THE IMPACT OF SASRA REGULATIONS ON THE FINANCIAL PERFORMANCE OF SACCO’S IN KENYA

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UNIVERSITY OF NAIROBI

NOVEMBER: 2012
DECLARATION

I certify that this research project is my original work and has not been presented for a degree in any University.

Signed........................................... Date 05/11/2012

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D61/60037/2010

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

University supervisor

Signed ........................................... Date 09/11/2012

Mirie Mwangi
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The completion of this project was not easy. It was not created by the author alone, but relied on the cooperative assistance of many unseen hands. First and foremost I owe special thanks to God Almighty for seeing me through. I sincerely acknowledge my supervisor Mr. Mirie Mwangi, Lecturer University of Nairobi, School of Business for his enabling support and guidance, his never ending patience, good eye and sharp mind.

I would also like to acknowledge the encouragement from all my colleagues and my MBA classmates, friends and relatives whose remarkable devotion and dedication throughout the project work was incredible. May God bless the work of their hands!
DEDICATION

This research study is dedicated to my wife and sons, my parents and my brothers and sister for their moral support throughout the entire MBA programme especially during this research project.
ABSTRACT

SACCOs in Kenya are required to adhere to regulations set in Sacco’s regulation authority (SASRA). 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. This study sought to fill the existing knowledge gap to determine the effect of SASRA regulation on Sacco’s financial performance and to answer the questions what is the impact of SASRA regulations on SACCO’s financial performance in Kenya. The objective of the study was to establish the impact of SASRA Regulations on SACCO financial performance in Kenya.

Causal research design was chosen to establish the effects of SASRA regulations on the financial performance of SACCOs in Kenya. The study targeted the 98 SACCOs registered by SASRA. The sampling method chosen for this study was purposive sampling which is a form of non-probability sampling to select 30 SACCO based in Nairobi. The study used secondary data. The secondary data was collected from the financial statements of the SACCOs to obtain information on annual earnings of the SACCOs registered under SASRA. A linear regression model of SACCOs return on assets versus SASRA regulations was applied to examine the relationship between the variables.

From the findings, the study found that higher capital requirements, and increase in management efficiency impacted positively to SACCO’s profitability in the post- capital regulation period. The study revealed that capital regulation affects financial performance in SACCOs. The study concluded that financial stability could be at risk as a result of shocks impinging on the economic system and absence of proper policy adjustments to mitigate the effects of these shocks. For policy implications, the findings indicate the importance of reviving demand for credit using macroeconomic policies.
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<tr>
<td>ACCOSCA</td>
<td>African Confederation of Savings and Credit Associations</td>
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<td>CAPR</td>
<td>Ratio of Capital to Total Assets</td>
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<td>CARs</td>
<td>Capital Adequacy Ratios</td>
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<td>CBK</td>
<td>Central Bank of Kenya</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>ICA</td>
<td>International Co-operative Alliance</td>
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<td>KGS</td>
<td>Kenya Gazette Suppliers</td>
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<td>KNFC</td>
<td>Kenya National Federation of Cooperatives</td>
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<td>KUSCCO</td>
<td>Kenya Union of Savings and Credit Cooperatives</td>
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<td>MCR</td>
<td>Minimum Capital Requirement</td>
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<td>MDIs</td>
<td>Microfinance Deposit taking Institutions</td>
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<td>MOCD&amp;M</td>
<td>Ministry of Co-operative Development and Marketing</td>
</tr>
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<td>PEARLS</td>
<td>Protection, Effective Financial Structure, Asset Quality, Rates</td>
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<td>RMFI</td>
<td>Rural and Micro Finance Institution</td>
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<td>ROA</td>
<td>Return on Assets</td>
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<td>ROB</td>
<td>Return on Business</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<td>SACCO'S</td>
<td>Savings and Credit Co-operative Societies</td>
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<td>SACCOL</td>
<td>Savings and Credit Co-operative League of South Africa</td>
</tr>
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<td>SASRA</td>
<td>SACCOs Society Regulatory Authority</td>
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<td>SME</td>
<td>Small and Micro Enterprise</td>
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<td>WOCCU</td>
<td>World Council of Credit Unions</td>
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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The unprecedented number of costly bank failures throughout the world in the last two decades of the twentieth century has focused attention on the need to determine more appropriate ways to improve upon the performance of different country’s financial systems. Bhole, (2004) stated that indeed, a substantial literature is already emerging on the causes and consequences of financial – mostly banking crises, and on various reforms that might help prevent future crises. Although the proposed reforms differ in important respects, nearly all include changes in existing financial regulations and supervisory standards (Sexton, 1986). This central core of agreement is certainly understandable insofar as the financial crises in countries ranging from the United States and Japan, to Korea and Mexico, to Chile and Thailand, to India and Russia, and to Ghana and Hungary have been blamed at least in part on ineffective regulation and supervision (Zimmer, 1993).

Recent economic crises in SACCOS have revealed the importance of regulations to hedge against the high risk attributed to imbalances in SACCOS’ balance sheets. Nonetheless, excessive regulations may have adverse effects. On the one hand, they serve as prudential measures that mitigate the effects of economic crises on the stability of the banking system and subsequent accompanying macroeconomic results. On the other hand, excessive regulations may increase the cost of intermediation and reduce the profitability of the in credit unions (Stiglitz, 2001). Diversity of RMFls and products is facilitated by a flexible regulatory environment in which they can develop innovative methodologies for reaching different market niches not served by
commercial banks. Nevertheless, at some point – in the sector’s evolution, in the growth of a successful RMFI, in the willingness of investors to enter these niches – regulations are appropriate both to facilitate commercialization and sustainability of the rural and micro finance (RMF) industry (especially through mobilization of savings from the public) and to ensure the stability of the financial system (as well as to protect deposits). Difficult decisions must be made in each country context as to the timing and complexity of regulations in order to promote orderly development without unduly stifling innovation. This review of Ghana’s experience, together with comparisons to other country case studies, is intended to draw lessons on how the timing and design of regulations has developed and affected the diversity, outreach and sustainability of RMFIs.

Whereas cooperative development in Kenya during the first era is well documented in the existing literature, the second era of cooperative development is yet to be adequately researched and understood. It is over a decade since the introduction of liberalization measures in Kenya, yet since then very little is known about the unfolding status of the cooperative movement. The few studies available tend to focus on disparate economic sectors of the cooperative movement, rather than providing comprehensive accounts that inform of the current status and functioning of cooperatives. To illustrate, some of the studies which have focused on SACCOs include; the use of performance indicators in savings and credit co-operative societies by Ngui (2010), and the power of financial ratios in detecting fraudulent activities in SACCOs (Leonard, 2009)
1.1.1 Savings and Credit Co-operative Societies in Kenya

SACCOs in Kenya are required by law to have their financial statements audited at the end of the fiscal year. Although most SACCOs comply with this requirement, financial statements are not always available on a monthly basis. Moreover, the financial position of most SACCOs is not accurately reported since many statements are not compliant with accepted accounting practices. For transparency, SACCOs are supposed to provide timely financial updates to their members and external auditors and they should be evaluated every three to five years using a competitive bidding process. An independent and qualified external auditor assures members and the general public about the authenticity of the SACCOs' books of accounts. SACCOs are required to comply with standards set by the regulatory body (McConnell, 2007).

Over the years, Kenyan SACCOs have catered for the needs of their membership. However, SACCOs are facing competition from banks which is further compounded by governance and financial management challenges. These issues have tainted the image of the SACCO sector. The board is the overall governing authority of a SACCO consisting of elected officials who oversee the running of the cooperative (WOCCU, 2009). While this process was put in place to ensure members are empowered to run their SACCO, there are several shortcomings related to this practice. Of concern is when elected officials are not necessarily qualified to assume leadership positions and fiduciary responsibilities. This has contributed to a myriad of problems which has seen many Kenyans lose their savings when their SACCOs go bankrupt because of weak governance and financial management. This failing is further complicated by the fact that the sector is not adequately regulated (FSD, 2009).
Some SACCOs in Kenya have adopted Front Office Services Activities (FOSA) to offer the services they render to clients. FOSAs have proved to be one of the key profit centers for SACCOs and members have appreciated the services offered by these FOSAs. Through the full utilization of the FOSA network, SACCOs provide their members with the full range of basic financial services and consolidate these services to the full satisfaction of members. The introduction of FOSA has contributed positively to the performance of SACCOs through improved profitability which has led to the declaration of a high dividend rates to the members (IFSB, 2005).

The government of Kenya established The SACCOs Societies Regulatory Authority (SASRA) under the Ministry of Cooperative Development and Marketing in an effort to reform SACCOs and ensures that there is confidence in the public towards the SACCOs sector and spurring Kenya’s economic growth through the mobilization of domestic savings (Ministry of Cooperatives and Marketing, 2008).

According to the KGS (2009) for effective enforcement of the regulations, SASRA is granted specific powers in law to deal with SACCOs societies that fail to comply. This is imperative as compliance cannot be left at the discretion of the SACCOs. In addition to financial capacity, licensing is testimony that a SACCO’s has the institutional capacity, in terms of human, technology and business processes to comply with the terms and conditions of the license. Thus failure to comply cannot be condoned as it will encourage impunity (Kenya Gazette, 2008). SASRA emphasizes that in accordance with vision 2030, the policy objective of establishing prudential regulation of deposit taking SACCOs societies is to enhance transparency and accountability in the SACCO subsector. This is consistent with the ongoing reforms in the
financial sector whose ultimate aim is to expand financial access, encourage efficiency and enhance financial stability of financial service providers in Kenya (IFSB 2010). SASRA recognizes that as a new law it is certain to bring challenges and impact on the SACCOs societies in different ways and extent. It is the responsibility of the board of directors and the management to analyze their business reality against the operational regulations and prudential standards; and develop strategies through the business plans for consideration by the Authority as part of the licensing process (Musyoki, 2008).

