THE IMPACT OF DEPOSIT LEVEL ON LENDING OF SACCOs REGULATED BY SASRA IN NAIROBI

BY

MUSASIAH KHASHMOTOH JUSTUS
D61 / 61455/ 2010

A Research Project Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Business Administration (MBA) of the University of Nairobi

OCTOBER, 2012

DECLARATION

I the undersigned declare that this Research Project is my original work and has not been submitted for the award of a degree or academic credit in any other institution or university.

Signed _____ Date _____

Musasiah Khashmottoh Justus
REG. NO.: D61/61455/2010

This Research Project has been submitted for examination with my approval as the university supervisor.

Sign_____ Date _____

Mr. Herick Ondigo
Lecturer
Department of Finance and Accounting
School Of Business
University Of Nairobi

DEDICATION

This research project is dedicated to my parents, siblings Yosi, Kaka, Tini and Zungu and friends for their encouragement, advice and support during my studies.

I specifically thank my parents; David and Abigail for instilling the value of education in me.

ACKNOWLEDGEMENTS

I would like to express my gratitude to all those who gave me the opportunity to complete this research project. I want to thank the University of Nairobi and their staff for the facilities, assistance and relentless support they accorded me and all the lecturers for very humbly imparting their knowledge. I also thank the SACCO Societies Regulatory Authority (SASRA), the SACCOs that participated in this study and their personnel for allowing me to use their data for this research.

I am deeply indebted to my supervisor Mr. Herick Ondigo from the Department of Finance and Accounting whose help, thought-provoking suggestions and encouragement helped me in all the time of this research project.

Thanks to the Almighty God for with Him, everything is possible.

ABSTRACT

The objective of the study was to determine the impact of deposit level on lending of SACCOs regulated by SASRA. The study looked at the Nairobi based SASRA regulated SACCOs in an attempt to find out whether deposits level impacted on lending .The study tried to determine whether there any other factors that impact on lending apart from deposits level.

The study was a survey of Nairobi based SACCOs that are regulated by SASRA for the period 2007 to 2011. Secondary data was collected from the financial statements of individual SACCOs and analyzed using SPSS and advanced MS Excel. The t statistics and F significance ANOVA were used to test the hypothesis.

The findings revealed that deposit levels positively impacted lending of SASRA regulated SACCOs in Nairobi during the period under study. Capital and interest rates either positively or negatively influenced lending. This is consistent with findings of past similar studies that concluded that growth in deposit levels results in increased lending.

This study was limited to SACCOs in Nairobi due to ease of access and recommends studies to be carried out to cover all other SACCOs were left out. Further, there is need to focus on regulations covering other players in the financial services sector such as banks and other microfinance institutions.

TABLE OF CONTENT

ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machines
BIS	Bank of International Settlement
BOSA	Back Office Service Activity
CBK	Central Bank of Kenya
CFI	Cooperative Financial Institution
DGF	Deposit Guarantee Fund
FC	Financial Cooperative
FI	Financial Institution
FOSA	Front Office Service Activity
GMM	Generalized Moments of Methods
ICA	International Cooperative Alliance
ICPAK	Institute of Certified Public Accountants of Kenya
IFRSs	International Financial Reporting Standards (IFRSs)
ILO	International Labour Office
KERUSSU	Kenya Rural Savings and Credit Cooperative Societies Union
KSHS	Kenyan Shilling
KUSSCO	Kenya Union of Savings and Credit Cooperatives
MBA	Masters in Business Administration
MFI	Microfinance Institution
MS	Microsoft
NSE	Nairobi Stock Exchange
SACCO	Savings and Credit Cooperative
SASRA	SACCO Societies Regulatory Authority
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
UN	United Nations
US	United States of America
VECM	Vector Error Correction Models

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The SACCO Societies Regulatory Authority (SASRA) was established as a result of financial sector reforms by the Kenyan Government with main objectives of protecting SACCO members' interests and ensuring public confidence in SACCO sector to spur economic growth. SASRA is a Semi-Autonomous Government Agency under the Ministry of Cooperative, Development and Marketing and came into being following the enactment of the SACCO Societies Act (2008) and the (2010) Regulations issued there under. As prescribed in the SACCO Societies Act (2008), SASRA is charged with the key responsibility of licencing and supervising deposit taking SACCO Societies in Kenya (SASRA, 2012).

A stable and efficient financial system has a potentially powerful influence on a country's economic development as it may have an impact on the level of capital formation, efficiency in the allocation of capital between competing claims, and also the confidence that end-users (consumers) have in the integrity of the financial system. In turn, a well-structured regulatory regime contributes to the efficiency and stability of the financial system (Lewellyn, 1986). The new legal framework, comprising of the SACCO Societies Act of 2008, ("the Act") and the SACCO Societies (Deposit-taking SACCO Business) Regulations of 2010, ("the Regulations"), currently applies to SACCO societies

("SACCOs") that conduct deposit-taking business as defined in the law. These are also the SACCOs operating Front Office Savings Activities ("FOSA") only. (KUSSCO, 2012)

Financial Institutions (including SACCOs) in any country are subject to an extensive form of complicated regulations. This implies that there is general agreement that some level and form of regulation is required because of the unique features of this sector. Involvement in the financial sector is crucial for creating desirable characteristics that will ensure smooth operation of the sector hence leading to economic growth and development (Kevin, 2007). As economic enterprises and as self-help organizations, cooperatives, play a meaningful role in uplifting the socio-economic conditions of their members and their local communities. Over the years, cooperative enterprises have successfully served as catalysts for social organization and cohesion. Promotion of cooperatives have served to guide cooperative formation, as well as limit the role of governments to one of providing an enabling environment and level-playing field so that cooperatives can operate on a sustainable basis alongside other types of business. United Nations Guidelines, (2001), ILO Recommendation No. 193, (2001) and ICA Identity Statement and cooperative principles, (2012).

Through their wide range of activities, SACCOs are important social and economic activity players in national economy. SACCOs are able to perform this role through their crucial functions of financial intermediation, provision of an efficient payments system, promotion of a savings culture and facilitating the implementation of monetary policies. Services provided by Kenyan SACCOs are broadly divided into Front Office Service Activities (FOSAs) and Back Office Service Activities (BOSAs). SACCOs with FOSAs

offer a broader set of financial services. Only a subset of the SACCOs offers FOSAs with SACCOs with BOSAs offering a limited set of savings and credit services. (Ajai, 2007)

In the period just before release of the SACCOs Act (2008), SACCOs had experienced tremendous growth to about 3.7million members and mobilized deposits to more than Ksh.200 billion with credit disbursement of about Ksh.120 billion. The 214 SACCOs with FOSAs had diversified into specialized bank like activities which include deposit taking, saving facilities, debit card business (ATM) and money transfers. To ensure soundness and safety of depositors' funds and maintain public confidence in sector, they needed a specific law. In this regard the SACCO societies Act, 2008 was made. (Njang'ombe, 2011).SASRA report (2010) observes that the division of SACCOs into deposit taking and non-deposit taking is embedded in the current legal framework. The Kenya SACCOs Act (2008) defines a Deposit Taking SACCO as that which operates a Front Office Savings Activity (FOSA). A FOSA activity is a quasi-banking activity undertaken by licensed SACCOs. The main banking activities undertaken by FOSAs involve disbursement of credit to members (lending).

Regulation of financial institutions has been defined by Llwellyn (1986) as a body of specific rules or agreed behaviour either imposed by government or other external agency or self imposed by explicit or implicit agreement within the industry that limits the activities and business operations of the financial institutions. In short, it is the codification of public policy towards financial institutions to achieve a defined objective and act prudently. The two major components of Financial Institution regulation are rules or agreed behaviours and monitoring and scrutiny to determine safety and soundness and

ensure compliance. Dimitri (1990) believes that good regulation and supervision will minimise the negative impact of moral hazard and price shocks on the financial system, thereby leading to a reduction in failures and financial system distress.

1.1.1 Deposit Level

According to Bhattacharya and Thakor (1993), a prominent feature of deposit-taking financial institutions is an emphasis on the asset transformation. These institutions are considered to issue securities in form of deposits to the ultimate creditors and invest the proceeds on their own in obligations in form of loans of the ultimate borrowers. Therefore, they combine lending and borrowing on their own and thus perform the qualitative transformation of some assets into others.

Bryant (1980) suggests that if small creditors (depositors) have unpredictable and unobservable needs of consuming their wealth in the future, then the banking can be considered as a way to overcome the uncertainty efficiently by minimizing necessary liquidity reserves. Diamond and Dybvig (1983) developed a formal model that views a bank as a coalition of depositors, which allows them to insure their consumption risks mutually. They found out that individual savers are usually uncertain about the date they will consume their savings in the future, but economic projects require some time to be completed and can bring losses when aborted prematurely. They concluded that individual depositors, however, still do not know their exact consumption dates in the future; therefore, it is impossible to specify the dates in their deposit contracts and the depositors get the right to withdraw their savings on demand or with a short notice.

