EFFECT OF STATUTORY REGULATIONS ON FINANCIAL PERFORMANCE OF DEPOSIT TAKING SAVINGS AND CREDIT COOPERATIVE ORGANIZATIONS IN NAKURU COUNTY, KENYA

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DECLARATION

This research project is my original work and has not been submitted for any award of a degree or diploma in any university.

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This research project has been submitted for examination with our approval as University Supervisors.

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DEDICATION
The research project is dedicated to my wife; Doris, and my sons; Mark and Paul who have supported me throughout my academic life. Thank you for giving me strength to reach where I am and making me who I am today. Thank you and God bless you abundantly.
ACKNOWLEDGEMENT
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ABSTRACT

Savings and Credit Cooperative Organizations (SACCOs) have been recognized worldwide as important avenue of economic growth. In Kenya, SACCOs remain the most important players in the provision of financial services and have deeper and extensive outreach than any other type of financial institution. However, against a backdrop of losses and reduced profitability loss of members to banks, inadequate capital structures, inefficient liquidity management, incompetent staff and poor corporate governance the government established SACCO Societies Regulatory Authority (SASRA) which was mandated to develop statutory regulations for effective management of SACCOs. The purpose of this study therefore was to assess the effect of selected statutory regulations on financial performance of SACCOs. The study was guided by four theories; Buffer theory of Capital Adequacy, Capital Asset Pricing Model, Earnings Theory of Capitalization and Anticipated Income Theory. The study employed a descriptive research design using quantitative approaches. The target population was FOSA managers, finance managers, credit managers and internal auditors all totaling 64 targeted respondents from SACCOs in Nakuru County, Kenya. The study used a census approach to collect data and it used closed ended questionnaires in collecting primary data. Secondary data was collected from SASRA annual publications. The questionnaires were pretested to ensure validity and reliability. The collected data was summarized and analyzed using both descriptive and inferential statistics and then presented in tables. From the findings, capital adequacy (r = 0.267) and asset quality (r = 0.080) had a positive and weak correlation with ROE. However, earnings performance (r = -0.013) and liquidity (-0.082) had a negative and weak correlation with ROE. The study concluded that since all the variables had some effect on financial performance, it would be prudent for SACCO to adhere to these regulations in order to enhance their performance.
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ABBREVIATIONS AND ACRONYMS

CAR : Capital Adequacy Ratio
CBK : Central Bank of Kenya
FSD : Financial Sector Deepening
GDP : Gross Domestic Product
GoK : Government of Kenya
MCD&M : Ministry of Cooperative Development and Marketing
MFI : Microfinance Institution
NACOSTI : National Council for Science, Technology and Innovation
ICA : International Cooperative Alliance
ROA : Return on Asset
ROE : Return on Equity
SACCO : Saving and Credit Cooperative Society
SASRA : SACCO Societies Regulatory Authority
SPSS : Statistical Package for Social Sciences
DEFINITION OF TERMS

Asset quality: Is an aspect of bank management which entails the evaluation of firm assets in order to facilitate the measurement of the level and size of credit risk associated with its operation (Abata, 2014).

Capital Adequacy: Is defined as the adequate capital for banks as the level at which the deposit insuring agency would breakeven in guaranteeing the deposits of individual banks with premium the banks pay (Yu, 2006).

Earnings Performance: Is the ratio used to show the company's profitability on a per-share basis and may be determined using the rate of return on equity, the net interest margin, the operating efficiency ratio, and the level of non-interest earnings ratio (Yu, 2006).

Liquidity: The ability of financial institutions to fund increases in asset holdings and meet obligations as they fall due (CBK, 2010)

Management Quality: Integrates fundamental management techniques, resources, and its implementation stands as a challenge and support to top management to generate improved products and services, as well as reduced costs, more satisfied customers and employees, and improved financial performance (Hendricks & Singhal, 2001).
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study
Cooperative development has generally traversed two main eras: the era of state control and that of liberalization (Quiroz, 2007). The first era, which saw the origin and substantial growth of cooperatives under state direction, conditioned these organizations to emerge as dependent agents and/or clients of the state and other semipublic agencies (Lila, 2010). By serving as instruments for implementing government socioeconomic policies, cooperatives were engulfed into state politics to the extent that the failures of state policies found expression in the cooperative movement. This partly explains why literature on cooperatives in this era is awash with more stories of cooperative failure than stories of cooperative success.

Such failures contributed to calls for the liberalization of the cooperative movement in the early 1990s (Ministry of Co-operatives and Marketing, 2008). SACCOs have been recognized worldwide as important avenues of economic growth. Close to a billion people are affiliated with co-operatives reflected in composition that make up the International Cooperative Alliance (ICA) - the global apex body representing cooperatives in the world. Many countries that have achieved economic development have a vibrant and dynamic cooperative sector which contributes substantially to the growth of those economies (ICA Report, 2006). SACCOs are institutions which offer similar products like banks but their performance is not something to be proud of compared to commercial banks and other financial institutions (Gathurithu, 2011).

SACCOs play a significant role in the provision of financial services to the poor (target groups). They provide savings and credit and investment opportunities to individuals, institutions and group members. SACCOs perform an active financial intermediation function, particularly mediating from urban and semi-urban to rural areas, and between net savers and net borrowers while ensuring that loan resources remain in the communities from which the savings were mobilized.

The regulations of SACCOs have been introduced in many different region across the globe. For example, India adopted a regulation that gave cooperatives a hybrid business alliance system that has enabled the cooperative owned business to grow to
big empire of companies and own vast properties around and outside India (Fischer and Cuevas, 2006). Similarly, UNISAP Federation is responsible for SACCO control in Mexico and has seen SACCOs grow to have lower risk than banks. The SACCOs have hence grown and patronizes more than 60% of the total Mexican rural population (Be’roff, 2008).

Furthermore, Brazil was an early adopter of cooperative model and as early as 1874 they had Teresa Christina cooperative in Parana formed by Jean Maurice a medical doctor from France. The regulation of cooperatives here was marked by legislation in 1890 to address involvement of military personnel in cooperatives. Similarly, Canada adopted a DEA (data envelopment analysis) system that checks; asset to equity ratio and a modified Z-score of all credit unions and compares them weekly to a fixed score. This has made SACCOs to operate prudently hence fewer cases of cooperative failure (Pille and Puradi, 2002). In U.S credit unions were regulated by non banking financial institution laws SEC (securities and exchange) Act. The system consists of complex rules that guide the operations of credit unions in the country. The system was introduced on the aftermath of great depression of 1929 and was meant to improve the public confidence on financial institution; it has been in force to date (Kumar et al, 1997).

In the African context, a number of countries have adopted cooperative sector regulations notably, Egypt, Nigeria, South Africa and closer home, Tanzania. In Egypt, regulation of credit union controlled strictly as the government sets the ceiling interest rate for issuing loans. Credit unions are also registered and managed directly by ministry of economy hence few cases of mismanagement of the unions. The regulations are however too stringent hence lead to the rise of an underground lending market by unregistered individuals come together and loan money amongst themselves (Mahmoud and Wright, 2000).

In the West African region, cooperative societies are very popular, more so in Nigeria. Onuoha (2002) in his study of cooperative history in Nigeria state that modern cooperative societies came as a result of the Nigerian cooperative society law enacted in 1935 following the report submitted by C. F. Strickland in 1934 to the then British colonial administration on the possibility of introducing cooperatives into Nigeria.
Through cooperatives, farmers could pool their limited resources together to improve agricultural output and this will enhance socio-economic activities in the rural areas (Ebonyi and Jimoh, 2002). The Sacco regulation 2005 of Tanzania restricted Sacco with stringent rules on composition and operations of SACCOs. This has caused a steady drop in the number of SACCOs and other microfinance institutions have taken over. In this case of stringent regulation, deregulation was direly needed to revive the sector (Rubambey, 2005).

1.1.1 SACCOs in Kenya

The co-operative nature of the Kenyan people can be traced to the pre-colonial traditional societies where people cooperated in several activities such as hunting, farming, building houses, taking care of animals and in many other important chores. The first formal Savings and Credit Co-operative Society (SACCO) in Kenya was at Lumbwa, Rift Valley in 1908. The SACCO was formed by white settlers to enable its members bargain for better fertilizer and seeds prizes. The SACCO was also to provide services to members and enable them seek competitive markets but the members did not collectively sell their products. The SACCO was however restricted to the white settlers only and no person of African or Asian persuasion could join. Since then, SACCOs have grown in leaps and bounds to become one of the dominant players in Kenya’s financial sector.

In Kenya, SACCOs remain the most important players in the provision of financial services and have deeper and extensive outreach than any other type of financial institution (ICA 2002). The government has continuously supported SACCOs as part of its rural development initiative. By the end of 2010 there were about 8000 registered SACCOs, the majority being salary SACCOs catering for those in employment. SACCOs contribute 45% of the country’s GDP and to date the sub-sector has effectively mobilized over Kshs. 200 billion deposits and assets totaling to Kshs. 210 billion. These enormous resources should give SACCOs a basis to compete in a liberalized environment. However, a recent study by FSD (2009) however, revealed that SACCOs are facing severe liquidity problems and majorities are unable to meet the demands of their clients for loans and withdrawal of savings. There is therefore need to understand the factors influencing financial performance of
SACCOs in order to provide appropriate measures that can mitigate against such factors.

SACCOs in Kenya face stiff competition from other players in the financial services sector including commercial banks, micro-finance institutions, shylocks, pyramid schemes and investment groups. It is estimated that a significant 24.6 million people (63%) participate either directly or indirectly in SACCO enterprises. In Kenya, 6,727 SACCOs were registered and employed directly 303,455 people as at December 2010 (GOK, 2011). However, despite the significant government initiative to support cooperative movements through legislation, a significant 3,457 (51%) of the SACCOs were not operational. This high failure rate of SACCOs continues to frustrate millennium development goals or vision 2030 objectives of increasing financial inclusion. It also implies that the 303,455 people directly employed by the cooperatives risk losing their jobs if the cooperatives fail (Pollet, 2009).

In all the 47 counties there are numerous SACCOs providing financial access to hitherto financially excluded Kenyans. SACCO membership is based on common bonds and knowledge about the borrower. These mechanisms have proven their ability to manage risk, enforce lending contracts and reduce the transaction costs of delivering credit. Until recently, SACCOs have been able to retain their membership and attract new members through natural affiliation, stemming from the common bond among members. With increased competition from other financial service providers and other factors such as retrenchment, poor management and loan defaulting, SACCO financial performance has been on a downward trend which resulted in the government establishing SASRA, a statutory body that licenses deposit taking SACCOs and ensures they adhere to various statutory requirements in order to operate in Kenya (Karagu & Okibo, 2014).