1.1.3 Determinants of Performance of SACCOS

Terence (1989) defines performance measurement as a way of ensuring that resources available are used in the most efficient and effective way. The essence is to provide for the organization the maximum return on the capital employed in the business. Financial performance for SACCOs is very important because managers need to know how well the SACCOs are performing. There are two major reasons as to why SACCOs should have financial performance measurement (Johnson and Mark, 1997). The first one is to produce financial statements at the right time. Secondly, financial statements should be analyzed to produce information about the performance of the scheme, which must be used to improve that performance.

Based on WOCCU’s standards of measuring performance, the factors which determine the performance of SACCOs include; asset base, Liabilities, Performance of the loan book, corporate governance and the quality of staff and Regulations in the industry.
1.1.4 SACCOs and Performance

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. 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 (PEARLS) 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.

1.2 Statement of the Problem

The research undertaken to analyze the effects of capital regulations on credit unions' performance has focused on the analysis of either cross-country or individual countries' banking systems. Chiuri, Ferri, and Majnoni (2002) examined a panel of data for 572 MFIs in 15 developing countries. They found consistent evidence- after seeking the control for banking crises- that the imposition of capital regulation induced a reduction in loan supply and, hence, in total lending in these countries. The study by Demirguc-Kunt, Laeven, and Levine (2003)
analyzed the impact of credit regulations as well as other internal determinants, which included concentration, and institutions, on MFIs profit margins. The study analyzed the impact of MFIs regulations, concentration, and institutions using bank-level data across 72 countries while controlling for a wide array of macroeconomic, financial, and bank-specific traits. Doliente (2003) investigated the determinants of net interest margins of banks in four Southeast Asian countries. Net interest margins are partially explained by bank-specific factors, namely operating expenses, capital loan quality, collateral and liquid assets. Barth, Caprio, and Levine (2004) used a new data base on bank regulations and supervision in 107 countries to assess the relationship between specific regulatory and supervisory practices and banking-sector development, efficiency and fragility. The results raised a cautionary flag regarding policies that rely excessively on direct authority supervision and regulation of credit union activities.

Athanosoglou, Brissimis, and Delis (2005) investigated, in a single-equation framework, the effect of capital adequacy on MFIs profitability. Using dynamic estimation technique, Goddard, Molyneyx, and Wilson (2004) studied the determinants of profitability of European MFIs. They found a significant persistence of abnormal profits from year to year and a positive relationship between the capital-asset ratio and profitability. Higher leverage or a low equity/asset ratio reduces the agency costs of outside equity and increases its value by constraining or encouraging managers to act more in the interest of shareholders. Hence, capital regulations on risk taking can mitigate conflicts between shareholders and credit union managers concerning the choice of investment and improve credit union financial performance.

SACCOs in Kenya are required to adhere to regulations set in the SACCO regulation authority (SASRA). 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. Despite the critical role played by SASRA on
improving management of SACCOs, there has been no study that has focused on establishing the
impact of SASRA on financial performance of SACCOs.

Previous study has focused on credit risk management and in SACCO financial performances.
Gisemba (2010) undertook a study on the relationship between credit risk management practices
and financial performance of SACCOs in Kenya. The study concluded that the management of
the SACCOs were involved in the management of the credit risk through making credit risk
decision through standardization of process and documentation watch over loan portfolio’s
degree of concentration and exposure for credit risk management. Gaitho (2010) carried out a
study on survey of credit risk management practices adopted by SACCOs in Nairobi. There has
therefore been no study that has focus on establishing the impact of SASRA on SACCOs’
financial performance. This study seeks to fill the existing knowledge gap to determine the effect
of SASRA regulation on SACCOs’ financial performance and to answer the questions what is
the impact of SASRA regulations on SACCOs’ financial performance in Kenya.

1.3 Objectives of the Study

The objective of the study was to establish the impact of SASRA Regulations on SACCO
financial performance in Kenya.
1.4 Importance of the Study

To the management of the SACCOs - The study is aimed to advice the management of the SACCOs on the effects of SASRA regulations on performance and the ultimate goal of ensuring growth and sustainable income and maximum benefit to the members.

To the academic researchers and scholars - There is very little literature if any in the field of SACCOs especially in the developing countries. The forerunners in this area have written in depth about the micro and small enterprises. The research thus aims at shedding more light in this field and to form bases for further researches.

To the Government - The main aim of SACCOs is to stimulate voluntary savings amongst members besides the financial assistance provided in form of loan repaid with low interests. It is expected that the research will shed more light on how members' deposits are being utilized by the SACCOs. Through this research, the government through the newly established SASRA will be able to know whether regulating the co-operatives is instilling confidence and security in the sector to amass deposits for investment and financial inclusion which is Kenya's financial strategy.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a theoretical development on regulation of financial institutions and a review of the literature related to the purpose of the study. The chapter is organized according to specific objectives in order to ensure relevance to the research problem. The review is undertaken to eliminate duplication of what has been done by other scholars and to provide a clear understanding of the existing knowledge base in the problem area. The literature review is based on authoritative, recent, and original sources such as journals, books, thesis, reliable websites and dissertations.

2.1.2 Financial Regulation and Liabilities

The regulation of banking and financial services has two main objectives: the first is to protect private interests of depositors, investors, and creditors; the second is to safeguard public or collective interest by promoting the integrity and reputation of financial services markets. The wave of deregulation of the financial services in the 1980s and the recent globalization of the industry have both been counterbalanced by a rise in regulations and enforcement actions (Gully-, 2005). The industry is highly supervised since banks may suffer from a severe liquidity crisis if poor investment choices are made and depositors choose to rapidly withdraw their money. A run on a single large bank may lead to an industry-wide crisis. Consequently, nearly every aspect of operations is closely monitored since a failure of any bank is in many ways viewed as a failure of regulators as well (Johnson and Rogely, 1997).
In the USA, the authority to examine compliance with regulations has been delegated to four regulatory agencies: the Federal Deposit Insurance Corporation (FDIC), the OCC, the Office of Thrift Supervision (OTS), and the Fed. The Fed regulates its member banks. The FDIC regulates state chartered banks that do not belong to the Fed, and administers the federally guaranteed insurance funds. The OCC regulates federally chartered national banks. The OTS regulates federally chartered and state-chartered savings associations. Furthermore, state chartered banks are subject to additional local laws and supervision from state regulators. Regulation of bank holding structures is even more complex and usually involves the oversight of several regulators at the same time (Johnson and Rogely, 1997).

With the argument that state control was stifling the performance of cooperatives and that their potential contribution to development could only be realized if they operated according to market principles, cooperative development was pushed into the second era that was characterized by economic liberalization. Consistent with the new economic environment that was sweeping across Africa in the 1990s, Kenya introduced new policy and legislation in 1997 in order to liberalize cooperatives (Rhyne, 2002). The resultant framework sought to facilitate the development of commercially autonomous, member-based cooperative organizations, which would be democratically and professionally managed, self-controlled and self-reliant business enterprises. The two eras have now been followed by an era of SACCOs regulations conferred in the Kenya society’s act 2008.

Njiru (2003), suggests that financial regulation should be focused, primarily rule-based, (because discretion will be hard to use during periods of boom/euphoria), and time and state-varying (light during normal periods, increasing as systemic threats build up). A financial institution is
insolvent when its “going concern” value does not exceed the expected value of its liabilities (Bernanke, 1983). In normal times, when financial markets are strong, it is fairly easy to identify insolvent financial firms. However, at times of crisis, it is difficult since solvency becomes so co-mingled with liquidity issues. Prices of assets become disconnected from estimates of expected cash flows and, instead, reflect the prices that could be obtained if the assets had to be sold tomorrow to the few investors prepared to buy such assets at such time the liquidity price (Davies, 1999).

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 (low funding liquidity) and sell off its assets (low market liquidity). 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)

More specifically, funding liquidity describes the ease with which investors and arbitrageurs can obtain funding from financiers. Funding liquidity is high and markets are said to be “awash with liquidity when it is easy to raise money. Typically, when a leveraged trader, such as a bank, dealer, or hedge fund, purchases an asset, he uses the purchased asset as collateral and borrows (short-term) against it. However, he cannot borrow the entire price. The difference between the security’s price and its value as collateral the margin or haircut must be financed by the trader’s
own equity capital. Margin lending is short-term since margins and haircuts can be adapted to market conditions on a daily basis (Holmstrom and Tirole, 1998).

Financial institutions that rely substantially on short-term (commercial) paper or repo contracts have to roll over their debt. An inability to roll over this debt—if, for example, the market for commercial paper dries up—is equivalent to margins/haircuts increasing to 100 percent, because the firm becomes unable to use its assets as a basis for raising funds. Similarly, withdrawals of demand deposits or capital redemptions from an investment fund have the same effect as an increase in margins. Funding liquidity risk is due to maturity mismatches and can thus take three forms: 1) margin/haircut funding risk, or the risk that margins and haircuts will change, rollover risk, or the risk that it will be more costly or impossible to roll over short-term borrowing; and 3) redemption risk, or the risk that demand depositors of banks or even equity holders withdraw funds. All three incarnations of funding liquidity risk are only detrimental when assets must be sold only at fire-sale prices—that is, when market liquidity is low (Jansson, and Mark, 1997). Market liquidity is low when it is difficult to raise money by selling the asset at reasonable prices. In other words, market liquidity is low when selling the asset depresses the sale price. When market liquidity is low, it is very costly to shrink a firm’s balance sheet. These two liquidity concepts do not exist in a vacuum; they are influenced by the financial soundness of other financial institutions (Johnson and Rogely, 1997).