Di Giorgio and Di Noia (2001) view depositor protection as a more relevant objective and argue that the objective of financial stability can be pursued with other tools. At the same time, Calomiris (1999) on the contrary considers the depositor protection argument as not defensible and labels it as a means of providing political cover for the subsidies which the banks receive through the safety net. Obviously, the divergence of opinion comes from differences in the financial and economic environment assumed for the safety net.

Findings by Ledgerwood and White (2006) reflect the fact that being regulated often permits institutions to collect deposits and thus gain a cheaper and more stable source of capital. Data drawn from MFIs analysed in the study has shown that as transformed institutions mature, deposits as a percentage of funding liabilities increases. According to (Arun, 2005), existence of information asymmetries defines the special nature of the financial industry and explains its heavier regulation compared to other industries. Jansson (2001) notes that the asymmetric distribution of information among the different stakeholders including depositors raises the need to counterbalance their particular interests through regulation, and especially, to protect the interests of small depositors.

Concerning the protection of depositors, Hardy et al (2003,) argue that depositors of an MFI are in a less advantaged position compared to other clients, not only because of the small amounts of their individual deposits but because any failure of an MFI would discourage them from participating in the financial system indefinitely. Besides, they point out the need for some protection against fraudulent practices like the “pyramid

schemes" that can be highly detrimental for small clients. The goals of prudential regulation are the ones claimed as justifications for regulating the financial system so as to preserve the stability and soundness of the financial system and protect the small depositors (Christen et al, 2003). Therefore, its oversight should be the responsibility of a public and specialised supervisory body (Llewellyn, 1999).

1.1.2 Lending

According to Romer et al (1990), lending view describes how regulation can affect the amount of loans supplied by banks. Any tightening in monetary policy (regulation) is expected to lead to a decrease in the amount of loans provided by banks. The flow of the bank lending channel begins with the tightening of monetary policy (regulation) which causes a decline in deposits, as a result of an increase in interest rates, causing banks' loans to deposit ratios to decline. The decline in bank loans occurs at a lag following the tightening of monetary policy (regulation). This was found to be true in Germany where for monthly time series data the decline lasted for 16 periods. This observation is similar to findings of a study by Kashyap and Stein, (1994).

Some studies are in disagreement with the lending view as to whether the amounts of loans provided by banks decline following contractionary regulation because the banks decrease the supply of loans or because borrower's demand for loans decreases. In their study that employed Generalized Moments of Methods (GMM), Coll et al (2005) suggested that the decrease in loan supply is due to the imperfect information problem. Kashyap and Stein (1994), on the other hand, suggested that the changes observed

through the bank lending channel are not caused by a shift in loan supply but rather a change in the demand for loans. The intuition behind this suggestion is that regulation is aimed at decreasing credit demand. Hulsewig et al (2004) conducted a study that employed Vector Error Correction Models (VECM). Findings from the study suggest that banks decrease loan supply in anticipation of a fall in the credit margin following monetary tightening, while loan demand decreases due to declines in output level and increases in the loan rate.

Sharpe (1995) observes that identifying the effect on bank lending of a decrease in bank capital is difficult because observed decreases in lending could be due to the deterioration in the creditworthiness of prospective borrowers rather than a decline in capital from higher loan losses. However, some studies have tried to solve this identification problem. Peek et al (2000) show that the U.S. subsidiaries of Japanese banking companies that suffered heavy losses on loans in Japan significantly reduced their commercial real estate lending in U.S. markets. In a study on the effect of liquidity shocks on bank lending, Khwaja and Mian (2008) address the identification problem by examining the change in lending by Pakistani banks after the unanticipated nuclear tests of 1998 made it harder for banks to borrow abroad. As expected, the study found out that firms suffered the biggest cutbacks in lending from those banks that experienced the biggest declines in liquidity.

1.1.3 The Impact of Deposit Levels on Lending

According to Usher (1943), deposit banking evolved from the activity of money changing in Continental Europe. The early middle ages saw an increasing use of coins rather than barter in trade. There was, however, a problem with the available coins. Coinage was

imperfect, so coins could contain very different quantities of metal even when newly produced by the same mint leading to development of deposit banking. Berlin and Mester(1999) find that deposit funding enables banks to smooth lending rates and thus provide a useful insurance service to the firm borrowers. Degryse and Van Cayseele(2000) suggest that access to information from a firm's checking account provides a lending bank with unique advantage in monitoring borrowers. Vale (1993) builds a model where access to transactions accounts gives banks private information about firms, making them more able to disentangle high-from low-quality borrowers than competing financial intermediaries without such access. The model predicts that depositors will receive better loan terms. However, Petersen and Rajan (1994) do not find evidence that deposit accounts reduce borrowing costs for firms. Their coefficient estimates mostly indicate a positive relationship between deposit accounts and interest rates, but their estimates are not statistically significant.

Diamond (1984) provides a convincing argument that some types of loans should be made by intermediaries, but it is hard to see in this model why the intermediary cannot be a nonbank finance company funded with short term debt, rather than a commercial bank funded with demand deposits. Similarly, Gorton and Pennachi(1990) show that intermediation can be valuable in creating adverse selection-free demand deposits, but it is again not obvious why this cannot be accomplished by mutual funds that invest only in liquid securities and that do not make any loans involving monitoring. So the distinguishing feature of a bank in their model has to be that it suffers from more severe agency problems than an industrial firm. Flannery (1998) suggests that this is indeed the case. Bank loans give off regular cash repayments, and these can be redeployed quickly

into new loans. It is hard to restrict such redeployment because making new loans is central to a banks business. Thus bank assets can be more easily transformed than industrial-firm assets, which may explain why bank investors need tighter control through demandable claims. Diamond and Rajan (2001) take a somewhat different approach by arguing that demandable claims allow banks to promise more than the market value of their assets, thus allowing banks to create liquidity.

Various studies provide evidence that there is a link between banks lending and deposit taking activities. According to Bernanke and Blinder (1992), in response to tightening of policy (regulation), bank transactions deposits or core deposits fall immediately. Secondly, total bank loans decline, but only after a significant lag of two to three quarters. Thirdly, banks are able to maintain lending in the face of a decline in core deposits by selling securities and by issuing managed liabilities such as time deposits and Eurodollar borrowings. Calomiris and Kahn (1991) describe demand deposits with sequential service as a way to provide incentives for the most efficient outside investors to monitor borrower. Depositors who are the first to withdraw get paid in full, giving them an endogenous incentive to monitor for value decreasing actions by the borrower. Furthermore, their rush to withdraw in turn alerts passive outside investors that the borrower may be acting against their interest.

According to Anil et al (2002), the withdrawal of demand deposits and the takedown of loan commitments can be less than perfectly correlated even if there are large numbers of depositors and borrowers. Depositors and borrowers may come from different segments of the population and so may have different liquidity demands. Alternatively, the two

groups may have different incentives. For example, in a bank run, depositors have an incentive to withdraw their money, while borrowers have little incentive to take down commitments. Saidenberg and Strahan(1999) documented a pronounced negative correlation between deposit flows and commitment takedowns at large banks during the period of bond-market turmoil in the fall of 1998.Malombe (2011) notes that SACCO members will be keen in making deposits to SACCOs that meet their lending needs as well as those that give high dividends. Gambacorta and Mistrulli (2004) used Vector Autoregression (VAR) and GMM model in their study. They produced evidence that suggested that contrary to the predictions of the Modigliani-Miller theorems of 1958, maintaining a higher level of core deposits ratio is costly for financial institutions and, consequently, a shortfall relative to the desired core deposit ratio may result in a downward shift in loan supply.

1.2 Research Problem

The debate on what ties core deposit levels to lending of a financial institution dates back to Modigliani and Miller (1958) theorems who have shown that a firm's leverage has no effect on its weighted average cost of capital .The question of how deposit levels in a regulated environment impact financial institutions lending has attracted the interest of many researchers. Several studies confirm that pressure to meet the new deposits and capital standards force financial institutions to cut back on loans. Ito and Sasaki (2002) summarize evidence which points to the conclusion that financial institutions with lower risk-based capital ratios tended to grow loans relatively slower. The study indicates that

financial institutions with lower capital ratios tended to issue more subordinated debts and to reduce lending.