According to Wanyoike (2013), the issues dealt with in the SASRA regulations relate to the extent of external borrowing, asset categorization and provisioning, maximum loan size and insider lending and loan loss classification. SACCOs are subject to adhering to: Monthly returns (capital adequacy, liquidity, and deposits), Quarterly returns (risk classification of assets and loan loss provisioning, investment returns, financial performance) and other returns as requested by the body. The regulations require SACCOs to submit Annual returns (audited financial statements). SASRA has
the authority to inspect the premises and the records of a SACCO and to prescribe enforcement actions in case of deficiencies including the appointment of a statutory manager. Noncompliance with legal requirements carries clearly specified penalties and includes removal from office of directors and other responsible officers.

1.2 Statement of the Problem

Despite the enforcement of SASRA regulations in Kenya, SACCOs still face number of challenges in their attempt to meet their performance targets. SASRA Act and the accompanying regulations were thus seen as a cure to the many challenges bedeviling the SACCO sector. The regulations stipulate that the management has to present the capital adequacy return reports, liquidity statement report, statement of financial position and statement of deposit return as well as return on investments report which compares land, building, and financial assets to the SACCO’s total assets and its core capital. According to the SASRA report 2016, a total of 168 SACCOs were fully compliant with the minimum core capital in 2016, as opposed to 173 SACCOs that maintained the compliance level in 2015. This means that there was a drop in the level of compliance by five (5) SACCOs in terms of the prescribed absolute core capital requirements. The report further notes that the ratio of non-performing loans (NPLs) to total gross loans increased in the aggregate from 5.12% in 2015 to 5.23% in 2016. This demonstrates a marginal worsening of the loan recovery methodologies employed by SACCOs. Furthermore, the report notes that interests from investments have remained minimal at 3.48% and thus raises questions on the viability of a majority of the other clusters of investments which SACCOs engage. Finally, the report notes that though a total of 165 SACCOs reported full compliance with the prescribed liquidity ratio of 15% and above in 2016, ten (10) other SACCOs failed to achieve the prescribed ratio, and thus evidence of potential inability to meet short term obligations. Despite the impressive liquidity levels registered in successive years, many SACCOs are often unable to meet their short term obligations to their members, particularly the disbursement of loans. It is thus clear that despite the intended effect of the regulations, SACCOs still face a number of challenges.

Considering that SASRA has adopted the CAEL (capital adequacy, asset quality, earnings performance and liquidity) in assessing the financial performance of SACCOs, it would be prudent to assess these specific parameters in order to establish their effect on financial performance of SACCOs. Various studies such as those of
Wanyoike (2013), Biwott (2014) and Buluma et al., (2015) have reported that before the enactment of the SASRA Act, the SACCO sector had a myriad of challenges; a number of SACCOs collapsed due to mismanagement, SACCO managers made imprudent investments, liquidity management was a serious problem, and there were a lot of challenges in loan administration with many cases insider loans leading to a collapse of many SACCOs. Further, since there is no evidence of studies in Kenya that have adopted the CAEL framework and thus this study sought to fill this existing knowledge gap.

1.3 Objectives of the Study

1.3.1 General Objective
The general objective of the study was to analyze the effect of selected statutory regulations on financial performance of SACCOs.

1.3.2 Specific Objectives
The study was guided by the following specific objectives:

i. To evaluate the effect of capital adequacy regulations on financial performance of SACCOs in Nakuru County, Kenya

ii. To determine the effect of asset quality regulations on financial performance of SACCOs in Nakuru County, Kenya

iii. To examine the effect of earnings performance regulations on financial performance of SACCOs in Nakuru County, Kenya

iv. To investigate the effect of liquidity management regulations financial performance of SACCOs in Nakuru County, Kenya

1.4 Hypotheses of the Study
The study was guided by the following hypotheses:

i. $H_{01}$: Capital adequacy regulations does not have a significant effect on financial performance of SACCOs

ii. $H_{02}$: Asset quality regulations do not have a significant effect on financial performance of SACCOs

iii. $H_{03}$: Earnings performance regulations do not have a significant effect on financial performance of SACCOs
iv. $H_{04}$: Liquidity management regulations do not have a significant effect on financial performance of SACCOs

1.5 Justification of the Study

This study will assist SACCOs in making rational decision on financial performance decisions by carefully managing the effect of statutory regulations that influence performance. It will also enable shareholders to know consequences of such regulations and thus place them in a better position to better contribute towards enhanced SACCO performance. The research finding will also provide valuable information to the government that may be useful in policy formulation on SACCO financial performance. The study will provide information to researchers on the analysis of the effect of statutory regulations on financial performance of SACCOs.

1.6 Scope of the Study

The study mainly focused on deposit taking SACCOs in Nakuru County, Kenya that were in existence before the enactment of the SASRA regulations and after enactment of the regulations. Available data indicate that there are eight (8) SACCOs in the town which meet this criterion; including Cosmopolitan, Metropolitan, Boresha, Stima, Mwalimu, Uni-County, Unaitas and Vision Africa. The study purposively target all the top managers, FOSA managers, members of credit, finance and audit departments in the SACCOs. The study obtained secondary data from annual published results of the SACCOs. The study was undertaken between September 2017 and March 2017, 2017 with a budget of Kenya shillings 70,000.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature relevant to the study. Issues on the different theories on this study have been critically reviewed. Empirical review based on the objectives of the study has also been presented. Finally, this section hypothesizes a conceptual framework and ends with identification of research gaps.

2.2 Theoretical Review

A number of theories can be used to interrogate financial performance of SACCOs. In evaluating the financial performance a number of theories have been articulated by various researchers with numerous strengths and weaknesses of the said theories. For the purpose of the current study we focus on Buffer Theory, Earning Theory, Anticipated Income Theory and Capital Asset Pricing Model.

2.2.1 Buffer Theory of Capital Adequacy

The buffer theory of Calem and Rob (1996) predicts that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. In capital buffer theory, banks aim at holding more capital than recommended. Regulations targeting the creation of adequate capital buffers are designed to reduce the procyclical nature of lending by promoting the creation of countercyclical buffers (Milne & Whalley, 2001). Moreover these regulations are designed to reduce the procyclical nature of lending by promoting the creation of countercyclical buffers (Khawish, 2011). The capital buffer is the excess capital a bank holds above the minimum capital required. The capital buffer theory implicates that banks with low capital buffers attempt to rebuild an appropriate capital buffer by raising capital and banks with high capital buffers attempt to maintain their capital buffer. More capital tends to absorb adverse shocks and thus reduces the likelihood of failure. Banks raise capital when portfolio risk goes up in order to keep up their capital buffer which appears to relate to determinant of capital adequacy and performance of commercial banks.
According to Ikpefan (2013), capital is more reliable, dependable and can be used for long term planning. Ability of SACCOs to mobilize enough deposits obviates the capital base from being eroded. The buffer theory predicts that a SACCO approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. However, poorly capitalized SACCOs may also be tempted to take more risk in the hope that higher expected returns will help them to increase their capital. This is one of the ways risks relating to lower capital adequacy affects SACCO operations. In the event of bankruptcy of a SACCO, the risks are absorbed by the SACCO, customers and SASRA.

The buffer theory can thus be used to explain capital adequacy issues and their related capital adequacy requirements in the SACCO subsector in Kenya. In this context, SACCOs may prefer to hold a ‘buffer’ of excess capital to reduce the probability of falling under the legal capital requirements, especially if their capital adequacy ratio is very volatile. SACCOs will require more capital if deposits are not fully mobilize from the public. Capital is more reliable, dependable and can be used for long term planning. Ability of SACCOs to mobilize enough deposits obviates the capital base from being eroded. However, poorly capitalized SACCOS may also be tempted to take more risk in the hope that higher expected returns will help them to increase their capital. This is one of the ways risks relating to lower capital adequacy affects SACCO operations.

2.2.2 Capital Asset Pricing Model
The Capital Asset Pricing Model (CAPM) was introduced by Jack Treynor in 1962, William Sharpe in 1964, John Lintner in 1965 and Jan Mossin in 1966 independently, building on the earlier work of Harry Markowitz on diversification and modern portfolio theory (Craig, 2003). The capital asset pricing model (CAPM) is a model used to determine a theoretically appropriate required rate of return of an asset, to make decisions about adding assets to a well-diversified portfolio. The model assumes that all active and potential shareholders have access to the same information and agree about the risk and expected return of all assets.

The market portfolio consists of all assets in all markets, where each asset is weighted by its market capitalization. This assumes no preference between markets and assets.
for individual active and potential shareholders, and that active and potential shareholders choose assets solely as a function of their risk-return profile. It also assumes that all assets are infinitely divisible as to the amount which may be held or transacted. The capital asset pricing model explains the risk of a particular asset or portfolio using the excess return on the market portfolio. The model suggests that investors should hold diversified portfolios, and predicts that investors will hold some fraction of the market portfolio. Furthermore, an important implication of the CAPM, also referred to as efficient markets hypothesis, is that investors lacking special investment knowledge would be well advised to buy and hold diversified portfolios. The model can thus be used to explain asset quality and its related regulations as used in the SACCO sector in Kenya.

The CAPM shows that investors require high levels of expected returns to compensate them for high expected risk. However, it is now widely recognized that in the presence of informational asymmetries and contract enforcement problems, it is not necessarily true that the SACCO system will allocate resources to projects or firms with the highest returns. Empirical evidence based on mean-variance portfolio selection, simulation analysis, and out of sample portfolio performance suggests that correcting for estimation error, particularly in the means, can substantially improve investment performance. The assumption is that quality assets/loans are one of the items in a SACCO’s portfolio. A SACCO portfolio consists of both assets and liabilities. It is the SACCO manager’s jobs to construct a portfolio to yield a high return at the same time reduce its risk.

2.2.3 The Earnings Theory of Capitalization

The earnings theory of capitalization was developed from the work of John Lintner in 1962. The theory points out that the determinants of the value of a firm’s cost of equity financing are the dividends the firm is expected to pay to perpetuity, the expected annual growth of dividends and the firm’s current stock price. According to the theory, earnings are forecasted and capitalized at a return rate, which actually is the representative of the industry. Earning basis for capitalization has the merit of valuing a firm at the amount directly related to its earning capacity. It is often considered superior to cost theory because of its lesser chances of being either under or over capitalized. The comparison of earnings approach to that of cost approach will
make the management to be cautious in negotiating the technology and the cost of procuring and establishing the new businesses. However, even earnings approach suffers with disadvantages. The major one being the firm’s dilemma of deciding on capitalization and its division thereof into various procurement sources. The rate to be estimated is equally formidable because of investor’s perception of established companies not b being unique of what the investor’s perceive from the earning power of the new firm.