Traditionally, capital requirements have been the cornerstone of financial regulation — especially so for banks. The current thinking behind the use of capital requirements is that maintaining a capital buffer allows an institution to absorb losses on its assets and remain solvent, thereby protecting its creditors — notably retail depositors. Moreover, that thinking relies on the reasoning that the solvency of each individual institution ensures the soundness of the financial system as a whole. This thinking
leads naturally to the conclusion that the key determinant of the size of the regulatory capital buffer should be some measure of risks associated with the assets of that institution. This is because the degree to which solvency can be ensured depends on the likelihood that the realized value of assets falls below the notional value of the creditors’ claim. The original Basel capital accord of 1988 introduced coarse risk buckets into which assets could be classified, but the Basel II rules have taken the idea much further, by refining the gradations of the riskiness of the assets, and fine-tuning the regulatory capital to the risks of the assets held by each bank. Protagonists of Basel II argue that its essential difference with Basel I is that it is far more risk-sensitive (Vogel, Gomez, and Fitzgerald, 2000). While this seems reasonable from an individual bank’s perspective, it is clear that the level of market and funding liquidity is not exogenously given but determined in the economy as a whole and hence, important adverse feedback effects might arise. This requires a more systemic view of liquidity crises (Kimeu, 2008).

2.2 Theories on Regulation of Financial Institutions

2.2.1 Economic Theory

Regulation consists of rulemaking and enforcement. Economic theory offers two complementary rationales for regulating financial institutions. Altruistic public-benefits theories treat rules as governmental instruments for increasing fairness and efficiency across the society as a whole. Agency-cost theory recognizes that incentive conflicts and coordination problems arise in multi-party relationships and that regulation introduces opportunities to impose rules that enhance the welfare of one sector of society at the expense of another (Diamond and Dybvig, 1983). Each rationale sets different goals and assigns responsibility for choosing and adjusting rules differently. Altruistic theories assign regulation to governmental entities that search for market
failures and correct them. It is taken for granted that we may rely on a well-intentioned government to use its discretion and choose actions for the common good. (Jensen and Michael, 1994)

Agency-cost theories portray regulation as a way to raise the quality of financial services by improving incentives to perform contractual obligations in stressful situations. These private-benefits theories count on self-interested parties to spot market failures and correct them by opening more markets. In financial services markets for regulatory service create outside discipline that controls and coordinates industry behavior. Institutions benefit from regulation that: enhances customer confidence; increases the convenience of customer transactions; or creates cartel profit. Agency-cost theories emphasize the need to reconcile conflicts between the interests of institutions, customers, regulators and taxpayers (Edward, 1997).

2.2.2 Financial Regulations and the Public Choice Theory — Arnold Kling

He argues that the fundamental flaw in financial regulations is that it is based on assumptions that regulators are self-interested individuals like the rest of us. He further says that we think about regulation only in terms of how to engineer the incentives of the regulated and ignore the fact that the regulators themselves rarely have a stake in doing the job well, which in any other occupation would limit the motivation and type of individuals a position attracts (Edward, 1997).

2.2.3 Liquidity Theory

Holmstrom and Tirole (1998) provided a theory of liquidity in a model in which intermediaries have borrowing frictions. In their Model, a government has an advantage over private markets because it can enforce repayment of borrowed funds while the private lenders cannot. They show
that availability of Government provided liquidity leads to a Pareto improvement where there is aggregate uncertainty. They further argue that the role of the government is thus to correct any inefficiencies arising from externalities and private information and possibility of hidden trades.

2.3 Approaches for Regulating SACCOs

Cooperative development in Kenya, like in most African countries, has generally traversed two main eras, namely, 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 semi-public agencies (Lila, 2010). By serving as instruments for implementing government socio-economic 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).

Arun, 2005; Kirkpatrick and Maimbo, (2002) indicated that the level of risk and the scale of operations of the majority of microfinance firms are so low that it is unlikely that they would generate any kind of instability to the financial system (Kirkpatrick and Maimbo, 2002). The Self-Regulation approach is usually supported when the microfinance industry is on its first stage due to the fact that regulators have none or little experience with the special features of the microfinance business (Kirkpatrick and Maimbo, 2002). Thus, for experiences in which there is a long history of non-profit or public organizations involved in the provision of financial services to low-income and poor households, like the Peruvian one, such an approach should not be
appropriate. Besides, it is believed that this kind of internal regulation has little possibility to be successful when microfinance activities start growing, because the objectives and interests of the MFIs involved may not be convergent (Kirkpatrick and Maimbo, 2002; Arun, 2005). In fact, empirical evidence has shown that self-regulation has not been completely effective in enforcing good financial discipline; nonetheless, it has induced MFIs to pursue good accounting practices and reporting standards (Christen et al, 2003).

According to Kirkpatrick and Maimbo, (2002), incorporating MFIs into the existing regulatory framework would contribute to a better integration of these institutions with the financial system (Christen et al, 2003). It is seen as more efficient and easier to adjust what already exists and to look for an adequate harmonization of the regulatory practices so as to facilitate the incorporation of MFIs to the regulated market (Christen et al, 2003). Finally, the establishment of a special regulatory framework tailored to the characteristics and risk profile of MFIs is widely supported by the microfinance industry (Kirkpatrick and Maimbo, 2002). This approach known as the ‘special window’ for microfinance is supposed to contribute to a better insertion of MFIs to a regulatory structure, according to the range of financial services to be provided (Gallardo et al, 2005).

On the other hand, when a regulatory framework for MFIs is designed, the objectives and scope of the regulation should be properly defined (Staschen, 2003). This refers to the issue that regulation can focus on microfinance lending as an activity or on the institutions that are engaged in the microfinance business. In any case, regulations should be established in an unambiguous way, with clear definitions of what is understood by microfinance services and of the legal and institutional form of MFIs in order to avoid regulatory arbitrage (Gallardo et al, 2005). Finally, it
is important to be aware about the special features of microfinance operations in order to understand the arguments behind the definition of prudential standards for MFIs, which in some cases are recommended to be stricter than the ones applied to commercial banking. Compared to traditional financial activities, microfinance has some distinctive characteristics regarding its lending methodology, composition of loan portfolio, capital structure and institutional form (Jansson, 1997).

2.5 Objectives and Rationale for Financial Regulations

Experience suggests however those financial systems are prone to series of instability. Beston (1998) argues that regulations, in practice serves the interest of Governments, regulators and financial firms but is mostly detrimental to the consumers. His argument is that the benefits of regulations to the regulated financial institutions are reduced competition: 'the benefit to financial service producers from reduced competition is most important reason why Governments have imposed regulations on financial services (Kassa, 2010).

Llewellyn (1998) highlights three core objectives of regulation as; to sustain systemic stability; to maintain the safety and soundness of financial institutions and to protect the consumer. His argument is that the objectives depend on various market imperfections (especially externalities and asymmetric information which in the absence of regulations, produce sub-optimal results and reduce consumer welfare

Llewellyn (1998) identifies seven components of the economic rationale of regulation and supervision of banking and financial regulations. He gives the justification for each of the components as follows; Potential systemic problems associated with externalities
form of market failure); Correction of other market imperfections and failures; the need for monitoring financial firms and the economies of scale that exist in this activity; the need for consumer confidence which is a positive externality; the potential for gridlock, with associated adverse selection and moral hazard problems; moral hazard associated with the revealed preference for Governments to create safety net arrangements and consumer demand for regulations in order to gain a degree of assurance and lower transaction costs. He also identifies two generic types of regulation and supervision as prudential regulation and conduct of business regulations (Leonard, 2002).

Banks have a pivotal position in the economy for two main reasons: they are the only source of finance for a large number of borrowers (Bemanke, 1983) and, more importantly, they manage the payments system. If the banking system is placed in jeopardy, the resultant financial disruption is likely to be more serious than would be the case with other sectors of the financial system. Benston (1998, and elsewhere) makes the case that bank runs are not rational when deposit insurance is in a place. However, this is true only where the coverage is one hundred percent, which is not the case in the UK or in Europe generally. Deposit insurance is supposed to provide direct creditor protection and avert a bank run because it directly pre-empts the reason for a run, fear for the safety of deposits and sanctions the impact of bankruptcy on the owners (Edward, 1997).

2.5.1 Prudential Regulations

There is also a case for prudential regulation that is for safety and soundness by reducing the probability of MFIs failing) which is independent of any systemic dimension. There are costs associated with MFIs failures which are different from systemic costs. In the absence of one
involved. MFI failures can also create a degree of uncertainty which is higher than when other firms fail though this is not to deny that there are costs associated with the failure of other (non bank and non-financial) firms. Benston in (1998) and others argue that the failure of any firm can cause disruption to consumers, and to this extent MFIs are not unique.

The second economic rationale for financial regulation relates to market imperfections and failures. If financial services were conducted in perfectly competitive markets that where there are no information problems, externalities, conflicts of interest, agency problems there would be no case of regulation that would be a net cost to the consumer (Jensen, 1994). Per contra, if there are market imperfections and failures but no regulation, the consumer pays a cost because the unregulated market outcome is sub-optimum. Focusing only upon the accountancy cost of regulation (which can be measured) overstate the true cost of regulation because it does not incorporate the value of the consumer benefit if the effects of market imperfections are alleviated. The ultimate rationale for regulation designed to protect the consumers is, therefore, to correct for market imperfections or market failures which would compromise consumer welfare in a regulation-free environment (Kane, 1997).