Evidence produced by Peek et al (1997) find that capital constraints and low deposit levels for financial institutions brought on by the decline in the stock market were associated with a decrease in lending. Malombe (2011) in the research titled "The Effects of Dividend Policy on Profitability of SACCOs with FOSAs in Kenya" pointed out that SACCOs have to cope with the new regulatory framework especially on mandatory capital requirements, development of dividend policy and its economic value to the SACCO. The recommended the need for more research especially on the impact of regulations on SACCOs.

By using data drawn from MFIs , Ledgerwood and White (2006) reveal the fact that being regulated often permits institutions to collect deposits and thus gain a cheaper and more stable source of capital. According to Christen et al (2003), the goals of prudential regulation are the ones claimed as justifications for regulating the financial system so as to preserve the stability and soundness of the financial system and protect the small depositors. Therefore, its oversight should be the responsibility of a public and specialised supervisory body (Llewellyn, 1999). Romer et al (1990), observes that regulation can affect the amount of loans supplied by banks as tightening in monetary policy (regulation) is expected to lead to a decrease in the amount of loans provided by banks. Bernanke and Blinder (1992) argue that in response to tightening of policy (regulation), bank transactions deposits or core deposits fall immediately.

According to Anil et al (2002), the withdrawal of demand deposits and the takedown of loan commitments can be less than perfectly correlated even if there are large numbers of depositors and borrowers.

Since the enactment of the Kenya SACCOs Act (2008), concerns have been raised by academia, financial practitioners and researchers about impact of deposit levels on deposit taking SACCOs lending in a regulated environment. So far, no comprehensive impact assessment has been done to determine the impact of deposits level on lending of SASRA regulated SACCOs. At issue are questions like: What ties together the deposit taking activities of SASRA regulated SACCOs and lending? What is the impact of the deposit levels on lending of SASRA regulated SACCOs? This research intends to answer these questions and bridge the knowledge gap on whether there is any impact of deposits levels on lending of SASRA regulated SACCOs.

1.3 Objective of Study

To examine the impact of deposit level on Lending of SACCOs regulated by SASRA in Nairobi .

1.4 Value of the Study

The study is important as it will help members of deposit taking SACCOs to fully understand the mechanism of SACCO supervision and the provisions of the law as it relates to SASRA regulations.

The study provides an independent platform via which the regulator (SASRA) can appraise fundamental tools of supervision in a bid to make reasonable adjustments where necessary thus improving lending operations of SACCOs.

The results of this study will be of help to academicians interested in understanding the inter-relationship between the actions of SASRA on one hand and the deposit taking SACCO institutions on the other as well as providing a platform for promoting an efficient and effective SACCO system.

CHAPTER TWO

LITERAURE REVIEW

2.1 Introduction

This Chapter covers the various studies carried out on deposit taking regulation and lending. It looks at theoretical and empirical literature on regulation and lending of SACCOs, impact of regulation on lending and summary of the previous findings from various studies.

2.2 Theoretical Review

Theories of regulation attempt to explain justification of regulation and whether there are any accompanying benefits of regulation. Various theoretical motivations have been advanced to support the opportunity of a particularly stringent regulation for financial intermediaries. Such motivations are based on the existence of particular forms of market failure in the credit and financial sectors (Giorgio Di Giorgio et. al., 2000).The theories documented pertaining regulations include:

2.2.1 Public Interest Theory

The public interest theory first developed by Arthur Cecil Pigou in the paper titled "The Economics of Welfare" in 1932. This theory that holds that regulation is supplied in response to the demand of the public for the correction of inefficient or inequitable market practices. Regulation is assumed initially to benefit society as a whole rather than

specific groups or individuals with vested interests. The regulatory body is considered to represent the interest of the society in which it operates rather than the private interests of the regulators. According to Arrow (1985), the first group of regulation theories account for regulation by looking at public interest. This public interest is described as the best possible allocation of scarce resources for individual and collective goods. In developed economies, the allocation of scarce resources is to a large extent coordinated by the market mechanism. In theory, it can even be demonstrated that, under certain circumstances, the allocation of resources by means of the market mechanism is optimal. In study of Anatomy of Market failure, Bator (1958) findings indicated that because these conditions are frequently not adhered to in practice, the allocation of resources is not optimal and there is demand for methods for improving this allocation. Shubik(1970) indicates the achievement of efficiency in allocation of resources as government regulation. According to public interest theory, government regulation is the instrument for overcoming the disadvantages of imperfect competition, unbalanced market operation, missing markets and undesirable market results. Public interest theory is usually applied to explain regulation as an aim for economic efficiency (Joskow and Noll, 1981,). In other cases, public interest theory is more broadly interpreted and regulation is accounted for as aiming to correct inefficient or inequitable market practices (Posner, 1974).

Various criticisms have been directed at the Public interest theory. Firstly, criticism has been directed at the theory of market failure underlying the explanation of government regulation (Cowen, 1988). In practice it appears that the market mechanism itself is often

able to compensate for any inefficiency. Secondly, the original theory assumes that government regulation is effective and can be implemented without great cost (Posner, 1974). Findings from studies points to the flawed information available to regulators, both in the drawing up of the rules and in their enforcement (Sappington and Stiglitz, 1987). This has the consequence of regulated businesses selecting inefficient combinations of production factors, so that they are unable to produce to minimal costs. The other criticism is that public interest theory is incomplete. In the first place, the theory does not indicate how a given view on the public interest translates into legislative actions that maximize economic welfare (Posner, 1974). The political decision-making process consists of various participants who will aim for their own objectives under different constraints. In contrast to the market economy, it is unclear in the political decision-making process how the interaction of the participants will lead to maximum economic welfare.

2.2.2 Chicago Theory of Regulation

In 1971 George Stigler advanced a study on the development of a theory of regulation titled, “The theory of Economic Regulation”. Similar studies were advanced by Posner (1974), “The Economic Theory of Regulation” and Noll (1989), “The Chicago Theory of Government”. This theory sought to address the weaknesses of the public interest theory. Main proposition of Stigler (1971) was that “as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit”. The benefits of regulation for a branch of industry are obvious. The government can grant subsidies or ban the entry of competitors to the branch directly so that the levels of prices rise. In the second place,

the government can maintain minimum prices more easily than a cartel. In the third place, the government can suppress the use of substitutes and support complements.

Posner (1971) criticized this theory by observing that in many cases regulation strongly advantaged certain consumer groups. For instance, uniform prices were prescribed for some commodities. The costs of the services supplied differ considerably between consumer groups, however, depending on their geographical spread, among other factors. Investigating who derives benefit from regulation and who carries the costs, has not established the cause of regulation. Another weak point is that it cannot be predicted which groups will be the most effective politically and who will collect the income transfers. (Noll, 1989) Furthermore, the Chicago theory is incomplete.

2.2.3 Capture Theory

In its critique of regulation to question the assumptions of a benevolent and competent government, the Chicago school has gone much further. This forms the basis of Stigler's capture theory (Stigler, 1971; Posner, 1974). Peltzman (1989) summarized this theory as consisting of two basic propositions. First, the political process of regulation is captured by the industry. Regulation fails to counter monopoly pricing and is to the contrary used to sustain it through state intervention. Second, even in the cases where, under the influence of organized consumer groups, regulators try to promote social welfare, they are incompetent and rarely succeed. Thus the scope for government regulation is minimal

at best, and such intervention is futile and dangerous even in the rare cases where there is scope.

2.3 Empirical Literature on Impact of Deposits on SACCO Lending in a Regulated Environment

Malombe (2011) carried out a research on the Effect of Dividend policy on profitability of SACCOs in Kenya. The study concluded that there is a positive relationship between dividend policy and the profitability of SACCOs with FOSAs in Kenya. The study also pointed out that for SACCOs to be able to meet the capital adequacy requirements, they may opt to adopt dividend reinvestment plans (DRIPS) rather than cash dividend payment plan.

Chege (2006), carried out a study on the effects on non remittance of members deductions by employers in SACCOs and found out that non-remittance of members deductions by employers have a negative impact on SACCOs financial performance. According to findings of the study, the negative effects included low turn around for loans, liquidity problems and lack of funds for the SACCO to meet its operational expenses. The study noted that if loans are not given, profitability will decline and members will not be given dividends. Kiragu (2010), conducted research on the relationship between profitability and capital adequacy of commercial banks in Kenya concluded that capital adequacy is one of the key determinants of earnings. The study concluded that there was no significant negative relationship found between capital and

return on equity but a significant negative relationship exists between capital and return on assets.