This theory assumes that an enterprise is expected to make profit (Lipson, 1998). According to the theory, its true value depends upon the firm’s earnings and/or earning capacity. Thus, the capitalization of the firm or its value is equal to the capitalized value of its estimated earnings. To find out this value, a firm, while estimating its initial capital needs, has to prepare a projected profit and loss account to complete the picture of earnings or to make a sales forecast. Having arrived at the estimated earnings figures, the financial manager will compare with the actual earnings of other companies of similar size and business with necessary adjustments. After this the rate at which other firms in the same industry, similarly situated are making earnings on their capital will be studied. This rate is then applied to the firm’s estimated earnings for determining its capitalization.

The earnings theory can be used to explain earnings performance in SACCO sector in Kenya since the value of a SACCO is determined by its ability to earn return on capital invested. The higher the rate and regularity of its earnings, the greater the value of the SACCO and the greater the amount of capital which may be safely invested in it. The earnings theory correlates the value of a SACCO directly with its earning capacity. In this context, earnings theory acts as a check on the costs of launching a new enterprise. However, in the case of new firms it may be difficult to estimate correctly the amount of future earnings and thus the capitalization based on earnings might prove to be risky for the SACCO.

2.2.4 The Anticipated Income Theory

The anticipated income theory which is one of the liquidity management theories was developed by H.V. Prochanow in 1944 on the basis of the practice of extending term loans by the US commercial banks. The theory posits that maintaining cash and near
cash assets even though increases liquidity, but it forgoes income opportunity. Therefore a bank should go for term loan of different dimension where from principal and interest can be received on installment basis. Prochnow considered the following factors in his theory: firstly, maintaining liquidity in the form of cash is not important as installment of term loan is enough to fulfill liquidity requirement. Secondly, bond and securities can be used as collateral to give term loan thus a bank can collect fund in times of emergencies by selling them in the secondary market or by keeping it as collateral. Thirdly, banks must given such long term loan from which the fund be recollected on due time. The theory thus provides a broader spectrum of firm's financial structure compared to other theories of liquidity.

According to this theory, regardless of the nature and character of a borrower’s business, the bank plans the liquidation of the term-loan from the anticipated income of the borrower. A term-loan is for a period exceeding one year and extending to less than five years. It is granted against the hypothecation of machinery, stock and even immovable property. The bank puts restrictions on the financial activities of the borrower while granting this loan. At the time of granting a loan, the bank takes into consideration not only the security but the anticipated earnings of the borrower. Thus a loan by the bank gets repaid out of the future income of the borrower in installments, instead of in a lump sum at the maturity of the loan.

The theory is applicable to SACCOs in Kenya as these SACCOs use a similar model in their loaning process. This theory can be used to explain liquidity management in SACCO because the theory fulfills the three objectives of liquidity, safety and profitability. Liquidity is assured to the SACCO when the borrower saves and repays the loan regularly in installments. It satisfies the safety principle because the SACCO grants a loan not only on the basis of a good security but also on the ability of the borrower to repay the loan. The SACCO can utilize its excess reserves in granting term-loan and is assured of a regular income. Lastly, the term-loan is highly beneficial for the business community which gets funds for medium-terms. The theory of anticipated income has limitations. Firstly, it is a method to analyze a borrower’s creditworthiness. It gives the SACCO criteria for evaluating the potential of a borrower to successfully repay a loan on time. Secondly, repayment of loans in
installments to the SACCO provides a regular stream of liquidity, but they fail to meet emergency cash needs of the lender SACCO.

2.3 Empirical Review

According to SASRA (2012), the SACCOs society regulations are meant to improve the competitiveness of SACCOs by setting financial and operating standards commensurate to the deposit taking business conducted by SACCOs. This is ultimately expected to drive efficiency and improve the level of savings in the SACCOs societies as envisaged in the financial sector strategy in vision 2030. SACCOs regulations and performance relate in that the regulations are meant to set specific requirements on the tools used to measure performance leading to a direct relationship (Financial Sector Deepening, 2009).

While there have been several reform initiatives in SACCOs subsector in the past, the introduction of a SACCOs specific law is recognition of the unique financial intermediation function that SACCOs play in an economy. Thus the operational regulations and performance standards are specific and prescriptive; not to make SACCOs societies non competitive and stifle their growth but to ensure that they operate and grow within a framework that promotes sound financial and business management practices. For the purpose of this study, we review some of the statutory regulations and their effect on financial performance.

2.3.1 Capital Adequacy Regulations and Financial Performance

Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou et al., 2005). Capital creates liquidity for the financial institution due to the fact that deposits are most fragile and prone to the organization’s runs. Moreover, greater capital reduces the chance of distress (Diamond, 2000). However, it is not without drawbacks that it induce weak demand for liability, the cheapest sources of fund capital adequacy is the level of capital required by the financial institution to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential loses and protect the institution’s debtors. According to Dang (2011), the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital
Adequacy ratio shows the internal strength of the organization to withstand losses during crisis.

Capital adequacy ratio is directly proportional to the resilience of the financial institution to crisis situations. It has also a direct effect on the profitability by determining its expansion to risky but profitable ventures or areas (Sangmiand Nazir, 2010). Capital adequacy refers to a relative measure: it establishes the maximum level of leverage that a financial institution is allowed to reach on its operations (Jansson, 1997). It is measured by the ratio of risk-weighted assets relative to regulatory equity, commonly known as a capital adequacy ratio of 8%. Nonetheless, it has to be remembered that this prudential standard was intended to be applied to international and large banking institutions from developed countries, and that it has been translated to several financial systems in developing countries despite the well-known differences in institutional risk profile, scale of operations and national economic environments (Guidotti et al., 2004).

In many developing countries, this regulatory requirement has also been extended to MFIs and SACCOs. But, it is argued that the capital adequacy ratio required should be higher than the one applied for banks due to the special features of the microfinance portfolio, which is characterized by a high volatility and scarce geographical diversification (Christen et al., 2003). This implies that, given a level of delinquency of loan portfolio, a MFI is likely to lose its capital more quickly than a banking institution; so, there is a need to comply with a lower level of leverage, that is, a higher capital adequacy ratio (Vogel et al., 2000). Besides, MFIs are less likely to respond quickly to capital calls from the supervisor when facing significant capital losses that could lead to a situation of insolvency, because of the weaker position of their shareholders (Jansson et al., 2004).

On the other hand, some argue that despite the rationale for ensuring an adequate level of solvency, the requirement of a high capital adequacy ratio could be counterproductive because it could generate lower levels of financial intermediation, and reduce the expected return on equity and consequently, create disincentives to attract potential investors (Jansson, 1997). According to Haubrich and Wachtel
(1999), capital regulations in the U.S. contributed to a decrease in lending that helped fuel a post-capital requirements credit crunch.

2.3.2 Asset Quality Regulations and Financial Performance

The financial institution’s asset is another specific variable that affects the profitability of a financial institution. The institution’s asset includes among others current asset, credit portfolio, fixed asset, and other investments. Often a growing asset (size) related to the age of the financial institution (Athanasoglou et al., 2005). More often than not the loan of a financial institution is the major asset that generates the major share of the institution’s income. Loan is the major asset of financial institutions from which they generate income. The quality of loan portfolio determines the profitability of the financial institutions. The loan portfolio quality has a direct bearing on financial institution’s profitability.

The highest risk facing a financial institution is the losses derived from delinquent loans (Dang, 2011). Thus, nonperforming loan ratios are the best proxies for asset quality. Different types of financial ratios used to study the performances of financial institutions by different scholars. It is the major concern of all financial institutions to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the financial institutions. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a financial institutions such as SACCOs. According to Sangmi and Nazir (2010), the lower the ratio the better the SACCOs financial performance. The current study therefore will attempt to establish the effect of asset quality regulations on financial performance of SACCOs.

2.3.3 Earnings Performance Regulations and Financial Performance

Through earnings and based on the banks dividend policy a financial institution can overtime increase its capital base through retained earnings, thereby ensuring its ability to seize opportunities as they arise, for instance using retained profits to finance an adoption of technology that will increase operational efficiency. Apostolos et al., (2011) contribute to the existing literature on the importance of earnings by stating that strong profits combined with its earnings profile reflect an institution’s ability to support current and future tasks. More specifically, this ratio reflects the
institution’s ability to absorb losses, expand its financing, as well as, its ability to pay dividends to its shareholders, and helps develop an adequate amount of own capital. Olweny and Shipho (2011) find a strong negative significant relationship between ROA and operational cost efficiency implying that increasing operational costs result to poor profitability.

The earnings and profitability of a financial institution shows its ability to persistently generate income to increase its own funds and reserves and also settle its debt obligations. Furthermore, the stream of income can be used to capture a larger market share and seize other opportunities (Kumar, 2007). The historical source of generating earnings by banks was through interest-earning activities, that is, lending. However, over the years, banks have realized income and fees from other innovative activities (Kumar, 2006). The tools for assessing institution’s earnings and profit levels include ROA, ROE and the NIM. These ratios are analyzed periodically to ascertain whether performance is increasing or decreasing (Nyathira, 2012). From an institution's regulator’s standpoint, the essential purpose of earnings, both current and accumulated, is to absorb losses and augment capital. Earning is the initial safeguard against the risks of engaging in the banking business, and represents the first line of defense against capital depletion resulting from shrinkage in asset value. Earnings performance should also allow the bank to remain competitive by providing the resources required to implement management’s strategic initiatives.

The analysis of earnings includes all the institutions operations and activities. When evaluating earnings, examiners should develop an understanding of the institution’s core business activities. Therefore, when earnings are being assessed, institutions should be aware of nonrecurring events or actions that have affected earnings performance, positively or negatively, and should adjust earnings on a tax equivalent basis for comparison purposes. Although the analysis makes adjustments for non-recurring events, examiners should also include within their analysis the impact that these items had on overall earnings performance. Events that may affect earnings include adoption of new accounting standards, extraordinary items, or other actions taken by management that are not considered part of the normal operations such as sales of securities for tax purposes or for some other reason unrelated to active management of the securities portfolio.
Liquidity is another factor that determines the level of a SACCO financial performance. Liquidity refers to the ability of the SACCO to fulfill its obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with SACCOs profitability. The most common financial ratios that reflect the liquidity position of a SACCO according to Dang (2011) are customer deposit to total asset and total loan to customer deposits. Other scholars use different financial ratio to measure liquidity. For instance Ilhomovich (2009) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks (Said and Tumin, 2011).