Because of the nature of financial contracts between financial firms and their firms, there are several characteristics of some financial products that require a continuous process of monitoring of the suppliers of products. It is often the case where long-term contracts are involved, principal-agent problems can arise, the quality of a financial product cannot be ascertained at the point of purchase, and there is often a fiduciary role for the financial institution, etc (Llewellyn, 1998).
A fourth economic rationale for regulation in financial services relates to questions of consumer confidence. The known existence of asymmetric information can, under some circumstances, reduce consumer demand for services and contracts. In a situation where consumers know there are good and bad products or firms but, due to insufficient credible information, are unable to distinguish them at the point of purchase because the quality is revealed only after the lapse of time, the demand for some products may decline. In the words of Davies (1999): “Without regulation to give consumers some independent assurance about the terms on which contracts are offered, the safety of assets which underpin them, and the quality of advice received, saving and investment may be discouraged, again with damaging economic consequences. The issue is whether, as some economists argue, firms have an incentive to provide relevant information without being required to do so by a regulatory agency. Benston (1998) argues that mandatory disclosure is not necessary and can be hazardous and against the consumer interest. It is argued that especially efficient and competitive) companies have an interest in disclosing relevant information to consumers in an open manner.

According to Bhole (2004) one of the major costs of regulation to the consumer, and benefits to regulated institutions, is that it frequently reduces competition. Regulation should not impede competition but should enhance it and, by addressing information asymmetries, make it more effective in the market place. Nevertheless, however well-intentioned, regulation has the potential to compromise competition and to condone, if not in some cases endorse, unwarranted entry barriers, restrictive practices, and other anti-competitive mechanisms. Although historically regulation in finance has often been anti-competitive in nature (Llewellyn, 1986), this is not an inherent property of regulation.
2.5.2 Minimum Capital

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). It is justified on the grounds of influencing the structure of the financial system: it serves as a cushion in periods when the institution shows an unhealthy situation due to its own performance or to exogenous factors such as economic downturns (Christen et al., 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 (Jansson, 1997). But, on the other hand, a high minimum capital requirement could help to mitigate moral hazard behaviour among shareholders (Jansson et al., 2004). In addition, a high minimum capital requirement is often seen as one tool for limiting the number of institutions that the supervisory body should be responsible for monitoring, especially if the supervisory resources are scarce (Schmidt, 2000).

2.5.3 Capital Adequacy

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, which has been internationally recommended to be equal to 12.5 times, or commonly known as a capital adequacy ratio of 8%.
(Jansson, 1997). Nonetheless, it has to be remembered that this prudential standard proposed by the Basel Committee 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; Jansson, 1997).

In many developing countries, especially in the Latin American context, this regulatory requirement has also been extended to microfinance institutions. But, it is argued that the capital adequacy ratio required for MFIs 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, i.e. 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 of the microfinance business, and consequently, create disincentives to attract potential investors (Jansson, 1997).
2.6 Credit Classification and Loan-loss Provisioning

It is generally recommended that regulation should properly define the characteristics of microenterprise lending as an activity and microcredit as a product in order to facilitate the introduction of credit risk regulations (Jansson et al, 2004). Perhaps more than any other prudential standards, the ones regarding credit risk are suggested to be tailored as close as possible to the specific characteristics of the microfinance lending. These requirements should be applied to every institution engaged in microfinance operations; regardless their institutional form (Christen and Rosenberg, 2000). In addition, it is suggested that these regulations be as simple as possible, in order to be compatible with possibly future innovations in the microfinance industry (Jansson et al, 2004).

On the other hand, it is argued that microcredits should be classified according to the number of days on arrears and on the number of times the loan has been rescheduled (Jansson et al, 2004; Jansson, 1997). It is suggested that this procedure be done in a simple and automatic manner in order to be cost-effective both for compliance by the supervisees and oversight by the regulator (Jansson, 1997). Also, it is recommended that the time period for reclassification should be shorter than in the case of commercial loans, because of the structure of microcredit in terms of length and period of repayments (Jansson et al, 2004; Jansson, 1997). In other words, the risk categories for microcredit should be defined contemplating fewer days of non-performance relative to the ones assigned to commercial loans. The microcredit portfolio should be subjected both to general provisions for preventing future deterioration of the credit portfolio, as well as to specific provisions to cover nonpayment risk (Jansson, 1997).
2.6.1 Insider Lending and Operational Restrictions

Insiders refer to those people directly or indirectly connected to the ownership or management of the MFIs, including directors, officials, employees and shareholders (Staschen, 2003). The argument to consider insider lending restrictions in prudential regulation relies on the fact that any operation related to these parties could lead to conflict of interests, misuse of MFI resources or even fraudulent practices. It is important to highlight that insider lending is a problem that could arise in any financial institution and not only in traditional ones (Staschen, 2003). In fact, because of their relative small net worth, insider-related operations could be more damaging and riskier for MFIs. On the other hand, it is suggested that MFIs should be allowed enough flexibility regarding the organization, management and operations of their offices (Jansson, 1997). This is due to the fact that complying with a fixed hour schedule or excessive branching requirements could create over costs or generate unnecessary wasted resources. This does not mean that there is no need to comply with minimum security requirements; indeed this is essential in the case where MFIs are allowed to take deposits from the public. However, there should be room for adaptation in the modalities of provision of financial services so as to properly satisfy and serve the clients (Christen et al, 2003).

2.6.2 Governance and Ownership Requirements

Prudential regulation regarding ownership and corporate governance is meant to establish minimum standards about the nature and quality of shareholders, measured by their financial solvency and personal integrity (Hardy, Holden and Prokopenko, 2003). Regarding their economic capacity, it is required that a shareholder should have enough resources to be able to
raise additional funds when the supervisory agency requires a capital injection (Christen et al, 2003). It is argued that microfinance intermediaries, acting as deposit-taking institutions, should comply with similar banking requirements to ensure a good structure of corporate governance. On the other hand, it is recommended that MFIs incorporate progressively some private investors as shareholders, in order to diversity their equity structure, and enhance their solvency (Jansson et al, 2004). This suggestion about inducing a more open participation of the private sector in the capital structure of MFIs seeks to enhance a business orientation in the microfinance industry, and might encounter some opposition in environments in which microfinance activities are still heavily managed by non-profit organizations (Jansson and Mark, 1997).

Besides, members of the board and top management should be required to demonstrate their good ethical character and their knowledge in finance-related matters. The regulatory framework must clearly define the roles and responsibilities of the members of the board and the executive management regarding the financial performance of the institution and compliance with regulation (Jansson et al, 2004).

2.7 Empirical Review

The potential of microfinance to reach large numbers of the poor is now well understood (Robinson 2001). Diversity of RMFIs and products is facilitated by a flexible regulatory environment in which they can develop innovative methodologies for reaching different market niches not served by commercial banks (Edward, 1997). Nevertheless, at some point – in the sector’s evolution, in the growth of a successful RMFI, in the willingness of investors to enter these niches – regulations are appropriate both to facilitate commercialization and sustainability.
of the rural and micro finance (RMF) industry (especially through mobilization of savings from the public) and to ensure the stability of the financial system (as well as to protect deposits). Difficult decisions must be made in each country context as to the timing and complexity of regulations in order to promote orderly development without unduly stifling innovation (Gonzalez and Claudio 1995).

Ghana has a population of about 18 million, which has been growing at about 3% per year. Recent statistics (1999-2000) indicate that 63% of the population lives in rural areas and 37% in urban areas. Gross domestic product (GDP) for 2001 at current prices stands at US$5.36 billion, with an annual growth rate of 4.2%; per capita GNP of US$390 remains lower than the average per capita income level of US$520 for Sub-Saharan Africa. Inflation and high interest rates have been a persistent problem; the end-of-period inflation rate rose from 13.8% in 1999 to 40.5% in 2000 before falling to 21.3% in 2001, with 91-day Treasury bill (T-bill) rates reaching 42% in 2001 before declining to 22% in 2002. Ghana’s financial structure is fairly shallow: the degree of monetization of the economy stands at 20.7%, as measured by the M2/GDP ratio. With international reserves at only 1.5 months of imports as of 2001, Ghana’s economy is markedly vulnerable to external shocks (Edward and Kane, 1997).

Researchers on regulation of financial institutions in the recent past have concentrated on Banking institutions and microfinance institutions (non-banking financial institutions). There is thus scanty literature or none at all specifically tailored for the SACCOs. Case studies have however been classifying SACCOs together with the Micro- Finance institutions in the group of
Semi formal financial institutions. Muganga (2010). It is for this because of the established relationship that this paper examines the existing evidence on Micro finance institutions.

Muganga (2010) Kenya brings up the importance of regulation with reference to the recent past in Kenya where MFIs in Kenya suffered a bad public image as a consequence of illegitimate micro – lenders running pyramid schemes but posing as legitimate MFIs or SACCOs. He further reveals that they collected deposits inform of advanced collateral inform of deposits for promised loans and later collapsed or vanished. The concerns highlighted from his research work are; rapid expansion of credit within the non-formal unregulated sector; the need for consumer protection and efficiency and sustainability concerns.