Findings of the study by Munene (2006) on the Impact of Profitability on Capital Structure of Companies Listed at the Nairobi Stock Exchange confirmed that there is a weak positive relationship between capital structure and profitability of firms quoted on the Nairobi stock exchange from the period 1999-2004. It was also established that firms listed on the Nairobi stock exchange during this period relied more on external funding rather than retained earnings. Oyoo(2002) researched on the Evaluation of Financial performance of saving and credit co-operative societies before and after deregulation on SACCOs based in Nairobi. The objective was achieved by analyzing the growth ratios, liquidity ratios, effective financial structure and profitability ratios. The study observed that performance of SACCOs in the two eras were not significantly different event though minor advantages were seen to have existed before deregulation especially when absolute mean ratios were used.

In the study of the relationship between the firm's capital structure and the systematic risk of common stocks of companies quoted on the Nairobi Stock Exchange, Lutomia(2002) concluded that there is a relationship between the firm's capital structure and the systematic risk of its common stocks. Obiero(2002) looked at the Banking Sector Regulatory Framework in Kenya and its Adequacy in reducing bank failures. The results of the study indicated that the Kenyan regulatory framework was fairly comprehensive in coverage and adequate in content to reduce the probability of failure.

Anil et al. (2002) researched on what ties together the traditional commercial banking activities of deposit taking with lending. The researchers argued that since banks often lend via commitments, their lending and deposit-taking maybe two manifestations of one primitive function: the provision of liquidity on demand. They produced evidence that found synergies between the two activities to the extent that both require banks to hold large balances of liquid assets. They observed that if deposit withdrawals and commitment takedowns are imperfectly correlated, the two activities can share the costs of the liquid-asset stockpile. They used regression model on a variety of data to test the model empirically. They predicted that deposit taking banks offer relatively more commitments than other lending intermediaries and that an increase in demand deposits should lead to an increase in loan commitments.

Limo (2009) researched on the relationship between Corporate Governance and Capital Structure for companies listed in the Nairobi Stock Exchange. Results of the study indicate a strong positive correlation between corporate governance and capital structure. The study observed that the positive relationship with firm size was due to large firms having higher debt capacity. Large firms also tended to provide more information to lenders than small firms. The results also indicate negative relationships in the case of board composition, profitability and managerial. The negative relationship of board suggested that boards had too many outsiders thus firms lost the expertise associated with serving the board. It is clear from the study that corporate governance influence financing of firms on NSE.

2.4 Lending of SACCOs in Kenya

According to SASRA (2012) SACCOs operating FOSAs(deposit taking SACCOs) undertake banking activities. One of their key activities is lending. The Kenya Cooperative Societies Act (2008) describes deposit-taking business as SACCO business which conducts their activities by accepting deposits on a day-to-day basis and any other activity of the SACCO business which is financed, wholly or to a material extent, by lending or extending credit for the account and at the risk of the person accepting the deposit, including the provision of short-term loans to members. The Act further prohibits SACCOs from granting loans or credit facilities to member where the loan or credit facility, in the aggregate, exceeds such limit of the society's core capital as the SASRA may prescribe. Further to this, the act prohibits SACCOs from granting loans or credit facility against the security of the core capital of the society.

SASRA (2012) provides that deposit taking SACCOs have to apply International Financial Reporting Standards (IFRSs). The IFRSs have strict disclosure requirements for entities to provide information on loan portfolio, non-performing loans as well as provisions for doubtful loans. The IFRSs further provide that entities applying the reporting standards need to have in place aging analysis of their loans. Further to this, the entities will need to have a clear lending policy in place which will form the basis for issue of loans (IFRS, 2012).

2.5 Summary

In summary, deposit and lending of financial institutions are related. Financial institutions that experience growth deposit level as a result of regulatory requirements witnessed increased lending. This is contrary to the predictions of Modigliani and Miller (1958) who showed that leverage of a firm (lending) has got no effect on its cost of capital. From past studies, it is clear that apart from deposit levels, it is clear that capital regulation and interest rates also affect lending. Later studies found out that pressure to conform to capital regulatory requirements is costly to financial institutions and force them to cut back on loans. This affirms that low deposit levels negatively impact on lending and vice versa. The focus of this study is to examine the impact of deposits on Lending of SASRA regulated SACCOs in Nairobi.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The main purpose of the study will be to examine the impact of deposits on Lending of SASRA regulated SACCOs in Nairobi. This chapter will present research design, population of study, data collection and data presentation methods to be employed in the study.

3.2 Research Design

The study was carried out as a census survey of SASRA regulated SACCOs in Nairobi. Pinsonneault and Kraemer (1993) defined a survey as a "means for gathering information about the characteristics, actions, or opinions of a large group of people". The survey design was appropriate as it enabled collection of quantifiable data to investigate the impact of deposit level on lending of SASRA regulated SACCOs. The survey was also cross-sectional. A census survey is advantageous over the other types of surveys due to its accuracy. Since respondents involved in census surveys are the members of a given population, the survey data collected is more reliable and accurate than the data gathered from sampling surveys.

3.3 Population of Study

According to Cooper and Schindler (2000), population of a research study is the census of all items or objects that possess the characteristic or that have the knowledge of the phenomenon being studied. The population of the study included all the 20 Nairobi based deposit taking SACCOs currently licenced by SASRA (See appendix II). The names and addresses of these deposit taking SACCOs are available with SASRA. This research studied the entire population (20 deposit taking SACCOs in Nairobi) and therefore there was no need for a sample. The focus on Nairobi based SACCOs removed the cost implication associated with covering SACCOs outside Nairobi. SACCOs outside Nairobi were also not within ease of access.

3.4 Data Collection

Quantitative secondary data was collected using the financial statements and annual reports of the SASRA regulated SACCOs for the last five years (2007-2011). It is assumed that the 5 year period was enough to demonstrate whether there is any impact of deposit levels on lending. Data on lending and deposit levels was derived from the financial reports. The annual financial statements include the statements of comprehensive income, financial position, cash flows and changes in equity. Statements of the board of directors, finance journals, SASRA reports and other relevant material were also used to collect data. In executing the survey, the researcher maintained ethical considerations. The researcher also maintained confidentiality of individual SACCOs information and reported survey results only in the aggregate as emphasized by Salant and Dillman (1994).

3.4.1 Data Reliability

Reliability is often used to refer to the consistency of survey responses over time. According to Saland and Dillman(1994), obtaining population estimates must be identified by obtaining the desired response rate and preferred level of accuracy of the survey. In this study, the researcher is 95% confident that the corresponding statistic for the population will fall within the specified range of the sample statistic.

3.5 Data Analysis

Data analysis involved the use of measures of central tendency and measures of dispersion in order to make comparison, test the hypotheses and draw conclusions. The raw was analyzed using Statistical Package for Social Sciences (SPSS) version 17 for windows and advanced MS Excel. The findings of this study were presented by use tables in order to convey meaning or to clarify information that may not be clear within the data.

3.6 Model Specification

As per the literature review done in Chapter Two, the findings reveal that deposit levels has an impact on lending. Various methods have been employed in the literature. Hulsewig, (2004), used Vector Error Correction Models (VECM). Gambacorta and Mistrulli (2004) used Vector Autoregression (VAR) in their study. Coll et al, (2005) and Gambacorta and Mistrulli (2004) employed Generalized Moments of Methods (GMM).

Based on the observations of the impact of deposit levels on lending of SASRA regulated SACCOs and the benefits of disaggregating data, the GMM approach as described by Arellano and Bond (1991) will be used for this study to come up with a regression model. This method is appropriate as the data is normally characterized by no strictly endogenous variables and individual effects. GMM estimates provide optimal results for models in which there exist serial correlation in the errors, individual effects, lagged dependent variables, and no strictly exogenous variables. The GMM estimates are also consistent and efficient in the presence of exogenous explanatory variables.

This study was to determine the relationship between deposits (D) and lending (L). The general form can be written as:

$$\mathbf{L}=f(\mathbf{D})$$

Where, L is an endogenous variable (dependent), D is an exogenous variable(independent),

We take into consideration that there are other factors that affect lending apart from deposits. From the literature review, it is clear that lending is also affected by deposits and interest rates.

Thus the empirical model resulting was as follows:

$$\mathbf{L}= \boldsymbol{\beta_0} + \boldsymbol{\beta_1}\,\mathbf{D}_{t,i} + \boldsymbol{\beta_2}\,\mathbf{C}_{t,i} + \boldsymbol{\beta_3}\,\mathbf{I}_{t,i} + \boldsymbol{\alpha}_{t,i}$$

Where;

$\mathbf{L}$	=	Lending
$\mathbf{D}_{t,i}$	=	Deposits
$\boldsymbol{\beta}_0$	=	Constant (y- intercept)
$\boldsymbol{\beta}_1$,$\boldsymbol{\beta}_2$ and $\boldsymbol{\beta}_3$	=	Coefficients of Determination
$\mathbf{C}_{t,i}$	=	Capital
$\mathbf{I}_{t,i}$	=	Interest
$\boldsymbol{\alpha}_{t,i}$	=	Random error

This model helped to establish whether there exists a relationship between lending and Deposits and whether this relationship is positive or negative. This model also established whether there are other factors that impact on lending apart from deposits.