The first prudential standard is the minimum amount of liquid capital that MFIs should raise to entry the regulated market (Staschen, 2003). This requirement is an absolute measure of solvency and is usually established by primary regulation (Staschen, 2003). This prudential standard is conceived to support the start-up and initial years of operations of a MFI until it reaches its break-even point (Jansson et al, 2004). Some argue that high minimum capital requirements could act as barriers to market entry to possible new players that are not able to raise sufficient capital for the initial stages as a regulated institution. But, on the other hand, a high minimum capital requirement could help to mitigate moral hazard behaviour among shareholders (Jansson et al, 2004).

The mechanisms that explain why liquidity can suddenly evaporate operate through the interaction of funding illiquidity due to maturity mismatches and market illiquidity. As long as a financial institution’s assets pay off whenever its debt is due, it cannot suffer from funding liquidity problems even if it is highly levered. However, financial institutions typically have an asset-liability maturity mismatch and hence are exposed to funding liquidity risk. A funding shortage arises when it is prohibitively expensive both to borrow more funds and sell off its assets. In short, problems only arise if both funding liquidity dries up high margins/haircuts, restrained lending) and market liquidity evaporates fire sale discounts (Denis and Muganga, 2010).
2.4 Conceptual Framework

The framework hypothesizes that capital adequacy, asset quality, management efficiency and liquidity management regulations all directly affect financial performance of SACCOs in Kenya. The relationship is depicted in Figure 2.1.

<table>
<thead>
<tr>
<th>Capital Adequacy Regulations</th>
<th>Asset Quality Regulations</th>
<th>Financial Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Total assets</td>
<td>- Quality of loan assets</td>
<td>- Return on Equity</td>
</tr>
<tr>
<td>- Total deposits</td>
<td>- Financial investments</td>
<td>- Return on Assets</td>
</tr>
<tr>
<td>- Level of compliance</td>
<td>- Property assets</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Earnings Performance Regulations</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Interest on deposits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cost of external loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Provision for bad loans</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liquidity Management Regulations</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Liquidity ratios</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- External borrowing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Loans to deposit ratio</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Independent Variables**

**Dependent Variable**

Figure 2.1: Conceptual Framework (Author, 2017)

2.4.1 Capital Adequacy Regulations

Capital regulation has been one of the key policy tools since the inception of the Basle Accord used to control financial stability of the banking sector. The two main functions of capital are, first and foremost the incentives function and secondly, the risk-sharing function. Due to the debt-like nature of their liabilities, SACCOs have an incentive to engage in risk shifting or asset substitution, that is, to take on excessive risk knowing that the downside risk is born by their creditors (depositors). Requiring SACCOs to hold a minimum ratio of capital to assets reduces the SACCO’s incentive to take risk. On the risk sharing aspect, Capital acts like a buffer that may offset the losses of the creditors (depositors) and allows for the orderly liquidation and disposal of assets in the event of financial distress. However, excessive regulations may have adverse effects since it may increase the cost of intermediation and reduce the
profitability of SACCOs. Similarly, if SACCOs focus solely on meeting the levels of compliance as required by SASRA, their business strategies may be affected as the SACCOs may end up altering their mode of operations not to meet performance targets but satisfy SASRA rules.

2.4.2 Asset Quality Regulations
A significant component of SACCO risk lies in the quality of its assets since its primary activity relates to extending credit to borrowers. Default occurs when a debtor has not fulfilled legal obligations according to the debt contract, or has violated a loan covenant (condition) of the debt contract, which might occur with all debt obligations. Poor asset quality has been one of the major causes of SACCO failure in Kenya. Nonperforming loans mainly lent to insiders is one of the major cause of SACCO failures in Kenya. According to the Central Bank of Kenya, asset quality as measured by the ratio of net non-performing loans to gross loans has improved consistently over the past five years and this is attributed to the risk management programs implemented by the financial institutions which enhanced credit appraisal and administration standards. SASRA regulations on asset quality are thus aligned to those of the Central Bank of Kenya and give SACCOs asset quality ratios that must be met to ensure better performance. Further, SASRA limits the level of asset investment though in some cases such as those run by banks, some assets are worth investing and give better returns if managed well.

2.4.3 Earnings Performance Regulations
Through earnings and based on the SACCO’s dividend policy a SACCO can overtime increase its capital base through retained earnings, thereby ensuring its ability to seize opportunities as they arise, for instance using retained profits to finance an adoption of technology that will increase operational efficiency. Importance of earnings in SACCOs can be seen through strong profits combined with its earnings profile which reflect a SACCO’s ability to support current and future tasks. More specifically, this ratio reflects the SACCO’s ability to absorb losses, expand its financing, as well as, its ability to pay dividends to its shareholders, and helps develop an adequate amount of own capital. SASRA requires that SACCOs provide specific percentage as provision for bad loans which often affects earnings. Further, the fluctuating cost of loans and the static interest on deposit leaves little room for SACCOs to meet loan
requirements of their members. The problem is compounded by the higher cost of credit from banks and the limitations of the share capital.

2.4.4 Liquidity Management Regulations

Financial intermediation theory posits that liquidity creation is the key reason why banks exist. The Central Bank of Kenya defines liquidity as “the ability of financial institutions to fund increases in asset holdings and meet obligations as they fall due”. One key purpose of managers is the management of liquidity risk which can result from a mismatch in the maturities of assets and the ‘obligations due” in these case withdrawable deposits, and whose occurrence in one institution can have systemic effects on the whole industry. With this in view regulators attempt to manage liquidity risk by imposing minimum liquidity ratios. SACCOs have however managed to maintain a liquidity ratio well in excess of the minimum set by the regulatory authorities, there is an opportunity cost in holding high liquidity, which is characterized by loss of an opportunity to hold onto high interest generating investments. Thus accumulation of excess liquidity in SACCOs precipitates inefficiency. Further, given that SACCOs are wholly dependent on members share deposits and transaction cost to stay afloat, regulations on loans to deposit ratio may affect the financial performance of SACCOs by limiting the amount of loans to be offered to members.

2.5 Summary of Reviewed Literature

According to SASRA, the SACCOs society regulations are meant to improve the competitiveness of SACCOS by setting financial and operating standards commensurate to the deposit taking business conducted by SACCOs. SACCO regulations and performance relate in that the regulations are meant to set specific requirements on the tools used to measure performance leading to a direct relationship (Financial Sector Deepening, 2009). While there have been several reform initiatives in SACCOs subsector in the past, the introduction of a SACCOs specific law is recognition of the unique financial intermediation function that SACCOs play in an economy. Thus the operational regulations and performance standards are specific and prescriptive; not to make SACCOs societies non-competitive and stifle their growth but to ensure that they operate and grow within a framework that promotes sound financial and business management practices. This study will seek to address
the existing research gap by conducting a study to determine the effects of statutory regulations on financial performance of SACCOs

2.6 Critique of Reviewed Literature

Various studies in literature have attempted to evaluate the effect of regulations on financial performance of financial institutions in different contexts. Wanjiru (2012) did a descriptive study on the effect of financial regulation on financial performance of deposit-taking microfinance institutions in Kenya and found that the supportive regulations asset quality led to the improvement in financial performance of MFIs. However, according to the CBK (2011), such regulations may or may not lead to increased financial performance but help in stabilizing the institutions operating environment. Secondly, regulations on liquidity are supposed to protect shareholders, build confidence, ensure that market failures are corrected, redress information asymmetry and ensure transparency (SASRA, 2010). SACCO sector stability impacts long-term economic growth through effect on the efficiency of intermediation and allow monitoring of the users of external funds, thus affecting the productivity of capital employed and improving financial performance. Muriuki and Ragui (2013) studied the effect of SASRA regulations on liquidity and found that regulations on liquidity and corporate governance enhanced performance of SACCOs. However, there is no evidence of such study in Kenya which has adopted the CAEL framework.

Thirdly, Carpenter (2010) found that capital adequacy regulations in the context of functional reserves in banking expressed as a capital ratio of liquid assets must be held comparable to the amount of money that is lent out. This requirement is put into place to ensure that these institutions are not holding investment that increase the risk of default and that they have enough to sustain operating losses while still honoring withdraws. In the Kenyan context, Chege (2006) found that the non-remittance of members' deductions has a negative impact on the SACCO performance and provides negative effects manifested in liquidity problems leading to low returns on loans. Meagher (2002) investigated the effects of capital adequacy requirements and found that the requirements performed a risk sharing function and limited the moral hazard of shareholders. Finally, Ali (2013) studied the impact of regulatory framework on microfinance in Kenya and found that better earnings would be attained if the microfinance sector used the SACCO regulatory framework in order to achieve
massive and sustainable delivery of financial services to the lower income section of the population. Ferri and Kalmi (2014) studied regulatory burden and its effect on credit unions and found that high capital requirements by regulatory bodies can affect their earnings performance. Therefore, a clearer understanding of how these regulations need to be further enumerated.

2.7 Research Gaps
Various studies such as those of Wanyoike (2013), Biwott (2014) and Buluma et al., (2015) have reported that before the enactment of the SASRA Act, the SACCO sector had a myriad of challenges; a number of SACCOs collapsed due to mismanagement, SACCO managers made imprudent investments, liquidity management was a serious problem, and there were a lot of challenges in loan administration with many cases insider loans leading to a collapse of many SACCOs. SASRA Act and the accompanying regulations were thus seen as a cure to the many challenges bedeviling the SACCO sector. According to these studies higher capital requirements, and increase in management efficiency impacted positively to SACCO’s profitability in the post- capital regulation period. The studies revealed that capital regulation affects financial performance in SACCOs. The studies adopted various research designs however they did not classify these regulations in terms of the CAEL factors used by SASRA in measuring financial performance of SACCOs. In order to clearly understand the effect of SASRA regulations on financial performance of SACCOs, more empirical research needs to be carried out. The current study will attempt to fill this knowledge gap.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section shows the roadmap which was used by the researcher to attain accuracy in the description, explanation, and prediction. It comprises of research design, target population, sampling procedure, data collection methods, data collection instruments, and data analysis.