Haq, Hoque and Pathan (2008) in a comparative analysis of regulation of micro-finance institutions in Asia examine the rationale of prudential regulations in microfinance institutions and SACCOs. The findings of their research work reveal that each type of regulatory approach has its pros and cons but their experience with LDCs suggests that self regulation fails due to enforcement problems. In Bangladesh a steering committee of the Central Bank’s “Microfinance Research and reference unit” (MRRU) has been appointed as the interim regulator of MFIs. Similarly Rural Credit Co-operatives (RCC) in China are regulated by the Peoples Bank of China (PBC), the China Banking Regulatory commission (CBRC) and the Department of Co-operative finance. In Nepal MFIs and SACCOs are regulated under the intermediary act and supervised by the central bank to mobilize deposits from the public. SACCOs are also placed under the ministry of Agriculture and Co-operatives who oversee the implementation of the regulations (Ahmed 2004). India is no exception too because mutual aid co-operative societies (MRC)
receive financial services but are free from any Government intervention. In Thailand regulation is done by the Ministry of the National council and regulated by the registrar of Co-operatives.

Other countries which have adopted regulatory frameworks in Africa include; Tanzania, Ethiopia, Nigeria and Ghana with a view of protecting deposits collected from the public and to reduce information asymmetry (Kassa, 2010). In Brazil a study by Rhyne (2002) looks at the benefits of regulating the MFIs and SACCOs and comes up with the finding that it instills confidence to depositors and helps the Central Bank in achieving the financial inclusion goal. Rhyne, (2002) gives an experience of regulating MFIs through the Microcredit regulatory authority and comes up with the finding that there are challenges of overlapping borrowers, sustainability of the sector and lack of good supervisory tools to monitor foreign investment and securitization. Murinde (2010) however suggest that regulating MFIs in Africa is problematic because the players in the financial sector and particularly non-banking financial institutions have been in the transition process from Basel I to Basel II and are currently in the post crisis era. In his findings, he argues that any regulatory framework in SACCOs and MFIs should embrace enlargement of access to credit, reduce information asymmetry and ultimately protect customers from systematic failures.

The importance risk management derives from the objectives of financial regulation. The problem of systemic risk constitutes part of the embodiment of the rationale for financial regulation (Davies, 1998). Regulators impose liquidity monitoring measures on banks to meet specified minimum levels of withdrawals. However, such measures are precautionary against short-term cash flow problems rather than a situation of panic outburst (Gleeson, 2006). The level of confidence reposed in the public by the financial community is what sustains banks in
modern times and this is strengthened by external checks which is given by credit agencies through scrutiny of published accounts and by bank regulation through prudential supervision (Hulme, and Mosley, 1996).

Furlong (1992), and Haubrich and Wachtel (1999), concluded that capital regulations in credit Unions in the U.S. contributed to a decrease in lending that helped fuel a post-capital requirements credit crunch. Berger and Udell (1994) examine whether the risk-based capital requirements put into place in the late 1980s contributed to the so-called “credit crunch” that occurred in the United States in the early 1990s. They find evidence that other sources of loan supply reduction or declines in loan demand in the early 1990s played much more prominent role in reducing microfinance institutions lending. In contrast, Peek and Rosengren (1995) conclude that there is considerable evidence, at least for New England, that both lower loan demand and a capital-crunch-induced decline in loan supply together brought about a decline in lending. Brinkmann and Horvitz (1995) also find evidence of significant loan supply responses to the Basle I capital requirements. Wagster (1999) reaches the same conclusion for Canada and the U.K. He fails to find support, however, for this result in the cases of Germany, Japan, and the U.S., where he concludes that a number of factors played a role in generating a credit crunch.

Benh-Khedhiri, Casu, and Sheik-Rahim (2005), study on profitability and interest rates' differentials in Tunisian banking industry. More specifically, they focused on the determinants of credit unions’ net interest margins as indicators of the sector’s efficiency. The study seeks to establish the direct effects of capital regulations and capital requirements.

Not all researchers agree that capital regulation has had significant effects on Credit Unions lending. Jackson et al. (1999) review a number of prior studies investigating how capital
adequacy regulations influence actual capital ratios; such as Rime (2001). Jackson et. al’s conclusion is that in the near term financial mainly respond to strict capital requirements by reducing lending and that there is little conclusive evidence that capital regulation has induced MFIs to maintain higher capital to assets ratios than they otherwise would choose if unregulated.

There is no consensus on how best to design the regulation of bank capital, Santos (2002). Restricting SACCO activities through a higher capital requirements ratio could be negatively associated with SACCOs’ development, adversely affecting credit expansion and credit growth. Moreover, regulatory restrictions on credit unions activities may increase net interest margins or overhead costs. The ability of SACCOs to stabilize income flows by diversifying activities may only work in countries with sufficient securities market development.

2.7.1 Empirical Models

The study seeks to explain the impact of SASRA regulations on SACCOs in Kenya using an empirical model that includes a measure of capital regulations plus a number of other major determinants. The variables chosen to measure the performance of SACCOs along with those chosen as proxies of the regulations chosen as given

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]

The first is a continuous measure of the ratio of capital to total assets (CAPR). SACCOs attempt to accommodate the capital requirement by raising the contribution of shareholders or decreasing assets, particularly risky assets. To test the effects of the capital ratio over time, the study will incorporate a dummy variable that takes a zero value before the change in capital regulation and one thereafter. If the effects of capital regulation on the cost of intermediation persist over time
the study will expect a statistically significant coefficient on this dummy variable. Further, to study the short-run dynamics of the effects of the change in capital regulation, the study will incorporate a dummy variable that takes the value of one in the year of the change in capital requirements and increases by an increment of one over subsequent three lags. The significance of each of the dummies in the current and three subsequent periods indicates the persistent effect of capital regulations on the dependent variable in the short-run.

Capital adequacy requirements operate at two levels minimum capital requirement (MCR); and capital adequacy ratios (CARs). MCR, the amount of money that an applicant must have in a specified form, is one of the preconditions for getting a license to establish a financial institution. The Basle Core recommend that banking supervisors must set prudent and appropriate MCRs for all banks and by implication for all similar financial institutions.

### 2.7.2 Earnings Requirements

In this study earnings are defined as the net income of a SACCO during a specific period. In the commercial banking sector earnings are assessed using both quantitative and qualitative measures such as return on equity, return on assets, operational efficiency measures, and lending rate(s) of interest. The same framework is applied for MDIs. For example, the earnings performance of the MDIs in Kenya in 2005 was assessed using ROA and ROE (KUSCCO, 2005). Besides, the MDI Act, 2003 and the Implementing Regulations of 2004 require the MDIs to make a profit.
2.8 Summary and Conclusion

The review of literature covered the objective and economic rationale of regulating MFIs and SACCOs an exercise which has been globally adopted. Linked to this, the existing economic theories and research work done on the field of regulation of financial institutions and especially MFIs across the world, reveals the stringent need of regulating SACCOs with emphasis on the impact of the regulations to SACCOs financial performance, utilization of members deposits and external borrowings which vary from one SACCO to another. As expected, regulation of SACCOs is required to embrace, deposit protection, moral hazards and externalities which would jeopardize the achievement of Kenya’s vision 2030 financial pillar which highlights financial inclusion as one of the strategic goals and identifies SACCOs as the flag-bearers. SACCOs faces challenges in ensuring it achieves its objective of saving of offering loans to members and therefore continuum of regulatory approaches with the Government at one end and SASRA at the other end as a purely private regulator to supervise and; ensure capital adequacy; liquid and asset liability management; shares, savings and deposits and credit management. This study seeks to establish the effects of SASRA regulation on SACCOs’ financial performance. The study will concentrate on regulations determining reserve requirements, capital requirements, and deposit coverage of SACCOs.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology that was used to carry out the research. It presents the research design, the population, sample size and sampling procedure, data collection and data analysis.

3.2 Research Design

Research design refers to the way the study is designed, that is the method used to carry out the research (Mugenda and Mugenda, 2003). Descriptive Research is the investigation in which quantity data is collected and analysed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time. Causal research design was chosen because it enabled the researcher to generalise the findings to a larger population. This study was therefore able to generalise the findings to all the SACCOs in Nairobi.

3.3 Target Population

The study population consisted of all 4,233 SACCOs registered under the societies Act in Kenya (Survey Report, February 2011). The list of the SACCOs was obtained from the Ministry of Cooperative, Development and Marketing. The study targeted the 98 SACCOs registered by SASRA.
3.4 Sampling Methods

There are 98 SACCOs that have been registered by SACCO Regulation Authority. The sampling method chosen for this study was purposive sampling which is a form of non-probability sampling to select 30 SACCO based in Nairobi. Purposive sampling involves a deliberate selection of particular units of population to constitute a sample representing the population (Kothari, 2004). In terms of this study, purposive sampling will be chosen for convenience purposes.

3.5 Data Collection

The study used secondary data. Secondary data refers to the information obtained from articles, books, newspapers, internet and magazines. Thus secondary data was collected from the financial statements of the SACCOs and books to collect information on annual earnings of the SACCOs, the Profit and Loss account and Balance Sheets of SACCOs registered under SASRA.

3.6 Data Analysis

The study was undertaken using the GMM estimation technique utilized in panel estimation that incorporates dynamics to take into consideration persistence in the behavior of dependent variables over time. A set of key financial ratios was computed for 2 years prior to, and 2 years after, the year of registration by SASRA (or the year of approval when the time of registration with SASRA was completed). The registration completion year was denoted as year 0. Tables and charts were used for representation for easy understanding and analysis. The study sought to explain the cost of intermediation and financial performance (ROA) in the SACCOs supervised by SASRA, using an empirical model that includes a measure of capital regulations plus a number of
other major determinants. The cost of intermediation variable was represented by the ratio of net interest revenue over average interest-bearing assets (NIM1) and the ratio of net interest income over average total assets (NIM2). The profitability variable was also represented by the return on assets (ROA) which was reflected by the ability of a SACCO to generate profit from the SACCO's assets.