Multiple R and R^2 were used to measure the strength of the relationship between the independent variables and the dependent variable. An F test was used to determine if the relationship can be generalized to the population represented by the sample. A t-test was used to evaluate the individual relationship between each independent variable and the dependent variable.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings derived from data collected and further analyzed. The analyzed data is presented in tables (Appendix VII-XI). The ANOVA table gives the F statistic for testing the relationship between independent and dependent variables. Explanations of the findings are discussed after each table. The chapter constitutes of the general findings of various variables on lending and deposit levels; the relationship between deposit levels and lending (member loans); capital and interest of SASRA regulated SACCOs in Nairobi for the period (2007-2011) and the overall summary of findings.

4.2 The relationship between Deposits Level and Lending of SASRA Regulated SACCOs in Nairobi

The results were generated by conducting a cross sectional multiple regressions by use of SPSS and advanced MS Excel on several SACCOs characteristics over the period 2007–2011 to generate ANOVA tables (Appendix VII-XI).

4.2.1 Year 2011 Analysis and Interpretations

The estimated model for 2011 was:

L=-223378.408+1.34**D**+1.29**C**-1.37 **I**

The "R Square 0.99759" indicates that 99.8 % of the variability in Lending is associated with deposits level, capital and Interest. This shows that, the explanatory power of this regression is great. The R Square and adjusted R of 99.5% and 99.3% show that the model is very strong for study. The "Multiple R 0.997593309" indicates that the correlation between actual and predicted lending is 99.8%.

The t-statistic was used to test the hypothesis that there is a relationship between deposit levels and lending.

H_0 : B_1 =0: There is a relationship between deposit levels and lending

H_1 : $B_1 \neq 0$: There is no relationship between deposit levels and lending

From the analysis, the **t**-statistics is 9.12, the **F** value is 552.01 and **p** value is 1.31E-09. Clearly, **α**= 0.05>1.31E-09, and the null hypothesis is rejected.

The general conclusion is that there is a strong positive correlation between lending and deposit levels.

4.2.2 Year 2010 Analysis and Interpretations

The estimated model for 2010 was:

L= -25534.05+1.33**D**-2.29**C**-1.07 **I**

The "R Square 0.999077362" indicates that 99.91 % of the variability in Lending is associated with deposits level, capital and Interest. This shows that, the explanatory power of this regression is great. The R Square and adjusted R of 99.91% and 99.87% show that the model is very strong for study. The "Multiple R 0.999538574" indicates that the correlation between actual and predicted lending is 99.95%.

$\mathbf{H_0 : B_1 = 0}$: There is a relationship between deposit levels and lending.

$\mathbf{H_1 : B_1 \neq 0}$: There is no relationship between deposit levels and lending.

From the analysis, the **t**-statistics is 18.47, the **F** value is 2887.60 and **p** value is 1.78E-12. $\boldsymbol{\alpha}$ = 0.05>1.78E-12, and the null hypothesis is rejected.

The general conclusion is that there is a strong positive correlation between lending and deposit levels.

4.2.3 Year 2009 Analysis and Interpretations

The estimated model for 2009 was:

L= 602933.63+1.00**D**-6.93**C**+0.19 **I**

The "R Square 0.89610448" indicates that 89.61 % of the variability in Lending is associated with deposits level, capital and Interest. This shows that, the explanatory power of this regression is great. The R Square and adjusted R of 89.61% and 86.78% show that the model is strong for study. The "Multiple R 0.94662795" indicates that the correlation between actual and predicted lending is 94.66%.

$\mathbf{H_0 : B_1 = 0}$: There is a relationship between deposit levels and lending.

$\mathbf{H_1 : B_1 \neq 0}$: There is no relationship between deposit levels and lending.

From the analysis, the t-statistics is 4.75, the **F** value is 31.63 and **p** value is 1.05E-05.

Clearly, $\boldsymbol{\alpha} = 0.05 > 1.05E\text{-}05$, and the null hypothesis is rejected.

The general conclusion is that there is a strong positive correlation between lending and deposit levels.

4.2.4 Year 2008 Analysis and Interpretations

The estimated model for 2008 was:

L= 649892.56+1.06**D**-12.07**C**-2.13 **I**

The "R Square 0.9454763" indicates that 94.54 % of the variability in Lending is associated with deposits level, capital and Interest. This shows that, the explanatory power of this regression is great. The R Square and adjusted R of 94.54% and 84.41%

show that the model is strong for study. The "Multiple R 0.9454763" indicates that the correlation between actual and predicted lending is 94.55%.

$H_0 : B_1 = 0$: There is a relationship between deposit levels and lending

$H_1 : B_1 \neq 0$: There is no relationship between deposit levels and lending

From the analysis, the t-statistics is 2.83, the **F** value is 22.47 and **p** value is 0.000298. Clearly, **α** = 0.05>0.000298, and the null hypothesis is rejected.

The general conclusion is that there is a strong positive correlation between lending and deposit levels.

4.2.5 Year 2007Analysis and Interpretations

The estimated model for 2007 was:

L= 679402.9+0.80**D**-8.00**C**+1.41 **I**

The "R Square 0.828483" indicates that 82.85 % of the variability in Lending is associated with deposits level, capital and Interest. This shows that, the explanatory power of this regression is great. The R Square and adjusted R of 82.85% and 69.98% show that the model is strong for study. The "Multiple R 0.91021" indicates that the correlation between actual and predicted lending is 91.02%.

$\mathbf{H_0 : B_1 = 0}$: There is a relationship between deposit levels and lending

$\mathbf{H_1 : B_1 \neq 0}$: There is no relationship between deposit levels and lending

From the analysis, the **t**-statistics is 3.05, the **F** value is 6.44 and **p** value is 0.051896. Clearly, $\boldsymbol{\alpha}$ = 0.05>0.051896, and the null hypothesis is rejected.

The general conclusion is that there is a strong positive correlation between lending and deposit levels.

4.3 Interpretation of Findings

The findings show that deposit level is positively correlated to lending. The 2007-2009 models indicate that an increase in a unit of deposit leads to an increase in lending. From the 2010-2012 findings, an increase in a unit of deposits leads to a reduction in lending.

The general equation was:

L=-336663.33+1.11**D**-5.6**C**-0.59**I**

In this model, for each additional unit of deposits, lending increases on the average by 1.1%. For each additional unit of capital, lending decreases by 5.6% while for each additional unit of interest, lending decrease by 0.59%.

From the above models, the study found out that deposit levels is positively correlated to lending for all the years. Capital and interest however varied from positive to negative. The study found out that the intercept varied. The highest value was 679402.9 and the lowest was -223378.408 with an average of -336663.33for all years.

From the printouts extracted, 99.8% of the variation in the measure of lending is explained by the linear regression model formulated for 2011 data. 99.91% of the variation in the measure of lending is explained by the linear regression model formulated for 2010 data. Further, 89.61%, 94.54% and 82.85% of the variation in the measure of lending is explained by the linear regression models formulated for 2009, 2008 and 2007 data respectively. This shows there is a very strong relationship between lending and deposit levels. Additionally, adjusted R of 99.3%,99.89%,86.78%84.41% and 69.98% for 2011,2010,2009,2008 and 2007 respectively. This shows the explanatory power of this regression is great.

From the analysis, the t-statistics, F value and p value lead to the conclusion that the null hypothesis is rejected for 2007-2011 models. All entire models were significant. According to the ANOVA tables above, the parameters predicted in the model had a significance level of less than 0.05 which is adequate to be used as a population parameter in predicting the effect of deposit levels on lending.

The study found out that deposit level positively impacted lending and that growth in deposits leads to increased lending. Other factors such as capital and interest impacted lending but varied from having positive to negative impact.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The objective of the study was to examine the impact of deposits level on Lending of SASRA regulated SACCOs in Nairobi. This chapter is a recap of the findings detailed in the previous chapters and make recommendations for further research to researchers and policy makers. The significant findings are summarized and conclusions drawn.

5.2 Summary

Results of the study indicate that a positive relationship exists between lending and deposit levels. The purpose of the study was to examine the impact of deposits level on Lending of SASRA regulated SACCOs in Nairobi.

This was a descriptive study. The study used data for the 20 SASRA regulated SACCOs for the period (2007-2011) which was analysed to obtain a regression model. The general equation was:

L=-336663.33+1.11**D**-5.6**C**-0.59**I**

The 2007-2011 models reveal that deposit levels is positively correlated to lending for all the years. Capital and interest however varied from positive to negative. The study found out that the intercept varied. The highest value was 679402.9 and the lowest was -223378.408 with an average of -336663.33for all years.