3.2 Research Design

According to Mugenda and Mugenda (1999), research design is the outline plan or scheme that is used to generate answers to research problem. It’s basically the structure and plan of investigation. A descriptive approach was adopted in this study. A descriptive research design is the process of collecting data from the members of a population in order to determine the relationship between variables study, this is because the researcher wanted to establish the relationship between two variables. The study aimed at analyzing the effects of statutory regulations on financial performance of SACCOS in Nakuru County, Kenya.

3.3 Target Population

Target population can be defined as a compute set of individuals, cases /objects with some common observable characteristics of a particular nature distinct from other population. According to Mugenda and Mugenda (1999), a population is a well-defined as a set of people, elements and events that are being investigated. The target population will comprise branch managers, finance managers, credit managers and internal auditors of the deposit-taking SACCOS in Nakuru County. Available data indicate that there are eight (8) deposit taking SACCOS in the town which operate Front Office Services and are registered by SASRA; including Cosmopolitan, Metropolitan, Boresha, Stima, Mwalimu, Uni-County, Unaitas and Vision Africa. The SACCOS have a combined targeted staff population of 64. Since the targeted population is fairly small, the study used a census technique to collect data. The entire target population was therefore form the sample of the study.
3.4 Data Collection Instruments

Although several tools exist for gathering data, the choice of a particular tool depends on the type of research. The study collected both primary and secondary data. In this study an appropriate method to collect the primary data is a questionnaire survey. The study used closed ended questionnaires as the main tools for collecting data. According to Kothari (2006), a questionnaire is the best tool for the researcher who wishes to acquire the original data for describing a population. Questionnaires enable the researcher to reach a large sample within a short time. Barrick and Mount (2001) assert that matrix questions share the same set of response categories and the most commonly used form of the category is the Likert type scale. For convenience and better analysis, a five point Likert scale was used. A self-administered questionnaire was constructed based on the above-mentioned instruments. Further, the researcher sourced secondary data using a data collection sheet.

3.5 Data Collection Procedures

Before getting on data collection, the researcher sought a research permit from the National Council for Science, Technology and Innovation (NACOSTI). The researcher then booked an appointment with relevant SACCO heads to seek clearance from the relevant SACCOs. The data needed for a study can be collected either as secondary data or as primary data. Cooper and Schindler (2005), define primary data to be data collected at source whereas secondary data is data which already exists. Data was collected primarily using closed ended questionnaires. Secondary data such as dividend paid out was sourced from SASRA’s annual financial documentation. The researcher attempted to personally administer the questionnaires to ensure correct information is received from the respondents. Secondary data was also be collected from annual financial publications and relevant documentation from the specific SACCOs.

3.6 Pilot Study

The data collection instruments were pretested in Baringo Farmers SACCO in order to ensure the reliability and validity of the instruments. The SACCO was chosen because its regulated by SASRA and operates out of Nakuru County. Piloting was done on 10 respondents who did not form part of the sample.
3.6.1 Validity of Instruments

According to De Vos (1998), a valid instrument measures the concept in question accurately. To ensure validity, the researcher used accurate measuring instruments, standardize data collection procedures by guiding the respondents appropriately and carried out piloting to determine usefulness of instruments, clarity in terminology, focus of questions, relevance and applicability, time required and methods for analysis. The findings of the pilot study and the respondents’ comments were used to enhance the quality of the questionnaires so that they adequately address the constructs of the study.

3.6.2 Reliability of Instruments

A questionnaire with a high reliability would receive similar answers if it is done again or by other researchers (Bryman and Bell, 2007). Utilizing data from the pilot test, the reliability was determined through the Cronbach alpha coefficient analysis. The Cronbach alpha reliability recommends a reliability coefficient of $\alpha = 0.70$ and above. Cronbach alpha provides a good measure of reliability because holding other factors constant the more similar the test content and conditions of administration are, the greater the internal consistency reliability. The reliability results are shown in Table 3.1.

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Number of Test</th>
<th>Cronbach Alpha Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Adequacy Regulations</td>
<td>6</td>
<td>0.772</td>
</tr>
<tr>
<td>Asset Quality Regulations</td>
<td>6</td>
<td>0.780</td>
</tr>
<tr>
<td>Earnings Performance Regulations</td>
<td>6</td>
<td>0.726</td>
</tr>
<tr>
<td>Liquidity Regulations</td>
<td>6</td>
<td>0.740</td>
</tr>
</tbody>
</table>

The reliability test shown in Table 3.1 produced Cronbach alpha ($\alpha$) values of greater than 0.70, making the questionnaires largely reliable as recommended by Fraenkel & Wallen (2000).
3.7 Data Analysis and Presentation

Data processing and analysis is the categorizing, manipulating and summarizing data in order to obtain answers to research questions. The study used both descriptive and inferential statistics and the findings will be presented in tables. For the purpose of analyzing the relationships of each of the independent variable on the dependent variable, a regression analysis will be used to test the hypothesis. The study hypothesized the following relationship:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon \]

Where: 
- \( Y \) = Financial Performance of SACCOs,
- \( X_1 \) = Capital Adequacy Regulations,
- \( X_2 \) = Asset Quality Regulations,
- \( X_3 \) = Earnings Performance Regulations,
- \( X_4 \) = Liquidity Management Regulations

\( \beta_0, \beta_1, \beta_2, \beta_3, \text{ and } \beta_4 \) = Beta Coefficients, and \( \epsilon \) = Error Term
CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction
The chapter outlines an analysis of the collected data, interpretation and discussion of the findings. Following the processing and analyzing of the collected data, the findings are presented and discussed. The responses on all the independent variables are on a 5-point scale in which 1, 2, 3, 4 and 5 represent strongly disagree, disagree, neutral, agree, and strongly agree respectively. Analysis using secondary data for each SACCO is also carried out. The chapter finally provides the regression analysis and the inferences drawn.

4.2 Response Rate
The researcher issued 64 questionnaires to the respondents across all the targeted SACCOs in Nakuru County, Kenya. In each SACCO, the researcher sought contact persons to enable easier issuance and clarification on the issues that were unclear. Out of 64 questionnaires that were issued to the sampled respondents, 57 of them were filled and returned. Of the returned questionnaires, 5 were incorrectly filled and thus were not used in the final analysis. Therefore, 52 questionnaires were correctly filled and hence were used for analysis representing a response rate of 81.25%. The high response rates meant the findings can be used to generalize performance issues in the targeted SACCOs.

4.3 Respondents’ Profile
The profile of respondents identifies pertinent information about the employees who participated in the research process depending on the relevance of the information sought.

The researcher sought to find out the distribution of the respondents according to their gender, age bracket, education level and working experience in their various SACCOs. The aim was to deduce any trend from the respondent’s profile that was directly linked to the variables under study.
4.3.1 Gender Distribution of the Respondents

The study sought to establish the gender of the respondents with an aim of establishing whether there was a link between gender and the variables under study. Table 4.1 shows the distribution of the respondents according to their gender.

**Table 4.1: Distribution of Respondents by Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>33</td>
<td>63.5</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>36.5</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100.0</td>
</tr>
</tbody>
</table>

According to the findings, majority of employees are male (63.5%) while female were 36.5%. The researcher deduced that most respondents were male and attributed the trend to the existing gender gap in employment in most sectors in Kenya today.

4.3.2 Distribution of Respondents by Age Group

The study further wanted to establish the distribution of ages of the employees since previous studies have linked age to various performance measures. Table 4.2 shows the distribution of the respondents according to their ages.

**Table 4.2: Distribution of Respondents by Age**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 - 40 years</td>
<td>4</td>
<td>7.7</td>
</tr>
<tr>
<td>41 - 50 years</td>
<td>37</td>
<td>71.2</td>
</tr>
<tr>
<td>above 50 years</td>
<td>11</td>
<td>21.2</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The findings in Table 4.2 indicate that a majority of the respondents in the targeted SACCOs are of the age group 41 – 50 years (71.2%) while the least age group was between 31-40 years (7.7%). The researcher attributed this trend to the nature of progression of employees in SACCOs where management positions are often filled by those who have progressed through the ranks which would always take longer periods to achieve.
4.3.3 Distribution of Respondents by Attained Educational Level

The study further sought to establish the educational levels of the respondents in order to ascertain if it influenced the variables under study. Table 4.3 shows the distribution of the respondents according to their attained educational levels.

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>5</td>
<td>9.6</td>
</tr>
<tr>
<td>Degree</td>
<td>22</td>
<td>42.3</td>
</tr>
<tr>
<td>Masters</td>
<td>25</td>
<td>48.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

From Table 4.3, the study established that 48.1% of the respondents had a master degree or above level of education which was attributed to the higher entry qualification levels in the SACCO sector in Kenya. Further, over 90% of the respondents had at least an undergraduate degree further indicating higher educational requirements needed to join the SACCO sector.

4.3.4 Working Experience of the Respondents

The researcher further wanted to establish the working experience of the respondents. This was important since previous studies indicated positive relationship between experience of employees and their performance. The findings of working experience are shown in Table 4.4.

<table>
<thead>
<tr>
<th>Working Experience</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3 years</td>
<td>8</td>
<td>15.4</td>
</tr>
<tr>
<td>4 - 7 years</td>
<td>9</td>
<td>17.3</td>
</tr>
<tr>
<td>8 - 10 years</td>
<td>21</td>
<td>40.4</td>
</tr>
<tr>
<td>above 11 years</td>
<td>14</td>
<td>26.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

According to the findings, majority of the respondents (40.4%) had worked for the SACCOs between 8 to 10 years. Cumulatively, more than 67.3% had more than 8
years of experience while only 15.4% had less than 3 years of working experience. This trend was attributed to the fact that most employees rise through the ranks over some period of time which translates to higher work experience and longer duration in their respective SACCOs. Further, the longer experience implied that most employees clearly know the workings of their SACCOs and thus their responses would be valid and relevant.

4.4 Findings of the Study Variables
The researcher analyzed the effect of statutory regulations on the financial performance of SACCOs in Nakuru County, Kenya. The selected regulations were capital adequacy, asset quality, earnings performance and liquidity. The dependent variable was financial performance of SACCOs.

4.4.1 Effect of Capital Adequacy Regulations on Financial Performance
The study sought to establish the effect of capital adequacy regulations on financial performance. The results of the analysis on factors associated with capital adequacy and how it influences financial performance are shown in Table 4.5.