The study employed three measures of capital regulation. The first was a continuous measure of the ratio of capital to total assets (CAPR). SACCOs attempted to accommodate the capital requirement by raising the contribution of shareholders or decreasing assets, particularly risky assets. To test the effects of the capital ratio over time, the study incorporated a dummy variable that took a zero value before the change in capital regulation and one thereafter. If the effects of capital regulation on the cost of intermediation persisted over time we expected a statistically significant coefficient on this dummy variable. Further, to study the short-run dynamics of the effects of the change in capital regulation, the study incorporated a dummy variable that took the value of one in the year of the change in capital requirements and increased by an increment of one over subsequent three lags. The significance of each of the dummies in the current and three subsequent periods indicates the persistent effect of capital regulations on the dependent variable in the short-run.

The study employed three measures of capital regulation in SACCO. The first is a continuous measure of the ratio of capital to total assets (CAPR) where CAPR was equal to Equity over total assets. To test the effects of the capital ratio over time, the study incorporated a dummy variable that takes a zero value before the change in capital regulation and one thereafter. Further, to study the short-run dynamics of the effects of the change in capital regulation, the study incorporated a dummy variable that takes the value of one in the year of the change in capital
requirements. The significance of each of the dummies in the previous and current year when SACCOs had operated under the SASRA indicated the persistent effect of regulations on the SACCO financial performance.

Liquidity (Liq): was the ratio of net loans over deposit and short term borrowing. Higher figures denote lower liquidity. This variable measures the risk of not having sufficient reserve of cash to cope with withdrawal of deposits. Predictions vary regarding the effects of liquidity on the cost of intermediation and profitability. One view suggests that excess liquidity may force SACCO to lower the cost of intermediation as they try to reduce non-earning assets. Alternatively, in a tight financial market where demand for credit was limited, SACCOs may be forced to raise the cost of intermediation in an attempt to increase profits.

Management efficiency was the ratio of earning assets to total assets. The higher the ratio the higher management efficiency was as SACCO managers strive for more earnings, it is likely that they would increase the cost of intermediation, which would enhance profits.

A linear regression model of SACCOs return on asset versus regulations was applied to examine the relationship between the variables. The relationship model was represented in the linear equation below:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]  (1)

Where

\[ Y = \text{ROA} \]
\[ \alpha = \text{Constant Term} \]
\[ \beta_i = \text{Beta coefficients}, \]
\[ X_1 = \text{Capital Regulation} \]
\[ X_2 = \text{Liquidity} \]
\[ X_3 = \text{Management efficiency} \]
\[ \varepsilon = \text{Error Term} \]

**Determining the Financial Performance of the SACCO**

Panel data estimation improved upon the issues that cross-section regressions fail to take into consideration, such as potential endogeneity of the regressors (ROA, Liq, and Capratio) and controlling for firm-specific effects. For panels with a limited number of 2 years and a substantial number of observations, the study estimated the equation with Generalized Method of GMM in first-differences. The study proceeded by first differencing the initial equation to remove the time invariant and leave the equation estimable by instrumental variables.

To complete the analysis regarding the effects SASRA regulations on performance of SACCOs, the study determinants of banks’ profitability, as measured by the returns on assets and equity, a GMM model explaining return on equity using dynamic estimation was adopted. The GMM-in-System specifications fitted the panel data reasonably well and helped in establishing impact of SASRA regulation return on equity and assets to their lag, justifying the use of dynamic panel data modeling.

Equation 2 after differencing the initial equation

\[ Y_{i,t} = \alpha + \delta Y + \lambda \text{Crd}_i + \text{PostCrd1}_{i,t} + \text{PostCrd2}_{i,t} \quad (2) \]
Where

\( Y_{t-1} \) period lagged of Profitability of the SACCO

\( \delta Y \) is Capital ratio

Crd\(_i\) is a variable that equals one in the year that SACCO1 implements SASRA requirements. PostCrd\( i \) took the value 1 in the first year after implementing SASRA

PostCrd\( 2i \) took the value 1 in the second year after implementation of SASRA

### 3.7 Validity and Reliability

Validity is the accuracy or meaningfulness and technical soundness of the research. It is the degree to which a test measures what it purport to measure. (Mugenda and Mugenda, 1999), (Borg and Gall, 1989) stated that, to enhance validity of a questionnaire, a Pilot population similar to the target population was conducted. The cronbach’s alpha reliability coefficient of three independent variables was obtained. The closer the reliability coefficient gets to 1.0 the better. Reliability estimated the consistency of measurement, or more simply the degree to which an instrument measured the same way each time it is used under the same conditions with the same subjects.
CHAPTER FOUR
DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

The section presents the results of the study on impact of SASRA regulations on SACCOs financial Performance. In determining the relationship between financial performance and capital regulation, the study used a Panel Data Analysis method. With Panel data analysis method it was possible to express the model that was used in studying the relationship between capital requirement and financial performance. A linear regression model of SACCOs return on asset versus regulations was applied to examine the relationship between the variables. The relationship model was represented in the linear equation below:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]  

Where \( Y = \) ROA

\( \alpha = \) Constant Term

\( \beta_1 = \) Beta coefficients,

\( X_1 = \) Capital Ratio

\( X_2 = \) Liquidity

\( X_3 = \) Management efficiency

\( \epsilon = \) Error Term
4.1 The Influence of Capital Regulations on SACCO Financial Performance in Year 2008-2009

Table 4.1 The Influence of Capital Regulations on SACCO Financial Performance in Year 2008-2009

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.602852</td>
<td>R Square</td>
<td>0.375591</td>
<td>Adjusted R</td>
<td>0.152594</td>
<td>Standard</td>
<td>0.943217</td>
<td>Observations</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>5</td>
<td>181.560</td>
<td>36.3120</td>
<td>1.68427</td>
<td>0.203007</td>
</tr>
<tr>
<td>Residual</td>
<td>14</td>
<td>301.832</td>
<td>21.5594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>483.392</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standar d Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
<th>Lower 95.0%</th>
<th>Upper 95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>9.16493</td>
<td>-1.53565</td>
<td>0.24691</td>
<td>-35.5712</td>
<td>5.88722</td>
<td>-35.5712</td>
<td>5.88722</td>
</tr>
<tr>
<td>X Variable 1</td>
<td>4.28044</td>
<td>1.27891</td>
<td>0.39886</td>
<td>-4.56242</td>
<td>13.7988</td>
<td>-4.56241</td>
<td>13.7988</td>
</tr>
<tr>
<td>X Variable 2</td>
<td>15.8084</td>
<td>-0.86071</td>
<td>0.45945</td>
<td>-46.9315</td>
<td>22.8801</td>
<td>-43.9316</td>
<td>21.8801</td>
</tr>
<tr>
<td>X Variable 3</td>
<td>2.57145</td>
<td>-0.61994</td>
<td>0.54525</td>
<td>-7.11492</td>
<td>3.92412</td>
<td>-7.11492</td>
<td>3.92412</td>
</tr>
</tbody>
</table>

From the findings of the study in the above table, the following regression equation was established by the study for the years 2008-2009,
The established regression equation for year 2008

\[ Y = 5.143 + 2.518020X_1 - 2.32071X_2 + 1.39593 + e \]

where \( Y = \text{ROA} \)

- \( B_0 \) = intercept (defines value of leverage without inclusion of predictor variables)
- \( X_1 \) = Variable 1 (Capital Ratio), \( X_2 \) = Variable 2 (Liquidity) and \( X_3 \) = Variable 3 (Management Efficiency)

From the findings in the above table the study found that holding profitability, growth, size, liquidity and non debt shield constant, Return on Equity or Assets would be 1.5954, the study also found that a unit increase in capital ratio caused a 2.218020 increase in ROA. Further it was established by the study that a unit increase in liquidity led to a decrease in ROA by 2.32071. It was also found by the study that a unit increase in management efficiently would lead to an increase in ROA by a factor of 5.143.

Table 4.2 The Influence of Capital Regulations on SACCO Financial Performance in Year 2010-2011

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.477551</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.248060</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.03763</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>3.479709</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANOVA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>df</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| Regression            | 4     | 50.631 | 10.1264 | 0.82727 | 0.550968 |
| Residual              | 15    | 169.3755 | 12.2411 |       |       |
| Total                 | 19    | 231.0075 |       |       |       |</p>
<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
<th>Lower 95.0%</th>
<th>Upper 95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.90634</td>
<td>6.471637</td>
<td>-0.48159</td>
<td>0.637530</td>
<td>-16.9969</td>
<td>10.76362</td>
<td>-16.9969</td>
<td>10.76362</td>
</tr>
<tr>
<td>X Variable 1</td>
<td>3.821026</td>
<td>2.352744</td>
<td>0.172655</td>
<td>0.866165</td>
<td>-4.83959</td>
<td>5.681638</td>
<td>-4.83959</td>
<td>5.681638</td>
</tr>
<tr>
<td>X Variable 2</td>
<td>-1.62350</td>
<td>6.477831</td>
<td>-0.79093</td>
<td>0.442179</td>
<td>-19.0171</td>
<td>8.770058</td>
<td>-19.0171</td>
<td>8.770058</td>
</tr>
<tr>
<td>X Variable 3</td>
<td>3.44600</td>
<td>2.159905</td>
<td>-0.90479</td>
<td>0.380884</td>
<td>-6.66605</td>
<td>2.67405</td>
<td>-6.6505</td>
<td>2.67205</td>
</tr>
</tbody>
</table>

From the finding of the study in the above table the following regression equation was established by the study for the years 2010-2011.