The study concludes that there is a positive relationship between deposit levels and lending of SASRA regulated SACCOs. This is consistent with the public interest theory of regulation, the Chicago theory of regulation and the capture theory of regulation.

5.3 Conclusions

While deposits level is most definitely the only factor that impacts lending, findings of this research confirm that increase in deposit levels results in growth in lending of SACCOs. From the findings, it was established that there is a positive significant relationship between deposit levels and lending. As the level of deposits increases, the lending levels also increase. SASRA regulated SACCOs are required to keep a certain level of minimum deposits. The study concluded that deposit levels and lending are related in line with studies by Degryse and Van Cayseele(2000), Vale (1993) and Mester(1999) that come to the same conclusion.

Further, the study concluded that both interest and capital of a SACCO affect lending but the impact varies from positive to negative. Regulations that results in increased deposit levels need to be encouraged as this positively impacts on lending.

5.4 Recommendations for Policy

Regulation has been very stringent in an attempt to enhance consumer protection at the expense of access to finance. In pursuit of guarding against over indebtedness, therefore, SACCOs leave lower income consumers of credit locked out, who then resort to the informal money-lenders and shylocks, which are unregulated and unregistered. These funds come at a higher cost because of high risk to the lenders. SACCOs needs to come up with policies to ensure that members are not locked out from accessing credit due to tight regulation.

SACCOs willing to upscale into deposit taking institutions, have to comply and adhere to a more sophisticated and highly rigorous SACCO Societies Act (2008) which, a good majority would hardly manage to abide by. The study recommends that SASRA comes up with appropriate legislations that attract voluntary deposits from the public enabling SACCOs to perform the "banking activities", to mobilise deposits and hence increase lending.

Kenya has a more robust and highly liquid market for SACCOs operations that needs specially designed regulations suited for their members and clients. The study suggests that these should be distinct from those applied to the banks or other financial services sector players. However, in the long run, having a more comprehensive credit law would be ideal, to ensure fair competition in the credit market and set standards across the board.

5.5 Limitations of the Study

In the course of the research, some challenges were encountered. Firstly, it was problematic to obtain information from some SACCOs due to reluctance of concerned officers who participated in the study. This delayed data collection.

Secondly, the annual financial statements used in the study are prepared under the underlying assumptions and concepts. These assumptions are subjective thus lack of consistency of their applicability especially in terms of provisions and estimates.

Thirdly, some of the financial statements were restated in the previous years. This means that pattern portrayed may affect the relationship established.

5.6 Recommendations for Further Research

Based on the findings, lending is positively impacted by deposit levels for SASRA regulated SACCOs in Nairobi. The research was only limited to SACCOs in Nairobi due to ease of access. All other SACCOs were left out. This creates a potential for further research SACCOs in Kenya and other financial institutions such as banks that are regulated by central bank of Kenya.

Secondly, transmission of loans to members in SACCOs may depend upon other factors such as guarantors, access to external funding and the information from credit reference bureaus. There is need to replicate this study and involve other factors that may affect lending.

Even though this study has been done carried out for SASRA regulated SACCOs, other financial institutions with different structure such as banks and microfinance institutions are subject to different forms of regulation under Central Bank of Kenya. A study may thus be carried out on financial institutions subject to other forms of regulation yet they still play a part in deposit mobilization.

REFERENCES

Ajai Nair Renate Kloeppinger-Todd (2007), ***"****Reaching Rural Areas with Financial Services: Lessons from Financial Cooperatives in Brazil, Burkina Faso, Kenya, and Sri Lanka, Agriculture and Rural Development",* Discussion Paper 35, The World Bank

Anil K. Kashyap, Raghuram Rajan, Jeremy C. Stein (2002), *"Banks as Liquidity Providers: An Explanation for the Coexistence of Lending and Deposit-Taking",* American Finance Association, The Journal of Finance, Vol. 57, No.1, Feb., 2002, 33-73

Arellano, M., and S., Bond (1991) *"Some Tests for Panel Data: Monte Carlo Evidence and an application to Employment Equations"*, Review of Economic Studies, 58, 277-297.

Arrow, Kenneth J. (1985), *"The Potentials and Limits of the Market in Resource Allocation"*, in Feiwel, G.R. (ed.), Issues in Contemporary Microeconomics and Welfare, London, The Macmillan Press, 107-124.

Arthur Cecil Pigou (1932), *"The Economics of Welfare"* Cambridge University

Basel Committee on Baking Supervision (1997*) "Core Principles for Effective Banking Supervision"*, www.bis.rg

Bator, Francis M. (1958), *"The Anatomy of Market Failure",* **72** Quarterly Journal of Economics, 351-379.

Bernanke, B. and A. Blinder, (1992*), "The Federal Funds Rate and the Channels of Monetary Transmission",* American Economic Review 82(4): 901-921.

Calomiris, C. W., (1999), *"Building an incentive-compatible safety net"* Journal of Banking and Finance 23, pp. 1499-1519.

Calomiris, Charles W., and Chalres M. Kahn (1991), *"The Role of Demandable Debt in Structuring Optimal Banking Arrangements"*, American Economic Review 81 (June 1991), 497-513.

Chege (2006), *"The Effects of Non-Remittance of Members Deductions by Employers to SACCOs",* Unpublished MB Project, University of Nairobi.

Christen R., Lyman T. and Rosenberg R. (2003), "*Microfinance Consensus Guidelines: Guiding Principles on Regulation and Supervision of Microfinance*", CGAP, Washington.

Christen R. and Rosenberg R. (2000), "*The Rush to Regulate: Legal Frameworks for Microfinance Institutions",* Occasional Paper, CGAP, Washington D.C.

Coll, Adriana A., Eduardo Torres and Eugenia Santander (2005), *"The Bank Lending Channel in Venezuela: Evidence from Bank Level Data"*, Banco Central de Venezuela.

Cooper, D. R., and Schindler, P.S. (2000), "*Business Research Methods",* McGraw-Hill New York, NY

Core Principles for Effective Banking Supervision (2006), *"Bank for International Settlement"*, October www.bis.org

Cowen, Tyler (1988), "*The Theory of Market Failure"*, Fairfax, George Mason University Press

David T Llewellyn (2006), *"Paper presented at a World Bank seminar, Aligning Supervisory Structures with Country Needs",* Washington DC, 6th and 7th June, 2006

Degryse, Hans and Van Cayseele, Patrick, (2000) *"Relationship Lending within a Bank-based system: Evidence from European Small Business Data",* Open Access publications from Katholieke Universiteit Leuven

Delis Manthos D, Molyneux, Philip and Pasiouras, Fotios, (2009*) "Regulations and Productivity Growth in Banking",*MPRA Paper 13891, University Library of Munich, Germany.

Di Giorgio, G., Di Noia, C., (2001) "*Which Deposit Insurance in the E-Banking World?"* Mimeo .

Diamond D., (1984), *"Financial Intermediation and Delegated Monitoring",* Review of Economic Studies, 51, nr. 3., 393-414.

Diamond, Douglas W., and Dybvig, Philip H. (1983) *"Bank runs, Deposit Insurance, and Liquidity"*, Journal of Political Economy 91 (June): 401–19. Federal Reserve Bank of Minneapolis Quarterly Review.

Diamond, Douglas W. and Rajan, Raghuram G., (2001) *"Banks, short-term debt and financial crises: theory, policy implications and applications",* Carnegie-Rochester Conference Series on Public Policy, Elsevier, vol. 54(1), pages 37-71, June.

Dimitri, Vitas (1990), *"Financial Regulation: Changing the Rules of the Game"*, Economic Development Institute of the World Bank.

Flannery, M.J., (1998), *"Using Market Information in Prudential Bank Supervision: A Review of the U.S. Empirical Evidence",* Journal of Money, Credit and Banking 30, 273–305.

Gambacorta L, Mistrulli PE (2004) *"Bank Capital and Lending Behaviour: Empirical Evidence for Italy"*. J Finan Intermed 13(4):436–457

Gary Gorton and George Pennacchi, (1990), *"Banks and Loan Sales: Marketing Non-Marketable Assets",* NBER Working Papers 3551, National Bureau of Economic Research, Inc.