<table>
<thead>
<tr>
<th>Description</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our SACCO has had a high capital adequacy ratio due to the strict adherence</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.79</td>
<td>1.035</td>
</tr>
<tr>
<td>to regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our SACCO is inadequately capitalized to meet modern day challenge and it</td>
<td>52</td>
<td>3</td>
<td>5</td>
<td>4.10</td>
<td>.774</td>
</tr>
<tr>
<td>thus seeks capital infusion from external sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SACCOs with higher levels of capital tend to perform better than their</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>3.31</td>
<td>1.502</td>
</tr>
<tr>
<td>undercapitalized peers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate capital provides the ultimate protection against insolvency and</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>3.50</td>
<td>1.540</td>
</tr>
<tr>
<td>liquidation arising from risk in the SACCO business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher capital levels arising from adherence to regulations in our SACCO</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>3.25</td>
<td>1.219</td>
</tr>
<tr>
<td>has enhanced our risk mitigation process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher capital levels arising from adherence to capital regulation</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.21</td>
<td>1.035</td>
</tr>
<tr>
<td>has enhanced our customer product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>52</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From the findings in Table 4.5, majority of the respondents agreed that their SACCO has had a high capital adequacy ratio due to the strict adherence to regulations (3.79), that their SACCO is inadequately capitalized to meet modern day challenge and it thus seeks capital infusion from external sources (4.10) and that adequate capital provides the ultimate protection against insolvency and liquidation arising from the risk in the SACCO business (3.50). The respondents were however unsure whether SACCOs with higher levels of capital tend to perform better than their undercapitalized peers(3.31), whether higher capital levels arising from adherence to regulations in their SACCO has enhanced our risk mitigation process (3.25) or whether higher capital levels arising from adherence to capital regulation has enhanced our customer product portfolio (3.21).

4.4.2 Effect of Asset Quality Regulations on Financial Performance

The study further sought to establish the effect of asset quality regulations on financial performance in line with the second study objective. Table 4.6 shows the findings related to asset quality regulations and financial performance.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our SACCO’s ratio of net non-performing loans to the gross loans has been low due to adherence to asset quality regulations</td>
<td>52</td>
<td>2</td>
<td>4</td>
<td>3.37</td>
<td>.817</td>
</tr>
<tr>
<td>Our SACCO carefully grants loans that are well examined and in compliance to existing regulations</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>3.54</td>
<td>.979</td>
</tr>
<tr>
<td>Our SACCO has a sound credit culture that is trusted by our customers</td>
<td>52</td>
<td>1</td>
<td>4</td>
<td>3.02</td>
<td>.874</td>
</tr>
<tr>
<td>Our SACCO’s credit policies are integrated with performance objectives and in line with asset quality regulations</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>3.37</td>
<td>1.329</td>
</tr>
<tr>
<td>The SACCO credit management system involves all departments that handle customers thereby minimizing the negative effects of bad debts</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>2.98</td>
<td>1.111</td>
</tr>
<tr>
<td>Higher asset quality levels arising from adherence to regulations has enhanced our customer product portfolio</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.29</td>
<td>.848</td>
</tr>
</tbody>
</table>

Valid N (listwise) | 52 |
The respondents, on average, agreed that their SACCO carefully grants loans that are well examined and in compliance to existing regulations (3.54). However, majority of the respondents were unsure when asked whether their SACCO’s ratio of net non-performing loans to the gross loans has been low due to adherence to asset quality regulations (3.37), whether their SACCO has a sound credit culture that is trusted by our customers (3.02), whether their SACCO’s credit policies are integrated with performance objectives and in line with asset quality regulations (3.37), whether their SACCO credit management system involves all departments that handle customers thereby minimizing the negative effects of bad debts (2.98) and whether higher asset quality levels arising from adherence to regulations has enhanced our customer product portfolio (3.29). On average, the other responses had a standard deviation close to 1.000 which indicated smaller dispersion from the mean which was interpreted to mean convergence of responses on the particular propositions.

4.4.3 Effect of Earnings Performance Regulations on Financial Performance

The study further sought to establish the effect of earnings performance regulations on financial performance in line with the third study objective. The findings are based on a 5-point Likert scale and are depicted in Table 4.7.

Table 4.7: Effect of Earnings Performance Regulations on Financial Performance

<table>
<thead>
<tr>
<th>Description</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from loans remains the most crucial source of income and forms the bulk of total income</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.44</td>
<td>.895</td>
</tr>
<tr>
<td>Interests from our investments have remained at above the required average of 5%</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.85</td>
<td>.751</td>
</tr>
<tr>
<td>We have had a consistent decrease in the overall cost of borrowing thereby boosting the net financial income in the past five years</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.83</td>
<td>.901</td>
</tr>
<tr>
<td>Our SACCO has maintained a respectable cost of external borrowing expenses to total income as required by statutory regulations</td>
<td>52</td>
<td>3</td>
<td>5</td>
<td>4.48</td>
<td>.641</td>
</tr>
<tr>
<td>Provisions for loan losses have markedly increased in the past five years as a result of strict application of SASRA Regulations</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.90</td>
<td>.664</td>
</tr>
<tr>
<td>Our adherence to good business practice has made us more conscious on putting proper loan recovery mechanisms</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>4.12</td>
<td>.758</td>
</tr>
</tbody>
</table>

Valid N (listwise) 52
The study established that most of the respondents agreed that interests from their investments have remained at above the required average of 5% (3.85), that they have had a consistent decrease in the overall cost of borrowing thereby boosting the net financial income in the past five years (3.83), that SACCO has maintained a respectable cost of external borrowing expenses to total income as required by statutory regulations (4.48), that provisions for loan losses have markedly increased in the past five years as a result of strict application of SASRA Regulations (3.90) and that adherence to good business practice has made us more conscious on putting proper loan recovery mechanisms (4.12). However the respondents were unsure when asked whether income from loans remains the most crucial source of income and forms the bulk of total income (3.44). On average, the responses had a standard deviation of <1.000 which indicated smaller dispersion from the mean which was interpreted to mean convergence of responses on the particular propositions.

### 4.4.4 Effect of Liquidity Regulations on Financial Performance

The study then sought to establish the effect of liquidity regulations on financial performance in line with the third study objective. The findings are based on a 5-point Likert scale and are depicted in Table 4.8.

<table>
<thead>
<tr>
<th>Description</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our SACCOs liquidity ratio has been always above the recommended ratio of 20%</td>
<td>52</td>
<td>3</td>
<td>5</td>
<td>4.13</td>
<td>.658</td>
</tr>
<tr>
<td>Our SACCO often meets its short term obligations due to increased liquidity</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.79</td>
<td>.572</td>
</tr>
<tr>
<td>The SACCO raises liquidity holdings hence reducing liquidity risks due to adherence of liquidity regulations</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.46</td>
<td>.917</td>
</tr>
<tr>
<td>Our SACCO’s credit policies are integrated with our performance objectives and are always in line with liquidity regulations</td>
<td>52</td>
<td>2</td>
<td>5</td>
<td>3.50</td>
<td>.897</td>
</tr>
<tr>
<td>The SACCO’s increased liquidity arising from adherence to liquidity regulations has enhanced our loan disbursement to customers</td>
<td>52</td>
<td>3</td>
<td>5</td>
<td>4.37</td>
<td>.627</td>
</tr>
<tr>
<td>Higher liquidity levels arising from adherence to liquidity regulations in our SACCO has enhanced our customer product portfolio</td>
<td>52</td>
<td>1</td>
<td>5</td>
<td>2.77</td>
<td>1.308</td>
</tr>
</tbody>
</table>

Valid N (listwise) 52
From the findings, majority of the respondents agreed that SACCOs liquidity ratio has been always above the recommended ratio of 20% (4.13), that their SACCO often meets its short term obligations due to increased liquidity (3.79), that their SACCO’s credit policies are integrated with our performance objectives and are always in line with liquidity regulations (3.50) and that the SACCO’s increased liquidity arising from adherence to liquidity regulations has enhanced our loan disbursement to customers (4.37). However, the respondents were unsure when asked whether the SACCO raises liquidity holdings hence reducing liquidity risks due to adherence of liquidity regulations (3.46) or whether higher liquidity levels arising from adherence to liquidity regulations in our SACCO has enhanced our customer product portfolio (2.77)

4.5 Correlation Analysis

The section presents findings resulting from correlation analysis using ROA and ROE

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>Capital Adequacy</th>
<th>Asset Quality</th>
<th>Earnings Performance</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROA</strong></td>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capital Adequacy</strong></td>
<td>Pearson Correlation</td>
<td>.259</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.064</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Asset Quality</strong></td>
<td>Pearson Correlation</td>
<td>.059</td>
<td>.275*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.675</td>
<td>.048</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Earnings Performance</strong></td>
<td>Pearson Correlation</td>
<td>-.012</td>
<td>.170</td>
<td>.193</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.935</td>
<td>.228</td>
<td>.171</td>
<td></td>
</tr>
<tr>
<td><strong>Liquidity</strong></td>
<td>Pearson Correlation</td>
<td>-.073</td>
<td>-.036</td>
<td>.078</td>
<td>.679**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.609</td>
<td>.802</td>
<td>.583</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed), *. Correlation is significant at the 0.05 level (2-tailed).
From the findings, capital adequacy \((r = 0.259)\) and asset quality \((r = 0.059)\) had a positive and weak correlation with ROA. However, earnings performance \((r = -0.012)\) and liquidity \((-0.073)\) had a negative and weak correlation with ROA. These findings are similar to those of Olweny and Shipho (2011). Further correlation analysis was carried out between the variables and ROE and the findings are presented in Table 4.10.

**Table 4.10: Correlation Analysis (ROE)**

<table>
<thead>
<tr>
<th></th>
<th>ROE</th>
<th>Capital Adequacy</th>
<th>Asset Quality</th>
<th>Earnings Performance</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Adequacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.267</td>
<td></td>
<td>.275*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.056</td>
<td></td>
<td>.048</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.080</td>
<td></td>
<td>.193</td>
<td>.679**</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.572</td>
<td></td>
<td>.228</td>
<td>.171</td>
<td></td>
</tr>
<tr>
<td>Earnings Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.013</td>
<td></td>
<td>.170</td>
<td>.929</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.929</td>
<td></td>
<td>.228</td>
<td>.171</td>
<td></td>
</tr>
<tr>
<td>Liquidity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.082</td>
<td></td>
<td>.078</td>
<td>.679**</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.563</td>
<td></td>
<td>.802</td>
<td>.583</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
<td>52</td>
</tr>
</tbody>
</table>

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

From the findings, capital adequacy \((r = 0.267)\) and asset quality \((r = 0.080)\) had a positive and weak correlation with ROE. These findings are similar to those of Nyathira (2012). However, earnings performance \((r = -0.013)\) and liquidity \((-0.082)\) had a negative and weak correlation with ROE. The findings for both ROA and ROE are consistent on the effect of capital adequacy, asset quality, earnings performance and liquidity regulations.
4.6 Regression Analysis

This section shows how the researcher came up with relevant inferences in line with the study objectives. The section presents and discusses findings resulting from regression analysis of the study variables.

