.00
110	All churches	2014	0.04	7.70	0.58	0.25	10.00
111	Mid land	2014	0.40	8.19	0.31	0.16	34.00
112	Universal traders	2014	0.00	8.75	0.14	0.17	23.00
113	Trans national times	2014	0.01	8.97	0.11	0.11	21.00
114	Mwalimu National	2015	0.00	10.52	0.20	0.16	41.00
115	Kenya Police	2015	0.02	10.24	0.36	0.19	43.00
116	Afya Sacco	2015	0.00	10.13	0.43	0.02	44.00
117	United Nations	2015	0.04	10.00	0.37	0.14	40.00
118	Unitas	2015	0.05	9.97	0.30	0.39	22.00
119	Ukulima SACCO	2015	0.03	9.96	0.09	0.11	43.00
120	Imarika	2015	0.02	9.64	0.17	0.19	41.00

121	Boresha	2015	0.02	9.64	0.09	0.11	39.00
122	Magereza	2015	0.01	9.62	0.12	0.90	45.00
123	Kwetu	2015	0.01	9.47	0.10	0.30	48.00
124	K-Unity	2015	0.02	9.41	0.38	0.23	41.00
125	Jamii	2015	0.04	9.41	0.12	0.17	14.00
126	Taifa	2015	0.01	9.33	0.19	0.18	17.00
127	Egerton University	2015	0.00	9.33	0.20	0.15	40.00
128	Capital	2015	0.00	9.32	0.11	0.11	10.00
129	Kenya Highlands	2015	0.01	9.23	0.67	0.24	24.00
130	Nation	2015	0.03	9.10	0.13	0.13	40.00
131	Wanaanga	2015	0.02	9.06	0.61	0.10	36.00
132	Nassefu	2015	0.03	9.05	0.08	0.15	40.00
133	Elimu	2015	0.01	9.01	0.22	0.16	40.00
134	Tower sacco	2015	0.01	9.60	0.90	0.11	14.00
135	mentor	2015	0.01	9.59	0.21	0.10	38.00
136	Safaricom SACCO	2015	0.01	9.51	0.24	0.11	14.00
137	Ushuru SACCO	2015	0.01	9.43	0.17	0.10	45.00
138	Fortune	2015	0.06	9.26	0.51	0.37	14.00
139	Tembo SACCO	2015	0.05	9.15	0.07	0.13	43.00
140	Mwito	2015	0.02	9.05	0.11	0.13	36.00
141	Dimkes	2015	0.02	8.99	0.11	0.10	16.00
142	Simba Chai	2015	0.05	8.98	0.05	0.16	15.00
143	Sukari	2015	-0.04	8.96	0.48	0.10	42.00
144	Fariji	2015	0.06	8.03	-0.05	0.16	38.00
145	Daima	2015	0.01	8.79	0.46	0.20	24.00
146	Airports	2015	0.02	8.74	1.12	0.11	18.00
147	Magadi	2015	0.03	8.63	0.24	0.12	38.00
148	Baraton	2015	0.03	8.04	0.12	0.15	19.00
149	Agro Chem	2015	0.04	8.01	0.23	0.25	14.00
150	All churches	2015	0.04	7.82	0.39	0.23	11.00
151	Mid land SACCO	2015	0.40	8.19	0.61	0.13	35.00
152	Universal traders	2015	0.01	8.82	0.06	0.15	24.00
153	Trans national times	2015	0.00	9.00	0.17	0.10	22.00
154	Mwalimu National	2016	0.01	10.57	0.23	0.14	42.00
155	Kenya Police	2016	0.04	10.30	0.32	0.21	44.00
156	Afya SACCO	2016	0.00	10.17	0.22	0.08	45.00
157	United Nations	2016	0.02	10.04	0.31	0.15	41.00
158	Unitas	2016	0.02	10.03	0.33	0.38	23.00
159	Ukulima SACCO	2016	0.02	10.00	0.08	0.12	44.00
160	Imarika	2016	0.05	9.76	0.15	0.20	42.00
161	Boresha	2016	0.02	9.69	0.13	0.17	40.00

162	Magereza	2016	0.02	9.62	0.10	0.09	46.00
163	Kwetu	2016	0.01	9.50	0.04	0.07	49.00
164	K-Unity	2016	0.02	9.46	0.33	0.22	42.00
165	Jamii	2016	0.01	9.49	0.12	0.18	15.00
166	Taifa	2016	0.02	9.39	0.16	0.20	18.00
167	Egerton University	2016	-0.01	9.38	0.23	0.06	41.00
168	Capital	2016	0.01	9.41	0.30	0.11	11.00
169	Kenya Highlands	2016	0.02	9.33	0.67	0.24	25.00
170	Nation	2016	0.03	9.15	0.72	0.13	41.00
171	Wanaanga	2016	0.01	9.05	0.17	0.11	37.00
172	Nassefu	2016	0.03	9.05	0.18	0.14	41.00
173	Elimu	2016	0.00	9.02	0.29	0.16	41.00
174	Tower sacco	2016	0.01	9.73	0.61	0.13	11.00
175	mentor	2016	0.01	9.69	0.18	0.11	39.00
176	Safaricom Sacco	2016	0.02	9.62	0.40	0.13	15.00
177	Ushuru SACCO	2016	0.01	9.49	0.12	0.10	46.00
178	Fortune SACCO	2016	0.08	9.38	0.70	0.36	15.00
179	Tembo SACCO	2016	0.04	9.28	0.34	0.19	44.00
180	Mwito	2016	0.03	9.11	0.96	0.15	37.00
181	Dimkes	2016	0.03	9.13	0.08	0.13	17.00
182	Simba Chai	2016	0.04	9.08	0.12	0.18	20.00
183	Sukari	2016	0.02	8.98	0.30	0.12	43.00
184	Fariji	2016	0.08	8.13	0.35	0.32	39.00
185	Daima	2016	0.01	8.88	0.63	0.17	25.00
186	Airports	2016	0.02	8.76	1.13	0.12	15.00
187	Magadi	2016	0.02	8.67	0.24	0.14	39.00
188	Baraka	2016	0.22	8.45	0.34	0.31	18.00
189	Baraton	2016	0.05	8.06	0.19	0.21	12.00
190	Agro Chem	2016	0.05	8.10	0.28	0.21	15.00
191	All Churches	2016	0.01	7.84	0.24	0.25	12.00
192	Universal traders	2016	0.01	8.92	0.27	0.13	25.00
193	Trans national times	2016	0.01	9.05	0.20	0.12	23.00