Giorgio Di Giorgio, Carmine Di Noia and Laura Piatti(2000), *"Financial Market Regulation: The Case of Italy and a Proposal for the Euro Area"*, Financial Institutions Center, The Wharton School, University of Pennsylvania,

Hardy D., Holden P., Prokopenko, V., (2003), *"Microfinance institutions and public Policy"* Policy Reform 6(3): 147-158

Hulsewig, Oliver, Eric Mayer, and Timo Wollmershauser (2004), *"Bank Loan Supply and Monetary Policy Transmission in Germany"* Journal of Banking and Finance

ILO Recommendation No. 193, (2001), "*Promotion of Cooperatives"* www.ilo.org

International Co-operative Alliance website (2012), www.ica.coop

International Financial Reporting Standards (2012), "*The IFRS Foundation",* website: www.ifrs.org

Ito, Takatoshi and Sasaki, Yuri Nagataki, (2002), *"Impacts of the Basel Capital Standard on Japanese Banks' Behavior"*, Journal of the Japanese and International Economies 16: 372–97.

Jansson T. (2001), "*Microfinance : from village to Wall Street"*, Inter-American Development Bank, Washington D.C.

Joe Peek, Eric S. Rosengren and Geoffrey M. B. Tootell, (2000), *"Identifying the Macroeconomic Effect of Loan Supply Shocks",* Working Papers 00-2, Federal Reserve Bank of Boston

Joskow, Paul L. and Noll, Roger C. (1981), "*Regulation in Theory and Practice: An Overview",* in Fromm, Gary (ed.), Studies in Public Regulation, Cambridge, MA, The MIT Press, 1-66.

Kashyap Anil K. and Jeremy C. Stein (1994), *"Monetary Policy and Bank lending",* Gregory Mankiw ed., Chicago: University of Chicago press

Kenya Gazette Supplement no. 8, (2008), "SACCOs *Societies Act",* (Acts No. 14), Republic of Kenya, 30th December 2008,

Kevin Davis (2007), *"Financial Regulation: Trends and Prospects"*, The Melbourne review,

Khwaja, Asim Ijaz and Atif Mian (2008), *"Tracing The Impact of Bank Liquidity Shocks",* American Economic Review, September.

Kiragu (2010), "*The Relationship between Profitability and Capital Adequacy of Commercial Banks in Kenya", Unpublished MBA Project*, University of Nairobi

KUSSCO website (2012), www.kuscco.com

Ledgerwood J. and White V. (2006*), "Transforming Microfinance Institutions: Providing Full Financial Services to the Poor",* World Bank, Washington DC.

Llewellyn D. (1999), "*The Economic Rationale for Financial Regulation",* Financial Services Authority, Occasional Paper 1. London.

Limo Emily Chepkurui (2009), *"The Relationship between Corporate Governance and Capital Structure For Companies Listed In The NSE", Unpublished MBA Project*, University of Nairobi.

Llewellyn, D. (1986), *"The Regulation and Supervision of Financial Institutions*", Gilbert Lectures on Banking, Institute of Bankers.

Lutomia J.O. (2003), *"The Relationship between the Firm's Capital Structure and the Systematic Risk of Common Stocks. An Empirical Study of Companies Quoted On The NSE", Unpublished MBA Project*, University of Nairobi.

Malombe Maria Georgina, (2011), "*The Effects of Dividend Policy on Profitability of SACCOs With FOSAs in Kenya", Unpublished MBA Project*, University of Nairobi.

Mitchell A. Petersen and Raghuram G. Rajan, (1994), *"The Effect of Credit Market Competition on Lending Relationships",* NBER Working Papers 4921, National Bureau of Economic Research, Inc.

Mitchell Berlin and Loretta J. Mester*,* (*1*999), *"Financial contracts and the legal treatment of informed investors",* Working Papers 99-8, Federal Reserve Bank of Philadelphia.

Modigliani, F. and M. Miller, (1958), *"The Cost of Capital, Corporate Finance, and the Theory of Investment,"* American Economic Review 48, 261–297.

Munene K. Habid(2006), *"Impact Of Profitability On Capital Structure Of Companies Listed At NSE", Unpublished MBA Project*, University of Nairobi.

Njang'ombe Geoffrey, (2011), "*Ministry of Co-Operative Development and Marketing",* Paper presented at ICPAK Seminar on Financial Reporting for SACCOs at Panafric Hotel, Nairobi

Noll, Roger G. (1989), *"Economic Perspectives on the Politics of Regulation",* in Schmalensee, Richard and Willig, Robert D. (eds), Handbook of Industrial Organization II, Amsterdam, North Holland, 1253-1287.

Obiero D. (2002), *"The Banking Sector Regulatory Framework in Kenya. Its Adequacy in Reducing Bank Failure", Unpublished MBA Project*, University of Nairobi.

Ongore V.O. (2001), *"Managerial Response to Deregulation of the Cooperative Sector. The Case of Savings and Credit Co-Operative Societies (SACCOs) In Nairobi"*, *Unpublished MBA Project*, University of Nairobi .

Oyoo M.O. (2002), *"Evaluation of Financial Performance of SACCOs before and After Deregulation. The Case of SACCOs Based In Nairobi*", *Unpublished MBA Project*, University of Nairobi.

Peek, J. and E. Rosengren, (1997), *"The International Transmission of Financial Shocks: the Case of Japan"*, The American Economic Review 87, no. 4, 496-505.

Peltzman, Sam (1989), *"The Economic Theory of Regulation After a Decade of Deregulation"*, Brookings Papers on Economic Activity: Microeconomics, 1-41.

Pinsonneault, A., and Kraemer, K. L. (1993), "*Survey Research Methodology in Management Information Systems: An assessment".* Journal of Management Information Systems, 10, 75-105.

Posner, Richard A. (1971), *"Taxation by Regulation",* Bell Journal of Economics, 22-50.

Posner, Richard A. (1974), *"Theories of Economic Regulation",* Bell Journal of Economics and Management Science, 335-358.

Romer, Christina D., David H. Romer, Stephen M. Goldfeld, and Benjamin M. Friedman (1990), *"New Evidence on the Monetary Transmission Mechanism"*, Brookings Papers on Economic Activity, Vol. 1990, No.1

SACCO Supervision Report (2011), "*Deposit Taking SACCOs"*, Issued in October, by SASRA

Saidenberg M. and P. Strahan, (1999), *"Are Banks Still Important for Financing Large Businesses?"* Current Issues in Economics and Finance, Federal Reserve Bank of New York, 5, nr. 12, 6 p.

Salant, P. and Dillman, D. A. (1994), "*How to Conduct your Own Survey"*, New York: John Wiley and Sons.

Sappington, David E.M. and Stiglitz, Joseph E. (1987), *"Information and Regulation",* in Bailey, Elizabeth E. (ed.), *Public Regulation: New Perspectives on Institutions and Policies*, Cambridge, MA, MIT Press, 3-43.

SASRA website (2012), www.sasra.go.ke

Sharpe, Steven A., (1995), *"Bank Capitalization, Regulation and the Credit Crunch: A Critical Review of the Research Findings"*, Finance and Economic Discussion Series, Washington: Board of Governors.

Shubik, Martin (1970), *"On Different Methods for Allocating Resources"*, Kyklos, 332-338.

Simon, M. K., and Francis, J. B. (1998), "*The Dissertation Cookbook: A Practical Guide to Start and Complete your Dissertation"*, (2nd Ed.). Dubuque, IA: Kendall/Hunt.

Stigler, G. J., (1971), *"The Theory of Economic Regulation"*, Bell Journal of Economics, Vol. 2,

Stigler, George J. (1974), *"Free Riders and Collective Action: an Appendix to Theories of Economic Regulation",* Bell *Journal of Economics*, 359-365.

Usher, Abbot Payson (1943), *"The Early History of Deposit Banking in Mediterranean Europe"*, Harvard University Press, Cambridge, MA

United Nations Guidelines, (2001),"*Recommendations on Policy Regarding Cooperatives and the Cooperative Movement"*,Vol 3 Number 1

Van den Heuvel, Skander (2002), *"The Bank Capital Channel of Monetary Policy-Mimeo, the Wharton School"*, University of Pennsylvania

VanHoose, D. (2008), *"Bank Capital Regulation, Economic Stability, and Monetary Policy: What Does the Academic Literature Tell Us?"* Atlantic Economic Journal, 36, 1-14.

APPENDICES

APPENDIX I: DATA COLLECTION INTRODUCTORY LETTER

Letter of Introduction

12 November 2012

Musasiah Khashmottoh Justus
The University of Nairobi
P.O. Box 30197
NAIROBI.
Tel: 0720970716

Dear Respondent,

RE: REQUEST FOR FINANCIAL INFORMATION

I am a Masters of Business Administration (MBA) Student of the University of Nairobi. As a partial requirement of the coursework assessment, I am required to submit a research project. My research topic is: Impact of deposit levels on lending of SASRA regulated SACCOs in Nairobi.