**The Established Regression Equation**

\[ Y = 5.90634 + 3.821026X_1 - 1.62350X_2 + 3.44600X_3 + e \]

where \( Y \) = ROA  
\( B_0 \) = intercept (defines value of leverage without inclusion of predictor variables)  
\( X_1 \) = Variable 1 (Capital Ratio)  
\( X_2 \) = Variable 2 (Liquidity)  
\( X_3 \) = Variable 3 (Management Efficiency)

From the findings in the above table the study found that holding capital ratio, liquidity and management efficiency constant, Return on Equity or Assets would be 3.821026, the study also found that a unit increase in capital ratio cause a 1.62350 increase in ROA, further it was established by the study that a unit increase in liquidity led to a decrease in ROA by 2.12351. It was also found by the study that a unit increase in management efficiently would lead to an increase in ROA by a factor of 5.90634.
 Mean financial performance of SACCO for Year 2008, 2009, 2010 and 2011

Table 4.3 Mean financial performance of SACCO for Year 2008, 2009, 2010 and 2011

<table>
<thead>
<tr>
<th>Financial Performance indicator</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA (Mean)</td>
<td>5.0</td>
<td>4.81</td>
<td>5.43</td>
<td>5.62</td>
</tr>
<tr>
<td>ROE (Mean)</td>
<td>6.30</td>
<td>5.51</td>
<td>4.9</td>
<td>7.27</td>
</tr>
<tr>
<td>Liq (mean)</td>
<td>3.45</td>
<td>3.17</td>
<td>3.76</td>
<td>3.51</td>
</tr>
<tr>
<td>Maneff (Mean)</td>
<td>6.54</td>
<td>7.00</td>
<td>10.45</td>
<td>11.23</td>
</tr>
</tbody>
</table>

The study found that SACCO’s return on Asset (ROA) improved on implementation of SASRA Capital regulations From 5.0 in the years 2008-2009 to 5.62 in the years 2010 and 2011.

The study also found that Return on Equity of the SACCOs had also improved from 6.30 in the year 2008 to 7.30 in the year 2011. The study found that Capital regulation has a positive influence on SACCOs’ Liquidity as ratio of net loans to customer and short term funding (LOFUND) increase from 3.45 in the year 2008 to 3.51 in the year 2011.

The study further found that capital regulation by SASRA on SACCOs improve management efficient where SACCOs attain a positive improvement after adoption of capital regulation from 6.54 in the year 2008, 7.00 in the year 2009, 10.45 in the year 2011. Implying that SACCOs ratio of earning assets to total assets was improving on implementation of capital regulation from SASRA. The higher the ratio the higher management efficiency implied that SACCO managers were striving for more earnings which could improve profitability of the SACCOs.
4.2 Financial Performance of SACCO Between 2008 and 2011

Table 4.4 Financial Performance of SACCO Between 2008 and 2011

<table>
<thead>
<tr>
<th>Table 2 – Summary statistics</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Mean before Adoption of SASRA Regulation</th>
<th>Mean after Adoption of SASRA Regulation</th>
<th>Difference in mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nim1</td>
<td>0.019</td>
<td>0.016</td>
<td>0.015</td>
<td>0.022</td>
<td>0.006*** (4.15)</td>
</tr>
<tr>
<td>Nim2</td>
<td>0.018</td>
<td>0.015</td>
<td>0.014</td>
<td>0.021</td>
<td>0.006*** (4.02)</td>
</tr>
<tr>
<td>ROA</td>
<td>0.012</td>
<td>0.012</td>
<td>0.011</td>
<td>0.012</td>
<td>0.001 (0.99)</td>
</tr>
<tr>
<td>ROE</td>
<td>0.129</td>
<td>0.127</td>
<td>0.141</td>
<td>0.219</td>
<td>-0.021* (-1.62)</td>
</tr>
<tr>
<td>Capratio</td>
<td>0.092</td>
<td>0.051</td>
<td>0.083</td>
<td>0.100</td>
<td>0.016*** (3.14)</td>
</tr>
<tr>
<td>Liq</td>
<td>0.451</td>
<td>0.133</td>
<td>0.405</td>
<td>0.487</td>
<td>0.081*** (6.24)</td>
</tr>
<tr>
<td>Implicit</td>
<td>-0.039</td>
<td>0.006</td>
<td>-0.059</td>
<td>-0.0026</td>
<td>0.003** (2.62)</td>
</tr>
<tr>
<td>Maneff</td>
<td>0.929</td>
<td>0.059</td>
<td>-0.005</td>
<td>-0.002</td>
<td>0.003** (2.62)</td>
</tr>
<tr>
<td>Costeff</td>
<td>0.018</td>
<td>0.009</td>
<td>0.018</td>
<td>0.018</td>
<td>0.000 (0.06)</td>
</tr>
<tr>
<td>Reserves</td>
<td>0.044</td>
<td>0.054</td>
<td>0.052</td>
<td>0.041</td>
<td>-0.012* (-1.81)</td>
</tr>
<tr>
<td>Mpower</td>
<td>0.041</td>
<td>0.071</td>
<td>0.046</td>
<td>0.036</td>
<td>-0.009 (-1.37)</td>
</tr>
<tr>
<td>Inf</td>
<td>0.08</td>
<td>0.058</td>
<td>0.134</td>
<td>0.037</td>
<td>-0.096*** (-28.98)</td>
</tr>
</tbody>
</table>

From the finding, the NIM1 of the SACCOs improve significantly from 0.015 (average of the mean between 2008-2009) to 0.022 (average mean between two years 2010 to 2011). This implied that the short-term dummies of capital regulations impact significantly on the liquidity of the SACCO.

The NIM2 improve significantly from 0.014 for 2008 to 2009 to 0.021 for the year 2010 to 2011 after adoption of capital requirements. This implied that the long-term dummy variable were
statistically significant, indicating that capital regulations have a sustained long-term effect on the financial performance of SACCOs.

The study found that there was no significant improvement on Return on Assets for the SACCOs after adoption of the capital regulations average ROA for the SACCOs was at 0.011 for the period of 2008 to 2009 and 0.012 for the year 2010 and 2011 after adoption of the capital requirement by SASRA. The study also found that there was significant improvement of Return on Equity in SACCOs after adoption of Capital requirements from SASRA as the ROE increase from 0.141 to 0.219 with a P value of 0.021 at 95% significant level. On management efficient, the study found that capital requirement had statistically significant influence on financial performance of SACCOs as it improve from -0.005 to -0.002 with a P value of 0.003 at 99% confidence level. The lagged dependent variable measures the degree of persistence in the effects of capital requirement. The lagged dependent variable is statistically significant across all models, indicating a high degree of persistence characterizing capital requirement in SACCOs and justifying the use of dynamic models.

The capital variable (capital/assets) has a positive and statistically significant effect; due to adoption of capital requirement as it increase from 0.083 to 0.100 at 99% significant level. SACCOs raise the capital adequacy to make up for a higher risk to shareholders. This implied that well capitalized Kenyan SACCOs’ face lower costs of going bankrupt which facilitate a reduction in the cost of funding. The result is higher profitability, as further analyzed below. Capital regulation has an impact on Liquidity which improves positively from 0.405 to 0.487 with a P value 0.081 at 99% confidence level and statistically significant. This implied that the ratio of net loans to customer and short term funding (LOFUND) is statistically significant and positively related to the profitability of domestic SACCOs, indicating a negative relationship between SACCO’s capital requirement and the level of
liquid assets held by the SACCOs. While SACCOs receive lower returns on holding excess cash or securities, they face a competitive market for deposits.

4.3 Impact of SASRA Capital Regulation on SACCOs Profitability

Table 4.5 Impact of SASRA capital regulation on SACCO Financial Performance

<table>
<thead>
<tr>
<th>Repressors</th>
<th>Capratio</th>
<th>Caplong</th>
<th>Capshort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROA</td>
<td>ROE</td>
<td>ROA</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.1463*** (3.88)</td>
<td>0.877*** (3.07)</td>
<td>-0.053* (-1.64)</td>
</tr>
<tr>
<td>ROA&amp;E_t-1</td>
<td>0.479*** (6.15)</td>
<td>0.456*** (3.79)</td>
<td>0.567*** (7.52)</td>
</tr>
<tr>
<td>Liq</td>
<td>0.001 (1.08)</td>
<td>0.043 (0.82)</td>
<td>0.004 (0.02)</td>
</tr>
<tr>
<td>Capratio</td>
<td>0.122** (2.27)</td>
<td>0.522 (0.70)</td>
<td>-</td>
</tr>
<tr>
<td>Capratio*Dumcap</td>
<td>-0.004 (-0.16)</td>
<td>-0.068 (-0.22)</td>
<td>-</td>
</tr>
<tr>
<td>Caplong</td>
<td>-</td>
<td>0.000 (0.02)</td>
<td>-0.026 (-0.79)</td>
</tr>
<tr>
<td>Bdate</td>
<td>-</td>
<td>-</td>
<td>0.004** (2.06)</td>
</tr>
<tr>
<td>Bdate1</td>
<td>-</td>
<td>-</td>
<td>0.002 (1.42)</td>
</tr>
<tr>
<td>Bdate2</td>
<td>-</td>
<td>-</td>
<td>0.006*** (3.02)</td>
</tr>
<tr>
<td>Bdate3</td>
<td>-</td>
<td>-</td>
<td>0.002 (0.75)</td>
</tr>
<tr>
<td>Implicit</td>
<td>-0.303*** (-3.50)</td>
<td>-0.263*** (-3.66)</td>
<td>-0.357*** (-4.26)</td>
</tr>
<tr>
<td>Maneff</td>
<td>0.097*** (3.11)</td>
<td>0.681*** (2.89)</td>
<td>0.053** (1.93)</td>
</tr>
</tbody>
</table>
**Note: Dependant variables are ROA and ROE.