4.6.1 Regression Model Summary

The study carried out a regression analysis to test the significance of the effect of the independent variables on financial performance measured as ROA and ROE. The model summary is shown in Table 4.11.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.267a</td>
<td>.071</td>
<td>-.008</td>
<td>.127535</td>
</tr>
</tbody>
</table>

The R², the coefficient of determination shows variability in dependent variable explained by the variability in independent variables. This value tells us how ROA can be explained by the independent variables. The R² value of 0.071 implies that 7.1% of the variations in ROA can be explained by the variations in independent variables. This therefore means that other factors not studied in this study contribute 92.7% of ROA. Further analysis was carried out using ROE and the findings are shown in Table 4.12.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.277a</td>
<td>.077</td>
<td>-.002</td>
<td>.098079</td>
</tr>
</tbody>
</table>

The R² value of 0.077 implies that 7.7% of the variations in ROE can be explained by the variations in independent variables. This therefore means that other factors not studied in this study contribute 92.3% of ROE.
4.6.2 Multiple Regression Analysis

The researcher further conducted a multiple regression analysis using ROE and the findings of the multiple regression model are depicted in Table 4.13. From the multiple regression model, holding all the independent variables constant, financial performance of SACCOs would increase by 0.329.

Table 4.13: Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.329</td>
<td>.159</td>
</tr>
<tr>
<td>Capital Adequacy</td>
<td>.031</td>
<td>.018</td>
</tr>
<tr>
<td>Asset Quality</td>
<td>.003</td>
<td>.025</td>
</tr>
<tr>
<td>Earnings Performance</td>
<td>-.005</td>
<td>.053</td>
</tr>
<tr>
<td>Liquidity</td>
<td>-.013</td>
<td>.043</td>
</tr>
</tbody>
</table>

Further, it was established that a unit increase in capital adequacy regulations would cause an increase in financial performance by a factor of 0.031, a unit increase in asset quality regulations would cause an increase in financial performance by a factor of 0.003, a unit increase in earnings performance regulations would cause a decrease in financial performance by a factor of 0.005 and a unit increase in liquidity regulations would cause a decrease in financial performance by a factor of 0.013. The un-standardized beta coefficients in Table 4.13 were then used to obtain the overall relationship of the independent variables and the dependent variable and model was formulated as:

\[
Y = 0.329 + 0.031X_1 + 0.003X_2 - 0.005X_3 - 0.13X_4
\]

Where \( Y \) = Financial Performance

\( X_1 \) = Capital Adequacy Regulations,
\( X_2 \) = Asset Quality Regulations,
\( X_3 \) = Earnings Performance Regulations,
\( X_4 \) = Liquidity Regulations.
4.6.3 Analysis of Variance (ANOVA)

The researcher sought to compare means using analysis of variance. ANOVA findings (P-value of .429) in Table 4.14 show that there is no significant correlation between the predictor variables (capital adequacy, asset quality, earnings performance and liquidity regulations) and dependent variable (financial performance of SACCOs).

Table 4.14: Analysis of Variance (ANOVA\textsuperscript{a})

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.038</td>
<td>4</td>
<td>.009</td>
<td>.978</td>
<td>.429b</td>
</tr>
<tr>
<td>Residual</td>
<td>.452</td>
<td>47</td>
<td>.010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.490</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: ROE

From the findings, ANOVA results (p= 0.429) indicated that there is no significant correlation between the predictor variables (capital adequacy, asset quality, earnings performance and liquidity regulations) and dependent variable (financial performance of SACCOs. This could be attributed to the use of secondary data for performance measures when tackling branch level data.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
The study sought to establish the effect of statutory regulations on the financial performance of SACCOs in Nakuru County, Kenya. In this chapter the findings of the study are summarized and conclusions are drawn from the summary. The conclusions enable the researcher to put across a number of key recommendations. The summary, conclusions and recommendations are presented in line with study objectives.

5.2 Summary of Findings
The researcher summarized the research findings in the order of the study objectives. The aim of summarizing was to enable the researcher to come up with key findings from which conclusions would be drawn.

5.2.1 Effect of Capital Adequacy Regulations on Financial Performance
The study established that SACCOs had a high capital adequacy ratio due to the strict adherence to regulations (3.79). Further, SACCOs are inadequately capitalized to meet modern day challenge and it thus seeks capital infusion from external sources (4.10). Finally, it was established that adequate capital provides the ultimate protection against insolvency and liquidation arising from the risk in the SACCO business (3.50). However it was unclear whether SACCOs with higher levels of capital tend to perform better than their undercapitalized peers (3.31), whether higher capital levels arising from adherence to regulations in their SACCO has enhanced our risk mitigation process (3.25) or whether higher capital levels arising from adherence to capital regulation has enhanced our customer product portfolio (3.21). From the correlation analysis capital adequacy \( r = 0.259 \) a positive and weak correlation with ROA. Similarly, capital adequacy \( r = 0.267 \) had a positive and weak correlation with ROE. The study deduced therefore that capital adequacy regulations had some effect on financial performance and thus SACCOs that are guided by the capital adequacy regulations would perform better financially.

5.2.2 Effect of Asset Quality Regulations on Financial Performance
The study established that SACCOs carefully grants loans that are well examined and in compliance to existing regulations (3.54). However, it was unclear whether
SACCO’s ratio of net non-performing loans to the gross loans has been low due to adherence to asset quality regulations (3.37), whether SACCOs had a sound credit culture that is trusted by our customers (3.02), whether SACCO’s credit policies were integrated with performance objectives and in line with asset quality regulations (3.37), whether SACCO credit management system involved all departments that handle customers thereby minimizing the negative effects of bad debts (2.98) and whether higher asset quality levels arising from adherence to regulations had enhanced our customer product portfolio (3.29). Correlation analysis carried out indicated that asset quality (r = 0.059) a positive and weak correlation with ROA. Similarly, asset quality (r = 0.080) had a positive and weak correlation with ROE. The study deduced therefore that asset quality had some effect on financial performance and thus SACCOs should embrace asset quality regulations for better performance.

5.2.3 Effect of Earnings Performance Regulations on Financial Performance
It was established that interests from their investments have remained at above the required average of 5% (3.85), that SACCOs had a consistent decrease in the overall cost of borrowing thereby boosting the net financial income in the past five years (3.83), that SACCOs had maintained a respectable cost of external borrowing expenses to total income as required by statutory regulations (4.48), that provisions for loan losses have markedly increased in the past five years as a result of strict application of SASRA Regulations (3.90) and that adherence to good business practice has made us more conscious on putting proper loan recovery mechanisms (4.12). However it was unclear whether income from loans remains the most crucial source of income and forms the bulk of total income (3.44). Further correlation analysis indicated that earning performance (r = -0.012) a negative and weak correlation with ROA. Similarly, earning performance (r = -0.013) had a negative and weak correlation with ROE. The study deduced therefore that earning performance had some effect on financial performance. However, the negative effect could be attributed to the limitations set by SASRA on the type and amount of asset that SACCOs can invest in.

5.2.4 Effect of Liquidity Regulations on Financial Performance
The study established that SACCOs liquidity ratio has been always above the recommended ratio of 20% (4.13), that SACCO often meets their short term
obligations due to increased liquidity (3.79), that their SACCO’s credit policies are integrated with performance objectives and are always in line with liquidity regulations (3.50) and that the SACCO’s increased liquidity arising from adherence to liquidity regulations had enhanced loan disbursement to customers (4.37). However, it was unclear whether SACCO raised liquidity holdings hence reducing liquidity risks due to adherence of liquidity regulations (3.46) or whether higher liquidity levels arising from adherence to liquidity regulations had enhanced customer product portfolio (2.77). Furthermore, correlation analysis carried out established that that liquidity (r = -0.073) a negative and weak correlation with ROA. Similarly, liquidity (r = -0.082) had a negative and weak correlation with ROE. The study deduced therefore that liquidity had some effect on financial performance. However, the negative effect could be attributed to the liquidity challenges facing SACCOs arising from their lack of access to cheaper sources of capital.

5.3 Conclusions of Findings

Based on the findings of the study, the researcher has drawn several conclusions which are presented in this section in line with the objectives of the study.

5.3.1 Effect of Capital Adequacy Regulations on Financial Performance

It was concluded that most SACCOs had a high capital adequacy ratio due to the strict adherence to regulations, that majority of SACCOs are inadequately capitalized to meet modern day challenge and it thus seeks capital infusion from external sources and that adequate capital provides the ultimate protection against insolvency and liquidation arising from the risk in the SACCO business. Though there was lack of clarity on whether SACCOs with higher levels of capital tend to perform better than their undercapitalized peers, whether higher capital levels arising from adherence to regulations in their SACCO has enhanced our risk mitigation process or whether higher capital levels arising from adherence to capital regulation has enhanced our customer product portfolio, it was concluded that capital adequacy regulations had some effect on financial performance.

5.3.2 Effect of Asset Quality Regulations on Financial Performance

The study concluded that most SACCOs carefully grants loans that are well examined and in compliance to existing regulations. However, it was unclear whether
SACCO’s ratio of net non-performing loans to the gross loans has been low due to adherence to asset quality regulations, whether SACCOs had a sound credit culture that is trusted by our customers, whether SACCO’s credit policies were integrated with performance objectives and in line with asset quality regulations, whether SACCO credit management system involved all departments that handle customers thereby minimizing the negative effects of bad debts and whether higher asset quality levels arising from adherence to regulations had enhanced our customer product portfolio. Since the correlation analysis carried out indicated that asset quality a positive and weak correlation with ROA and ROE, it was asset quality had some effect on financial performance and thus SACCOs should embrace asset quality regulations for better performance.

5.3.3 Effect of Earnings Performance Regulations on Financial Performance
It was concluded that interests from their investments have remained at above the required average of 5%, that SACCOs had a consistent decrease in the overall cost of borrowing thereby boosting the net financial income in the past five years, that SACCOs had maintained a respectable cost of external borrowing expenses to total income as required by statutory regulations, that provisions for loan losses have markedly increased in the past five years as a result of strict application of SASRA Regulations and that adherence to good business practice has made us more conscious on putting proper loan recovery mechanisms. However it was unclear whether income from loans remains the most crucial source of income and forms the bulk of total income. However, since earning performance had a negative and weak correlation with ROA and ROE, it was concluded that earning performance had some effect on financial performance. The negative effect was attributed to the limitations set by SASRA on the type and amount of asset that SACCOs can invest in.

5.3.4 Effect of Liquidity Regulations on Financial Performance
The study concluded that SACCOs liquidity ratio has been always above the recommended ratio of 20%, that SACCOs often meet their short term obligations due to increased liquidity, that their SACCO’s credit policies are integrated with performance objectives and are always in line with liquidity regulations and that the SACCO’s increased liquidity arising from adherence to liquidity regulations had enhanced loan disbursement to customers. However, it was unclear whether SACCO
raised liquidity holdings hence reducing liquidity risks due to adherence of liquidity regulations or whether higher liquidity levels arising from adherence to liquidity regulations had enhanced customer product portfolio. The study therefore concluded that since liquidity had a negative and weak correlation with ROE and ROA, liquidity had some effect on financial performance. However, the negative effect was attributed to the liquidity challenges facing SACCOs arising from their lack of access to cheaper sources of capital.

5.4 Recommendations

After drawing inferences in line with the study objectives, the researcher has proposed pertinent recommendations. The recommendations are based on the inferences drawn from the regression analysis and the conclusions drawn. The study recommends that comparative analysis of SACCOs with higher levels of capital to ascertain whether they perform better than their undercapitalized peers. Further, SACCO should analyze whether higher capital levels arising from adherence to regulations in their SACCO enhances their risk mitigation process. Finally, SACCO should clarify whether higher capital levels arising from adherence to capital regulation enhances their customer product portfolio.

The study recommends that SACCO’s ratio of net non-performing loans to the gross loans to be further investigated to ascertain its link asset quality regulations. Further, SACCO’s credit culture can be investigated from a customer perspective. Finally, the study recommends that SACCO’s credit policies be integrated with performance objectives and in line with asset quality regulations. The study recommends that SACCOs should enhance their income from loans and ensure that it remains the most crucial source of income and forms the bulk of total income. The study recommends that SACCOs should raise liquidity holdings hence reducing liquidity risks due to adherence of liquidity regulations and should increase their liquidity levels in adherence to liquidity regulations to enhance their customer product portfolio.

5.5 Suggestions for Further Studies

It is suggested further research be conducted to investigate the same variables but using purely secondary data over some period of time to further provide clear empirical data. Similarly, other scholars should also undertake a comparative analysis
of SASRA regulated and the non-SASRA regulated SACCO to ascertain whether
these regulations have helped SACCOs meet their objectives. Lastly, more research
should be conducted to understand the reporting procedures of SACCOs so as to
ascertain the various levels of compliance.
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Filene Research Institute

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APPENDICES

Appendix I: Letter of Introduction

To The Chief Executive Officer,

________________________________________ SACCO

Dear Sir / Madam,

RE: PERMISSION TO CARRY OUT ACADEMIC RESEARCH

I am a Master of Business Administration (Finance) student of Jomo Kenyatta University of Agriculture and Technology conducting a research study entitled “Effect of Statutory Regulations on Financial Performance of SACCOs in Nakuru County, Kenya”. Your organization has been identified and selected for the study. The purpose of this letter is to request you for permission to interview your employees using the Questionnaire copies attached. The information obtained is strictly for academic purpose and shall be treated with utmost confidentiality. For any clarifications kindly call Kiplangat on 0724 551 859.

Thank you.

Yours Faithfully,

KIPLANGAT NGETICH ONCHWARI
Appendix II: Questionnaire

The questionnaire is intended to collect information related to the effect of statutory regulations on the financial performance of SACCOs in Nakuru County, Kenya. Be assured the information you provide will be solely for academic purposes and will be treated in confidence.

Section A: Bio Data

Kindly fill the blank with a tick where appropriate.

1. What is your gender?  
   Male [ ]  
   Female [ ]

2. What is your age bracket?  
   Below 21 yrs [ ]  
   21-30 years [ ]  
   31-40 years [ ]  
   41-50 years [ ]  
   51 years and above [ ]

3. What is your highest education Level?  
   Primary School [ ]  
   High School [ ]  
   Certificate [ ]  
   Diploma [ ]  
   Degree [ ]  
   Masters [ ]  
   Doctorate [ ]

4. How long have you in the SACCO sector?  
   Between 0-3 years [ ]  
   Between 4-7 years [ ]  
   Between 8-10 years [ ]  
   Over 11 years [ ]

SECTION B: Influence of Capital Adequacy Regulations on Financial Performance. Using the scale below, please indicate your level of agreement to the following propositions relating Capital Adequacy Regulations and Financial Performance.

5 – Strongly Agree; 4 - Agree; 3 - Neutral; 2 – Disagree; 1 – Strongly Disagree

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our SACCO has had a high capital adequacy ratio due to the strict adherence to regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our SACCO is inadequately capitalized to meet modern day challenge and it thus seeks capital infusion from external sources

SACCOs with higher levels of capital tend to perform better than their undercapitalized peers

Adequate capital provides the ultimate protection against insolvency and liquidation arising from the risk in the SACCO business

Higher capital levels arising from adherence to regulations in our SACCO has enhanced our risk mitigation process

Higher capital levels arising from adherence to capital regulation has enhanced our customer product portfolio

SECTION C: Influence of Asset Quality Regulations on Financial Performance.
Using the scale below, please indicate your level of agreement to the following propositions relating Asset Quality Regulations and Financial Performance.

5 – Strongly Agree; 4 - Agree; 3 - Neutral; 2 – Disagree; 1 – Strongly Disagree

<table>
<thead>
<tr>
<th>Proposition</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our SACCO’s ratio of net non-performing loans to the gross loans has been low due to adherence to asset quality regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Our SACCO carefully grants loans that are well examined and in compliance to existing regulations</td>
<td></td>
<td></td>
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<tr>
<td>Our SACCO has a sound credit culture that is trusted by our customers</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Our SACCO’s credit policies are integrated with performance objectives and in line with asset quality regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The SACCO credit management system involves all departments that handle customers thereby</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
minimizing the negative effects of bad debts
Higher asset quality levels arising from adherence to regulations has enhanced our customer product portfolio

**SECTION D: Influence of Earnings Performance Regulations on Financial Performance.** Using the scale below, please indicate your level of agreement to the following propositions relating Earnings Performance Regulations and Financial Performance. 5 – Strongly Agree; 4 - Agree; 3 - Neutral; 2 – Disagree; 1 – Strongly Disagree

<table>
<thead>
<tr>
<th>Proposition</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from loans remains the most crucial source of income and forms the bulk of total income</td>
<td></td>
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<tr>
<td>Interests from our investments have remained at above the required average of 5%</td>
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<tr>
<td>We have had a consistent decrease in the overall cost of borrowing thereby boosting the net financial income in the past five years</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Our SACCO has maintained a respectable cost of external borrowing expenses to total income as required by statutory regulations</td>
<td></td>
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<tr>
<td>Provisions for loan losses have markedly increased in the past five years as a result of strict application of SASRA Regulations</td>
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<tr>
<td>Our adherence to good business practice has made us more conscious on putting proper loan recovery mechanisms</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
SECTION E: Influence of Liquidity Regulations on Financial Performance.

Using the scale below, please indicate your level of agreement to the following propositions relating Liquidity Regulations and Financial Performance.

5 – Strongly Agree; 4 - Agree; 3 - Neutral; 2 – Disagree; 1 – Strongly Disagree

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our SACCOs liquidity ratio has been always above the recommended ratio of 20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Our SACCO often meets its short term obligations due to increased liquidity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The SACCO raises liquidity holdings hence reducing liquidity risks due to adherence of liquidity regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our SACCO’s credit policies are integrated with our performance objectives and are always in line with liquidity regulations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The SACCO’s increased liquidity arising from adherence to liquidity regulations has enhanced our loan disbursement to customers</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Higher liquidity levels arising from adherence to liquidity regulations in our SACCO has enhanced our customer product portfolio</td>
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</tbody>
</table>
Appendix III: Data Collection Sheet

Use the table below to indicate the level of financial performance arising in your SACCO for the last 5 years.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Income (Millions)</td>
<td></td>
</tr>
<tr>
<td>Operating Expenses (Millions)</td>
<td></td>
</tr>
<tr>
<td>Total Capital(Millions)</td>
<td></td>
</tr>
<tr>
<td>Non-performing Assets Provisions</td>
<td></td>
</tr>
<tr>
<td>Gross Advances (Millions)</td>
<td></td>
</tr>
<tr>
<td>Total Assets (Millions)</td>
<td></td>
</tr>
<tr>
<td>Net Profits (Millions)</td>
<td></td>
</tr>
<tr>
<td>Annual value of premiums</td>
<td></td>
</tr>
<tr>
<td>Annual Interest on loan advances</td>
<td></td>
</tr>
<tr>
<td>Ratio of non-performing loans</td>
<td></td>
</tr>
<tr>
<td>Liquidity Ratio</td>
<td></td>
</tr>
</tbody>
</table>

Thank You and God Bless
Appendix IV: List of Registered Deposit Taking SACCOs in Nakuru County

1. Metropolitan SACCO
2. Cosmopolitan SACCO
3. Boresha SACCO
4. Stima SACCO
5. Mwalimu SACCO
6. Uni-County SACCO
7. Unaitas SACCO
8. Vision Africa SACCO

Source: SASRA (2018)
### Appendix V: Secondary Data

<table>
<thead>
<tr>
<th>Name of SACCO</th>
<th>Average ROA for 2012 – 2016</th>
<th>Average ROA for 2012 – 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan</td>
<td>0.203</td>
<td>0.352</td>
</tr>
<tr>
<td>Cosmopolitan</td>
<td>0.346</td>
<td>0.411</td>
</tr>
<tr>
<td>Boresha</td>
<td>0.402</td>
<td>0.432</td>
</tr>
<tr>
<td>Stima</td>
<td>0.397</td>
<td>0.473</td>
</tr>
<tr>
<td>Mwalimu</td>
<td>0.448</td>
<td>0.512</td>
</tr>
<tr>
<td>Uni-County</td>
<td>0.124</td>
<td>0.282</td>
</tr>
<tr>
<td>Unaitas</td>
<td>0.189</td>
<td>0.321</td>
</tr>
<tr>
<td>Vision Afrika</td>
<td>0.115</td>
<td>0.198</td>
</tr>
</tbody>
</table>

Source (SASRA, 2018)