Estimation method is one-step GMM-in-System estimator.

Hansen = Hansen test for validity of over-identifying restrictions, distributed as indicated under null.

AR(2) = test of null of zero second-order serial correlation, distributed N(0,1) under null.

Numbers in parentheses are t-statistics. * ** and *** indicates statistical significance at the 1%, 5% and 10% level.

To complete the analysis regarding the impact of capital regulations on financial performance of SACCOs, the study determinants of SACCO' profitability, as measured by the returns on assets and equity. Table 4.2 summarizes the results of the model explaining return on equity using dynamic estimation. The GMM-in-System specifications seem to fit the panel data reasonably well since the Hansen test shows no evidence of over-identifying restrictions and the second-order autocorrelation was absent.
From the findings, the capital requirement from SASRA had a positive and significant impact on return on equity (ROE) as indicated by 3.79 with a P Value of 0.456 at 99% significant level. The study also found that Capital requirement from SASRA has a positive and significant impact Return on Assets to their lag and indicated by 6.15 with P Value of 0.479 at 99% significant level Figure, justifying the use of dynamic panel data modeling. Besides, this persistence of profit means the forces of competition are not sufficiently strong to cause all abnormal profits to dissipate within a one-year time span. In the present study the estimates on lagged profitability ratios range between 0.425 to 0.579. The study found that capital adequacy variable (capital/assets) had a positive and significant effect on returns on assets in SACCOs as indicated by 2.27 with a P Value of 0.122 at 99% significant level. This implied that has SACCOs with capital adequacy face lower costs of going bankrupt and reduce the cost of funding, resulting in higher profitability.

The study establishes that high capital ratio does not increase returns on equity (ROE) as indicated by 0.70. This clearly indicates that unexpected losses have been exactly offset by an increase in the capital requirements and profits through an interest margin increase. Moreover, the effect of capital regulation on SACCOs’ ROE was would not be sustained over time. The study found that the coefficient 0.02 and 000 and 0.79 on the long-term dummy was not statistically significant in the estimation of either return on equity or return on assets. This implied that the interactive dummy variable was not significant and therefore the relationship between capital and profitability does not vary with the level of capital requirements across SACCOs.

SACCO’ liquidity does not determine returns on assets or equity significantly as indicated in Table 4.2. The study however found that management efficiency had positive and significant effect on SACCO’s profits, Return on Assets and Equity. The study found that capital requirement
had a positive and significant effects on management Efficiency which would influence Return on Assets of SACCOS as indicated by 3.11 with a P Value 0.097 at 99% level of significant Level, The study found that influence of Capital requirement in SACCOS influence SACCOS Return on Equity by 2.89 with a P Value of 0.682 at 99% level of confidence. This implied that SACCOS with capital adequacy face lower costs of going bankrupt and reduce the cost of funding, resulting in higher profitability.

4.4 Summary of the Findings

The study established that SASRA regulations have positive impact on capital ratio and led to an increase in ROA from 1.5954 to 1.62350 between 2008-2009 and 2011 -2011, further it was established that increase in liquidity led to a decrease in ROA by 2.12351 up from 2.3207, it was also found by the study that a unit increase in management efficiency increased ROA by a factor of 5.90634. This clearly indicates that Return on assets increased due to the implementation of SASRA regulations.

To sum, a number of factors that contributed positively to SACCOS’ profitability in the post-SASRA capital regulation period included higher capital requirements and the reduction in implicit cost. Counter effects on SACCOS’ profitability was attributed to reduction in economic activity, which is likely to have decreased SACCOS’s profitability in the post-regulation period. The study also found that management efficiency had positive and significant effect on SACCOS’s profits, Return on Assets and Equity. As indicated, shareholders benefit directly from improvement in management efficiency.
CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary and Conclusions

The aim of this investigation has been to investigate the effects of SASRA capital regulations on the performance and stability of SACCOs in Kenya focusing on SACCO financial performance, as measured by return on assets or equity.

The study investigates the effect of capital regulations in three dimensions. First, seeking to establish the effect of the ratio of capital to total assets on the SACCO’s financial performance and profitability. The study also focused on dummy variable that captures the structural break marking the introduction of capital regulation to test the sustained long-term effects and introducing short-term dummies to test the progressive effects of SASRA capital regulations in the current and four subsequent years i.e., 2 year before SASRA and 2 years after SASRA.

The results provide a clear illustration of the effects of SASRA capital regulations on the cost of intermediation and SACCOs’ profits. As the capital adequacy ratio internalizes the risk for shareholders, SACCOs increase the operation cost, which supports higher return on assets and equity. These effects appear to increase progressively over time, starting in the period in which capital regulations are introduced and continuing 1 year after the implementation.

In addition to the above effects, the empirical estimation unveils interesting features about the effects of SACCO banking-specific and macro variables on the performance of SACCOs in Kenya. Management efficiency was found to increase SACCO return on assets and Return on Equity after the implementation of the SASRA Capital Regulation. Among the macro variables, inflation proved to be an important factor that depresses the cost of intermediation in an effort to stimulate demand for
A pickup in output growth appears to be the most important factor that increases demand for credit, enabling SACCO to charge a higher cost of operation.

5.2 Conclusions

The study concluded that higher capital requirements, and increase in management efficiency led to positively to SACCO’s profitability in the post-capital regulation period. Countering effects on SACCOs’ profitability were attributed to the reduction in economic activity and, to a lesser extent, to the reduction in reserves. The effect of better efficiency is likely to have been absorbed in SACCOs’ fees and commissions.

The study finally concluded that importance of capital regulation to the performance of SACCOs and financial stability in Kenya and that the state of the economy was a major factor that determines the performance of the Credit Unions. The study concluded that financial stability could be at risk as a result of shocks impinging on the economic system, absent proper policy adjustments to mitigate the effects of these shocks.

5.3 Limitations of the Study

The study faces limitations. Obtaining of data from the SASRA and SACCOs was a great challenge and the management in the SASRA and the SACCOs were uncooperative, however the researcher explained that the data that was to be obtained was for academic purpose only. In attaining its objective the study was limited to 32 SACCOs which are registered with SASRA for more than 1 year from whose data was sourced. The study is also limited to the degree of precision of the data obtained from the SACCOs financial reports.
The study also faces challenges of time resources limiting the study from collecting information for the study particularly where the SACCOs management delayed giving the SACCOs financial reports. To mitigate this, the researcher made often follow up and enhanced collection of sufficient data from the SACCOs.

The period of study was limited to two years. The SASRA regulations have been implemented in SACCOs for less than two years hence SACCOs management has been in a period of adjustment. This could have affected the financial performance of SACCOs.

The study was further constrained by limited financial and time resources. The researcher will draw a time schedule and a budget that will enable the study to be completed using the budget drawn and within the required time of the study.

5.4 Recommendation of the Study

For policy implications, the findings indicate the importance of reviving demand for credit using macroeconomic policies. The study recommends that structural reforms should aim at establishing more competition in the banking industry to ensure that performance indicators were commensurate with the optimal practices of the intermediation function that guarantees financial stability over time to provided a high and strong demand for credit. However, the findings also caution formulation of government policies that rely excessively on direct government supervision and regulation of SACCOs activities to foster incentives for private agents to promote SACCOs development, performance, and stability.
5.5 Suggestions for Further Study

This study examined the Impact of Capital Requirements on SACCOs' capital adequacy and financial Performance. The study was limited to examining the impact of Capital Requirements on SACCOs' capital adequacy and financial Performance in Nairobi. A further study should be carried out to examine the Impact of SACCOs' regulations on financial Performance of employees and agricultural based SACCOs to provide a broad analysis on the financial performance.

The study also recommends that a further study should be carried out to determine the challenges facing SACCOs in implementation of SASRA regulations. The study finally recommends that a study should be conducted to establish the relationship between capital regulations and financial performance of the microfinance institutions in Kenya offer a broad analysis on impact of regulations on financial performance of credit unions in Kenya.

A study should be carried out to determine the Impact of the Ministry of Cooperative Development and Marketing regulations on financial Performance of SACCOs' not registered with SASRA. A further study should be carried out to assess the impact of SASRA regulation on investment and saving mobilization in SACCOs to establish the relationship between SASRA regulation and SACCO investment and Savings.
REFERENCES


Ministry of Co-operatives and Marketing (2008). An Internal Ministry Publication on The Number of Registered SACCOs in Kenya.


Muriuki, E. (2003). Determinants Of Priority Structure Of Corporate Liabilities For Firms Quoted At The NSE. Unpublished MBA Project, University Of Nairobi


Sasra website: www.sasra.org.ke


# APPENDIX 1: SACCO PERFORMANCE

<table>
<thead>
<tr>
<th>SACCO NAME</th>
<th>YEAR 2008</th>
<th>YEAR 2009</th>
<th>YEAR 2010</th>
<th>YEAR 2011</th>
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<td>Liquidity</td>
<td>Man Efficiency</td>
<td>Return on Assets</td>
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<tr>
<td>No.</td>
<td>Sacco Name</td>
<td>1st Year</td>
<td>2nd Year</td>
<td>3rd Year</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
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<td>GITHUGURI DAIRY FARMERS CO-OPERATIVE SOCIETY LTD</td>
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<td>27. WANA-ANGA SACCO SOCIETY LTD</td>
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