I would highly appreciate if you could kindly allow me to use your audited financial statements for the last five years to establish this causal relationship.

The results of the report will be used solely for academic purposes and will be treated with utmost confidence.

Thank you in advance,

Yours faithfully,

Musasiah Khashmottoh Justus,

APPENDIX II: LIST OF LICENCED SACCOs IN NAIROBI

1. AFYA SACCO SOCIETY LIMITED
2. ASILI SACCO SOCIETY LIMITED
3. CHAI SACCO SOCIETY LIMITED
4. COMOCO SACCO SOCIETY LIMITED
5. HARAMBEE SACCO SOCIETY LIMITED
6. JAMII SACCO SOCIETY LIMITED
7. KENPIPE SACCO SOCIETY LIMITED
8. KENYA POLICE SACCO SOCIETY LIMITED
9. KINGDOM SACCO SOCIETY LIMITED
10. MWALIMU SACCO SOCIETY LIMITED
11. MWITO SACCO SOCIETY LIMITED
12. NACICO SACCO SOCIETY LIMITED
13. NATION STAFF SACCO SOCIETY LIMITED
14. ORTHODOX SACCO SOCIETY LIMITED
15. SAFARICOM SACCO SOCIETY LIMITED
16. SHERIA SACCO SOCIETY LIMITED
17. STIMA SACCO SOCIETY LIMITED
18. TAI/KIAMBU TG SACCO SOCIETY LIMITED
19. UN SACCO SOCIETY LIMITED
20. WANANDEGE SACCO SOCIETY LIMITED

Source: SASRA 2012

APPENDIX III: MEMBER DEPOSITS KSHS. (000')

	SACCO	YEAR				
		2011	2010	2009	2008	2007
1	AFYA SACCO SOCIETY LTD			4,705,956	4,441,037	4,264,241
2	ASILI SACCO SOCIETY LTD					
3	CHAI SACCO SOCIETY LTD	938,611	879,638	848,800	912,100	917,400
4	COMOCO SACCO SOCIETY LTD					
5	HARAMBEE SACCO SOCIETY LTD	10,339,146	9,307,989	8,631,791	7,973,031	6,992,288
6	JAMII SACCO SOCIETY LTD	920,103	628,915	554,532	492,500	
7	KENPIPE SACCO SOCIETY LTD	916,583	787,938	708,771	660,494	634,933
8	KENYA POLICE SACCO SOCIETY LTD			4,024,756	3,306,060	
9	KINGDOM SACCO SOCIETY LTD	167,902	128,604			
10	MWALIMU SACCO SOCIETY LTD			10,862,000	9,786,708	
11	MWITO SACCO SOCIETY LTD	534,772	449,561	392,585	338,709	
12	NACICO SACCO SOCIETY LTD					
13	NATION STAFF SACCO SOCIETY LTD					
14	ORTHODOX SACCO SOCIETY LTD	39,297	33,783			
15	SAFARICOM SACCO SOCIETY LTD	607,146	505,095	406,440		
16	SHERIA SACCO SOCIETY LTD	1,349,233	1,169,164	989,955		
17	STIMA SACCO SOCIETY LTD	5,481,844	4,677,351			
18	TAI/KIAMBU TG SACCO SOCIETY LTD	428,793	368,729			
19	UN SACCO SOCIETY LTD	4,462,385	3,748,852	3,010,551	2,491,122	2,000,000
20	WANANDEGE SACCO SOCIETY LTD			661,381	585,412	533,769

Source: SASRA Regulated SACCOs Financial Statements and Reports (2007-2011)

APPENDIX IV: MEMBER LOANS/ADVANCES KSHS. (000')

	SACCO	YEAR				
		2011	2010	2009	2008	2007
1	AFYA SACCO SOCIETY LTD			4,320,637	3,790,468	3,749,747
2	ASILI SACCO SOCIETY LTD					
3	CHAI SACCO SOCIETY LTD	1,031,320	906,000	934,800	1,071,500	944,900
4	COMOCO SACCO SOCIETY LTD					
5	HARAMBEE SACCO SOCIETY LTD	13,020,438	10,877,610	8,844,076	7,914,553	7,055,678
6	JAMII SACCO SOCIETY LTD	1,065,770	870,478	797,207	681,900	
7	KENPIPE SACCO SOCIETY LTD	134,467	940,636	864,331	792,649	660,794
8	KENYA POLICE SACCO SOCIETY LTD			3,832,776	3,315,423	
9	KINGDOM SACCO SOCIETY LTD	142,894	112,348			
10	MWALIMU SACCO SOCIETY LTD			12,126,102	9,267,280	
11	MWITO SACCO SOCIETY LTD	549,207	458,182	383,623	328,513	
12	NACICO SACCO SOCIETY LTD					
13	NATION STAFF SACCO SOCIETY LTD					
14	ORTHODOX SACCO SOCIETY LTD	39,562	24,666			
15	SAFARICOM SACCO SOCIETY LTD	857,629	668,995	812,684		
16	SHERIA SACCO SOCIETY LTD	1,410,002	1,248,585	1,017,956		
17	STIMA SACCO SOCIETY LTD	6,292,003	5,395,843	4,400,000	3,600,000	2,900,000
18	TAI/KIAMBU TG SACCO SOCIETY LTD	353,086	289,384			
19	UN SACCO SOCIETY LTD	4,832,853	3,995,860	3,272,620	2,606,795	2,400,000
20	WANANDEGE SACCO SOCIETY LTD			572,156	465,673	268,412

Source: SASRA Regulated SACCOs Financial Statements and Reports (2007-2011)

APPENDIX V: INTEREST ON MEMBER LOANS KSHS. (000')

	SACCO	YEAR				
		2011	2010	2009	2008	2007
1	AFYA SACCO SOCIETY LTD			374,839	403,851	
2	ASILI SACCO SOCIETY LTD					
3	CHAI SACCO SOCIETY LTD	40,697	40,934			
4	COMOCO SACCO SOCIETY LTD					
5	HARAMBEE SACCO SOCIETY LTD	781,227	707,045	530,645	474,873	423,341
6	JAMII SACCO SOCIETY LTD	74,603	50,334			
7	KENPIPE SACCO SOCIETY LTD	123,268	116,359	105,301	93,452	83,938
8	KENYA POLICE SACCO SOCIETY LTD					
9	KINGDOM SACCO SOCIETY LTD	15,726	12,376	42,781		
10	MWALIMU SACCO SOCIETY LTD			527,766	674,420	
11	MWITO SACCO SOCIETY LTD	27,460	11,455	19,181	16,426	
12	NACICO SACCO SOCIETY LTD					
13	NATION STAFF SACCO SOCIETY LTD					
14	ORTHODOX SACCO SOCIETY LTD					
15	SAFARICOM SACCO SOCIETY LTD	54,643	50,510	34,500		
16	SHERIA SACCO SOCIETY LTD	135,258	118,581			
17	STIMA SACCO SOCIETY LTD	931,174	750,491			
18	TAI/KIAMBU TG SACCO SOCIETY LTD	7,500	8,309			
19	UN SACCO SOCIETY LTD	716,639	566,651	408,407	385,153	363,471
20	WANANDEGE SACCO SOCIETY LTD			38,462	35,150	27,014

Source: SASRA Regulated SACCOs Financial Statements and Reports (2007-2011)

APPENDIX VI: SHARE CAPITAL KSHS. (000')

	SACCO	YEAR				
		2011	2010	2009	2008	2007
1	AFYA SACCO SOCIETY LTD			35,169	37,717	
2	ASILI SACCO SOCIETY LTD					
3	CHAI SACCO SOCIETY LTD	30,040	28,120	44,695		
4	COMOCO SACCO SOCIETY LTD					
5	HARAMBEE SACCO SOCIETY LTD	325,062	322,275	43,724	41,656	39,341
6	JAMII SACCO SOCIETY LTD	42,586	25,769	15,650	9,400	
7	KENPIPE SACCO SOCIETY LTD	30,804	30,804	25,452	2,016	15,020
8	KENYA POLICE SACCO SOCIETY LTD			79,454	73,714	68,248
9	KINGDOM SACCO SOCIETY LTD	14,025	10,495			
10	MWALIMU SACCO SOCIETY LTD			23,607	23,354	
11	MWITO SACCO SOCIETY LTD	24,242	12,882	0	0	0
12	NACICO SACCO SOCIETY LTD					
13	NATION STAFF SACCO SOCIETY LTD					
14	ORTHODOX SACCO SOCIETY LTD	9,445	3,442			
15	SAFARICOM SACCO SOCIETY LTD	13,996	10,741	5,614		
16	SHERIA SACCO SOCIETY LTD	35,074	6,210	5,654	4,685	
17	STIMA SACCO SOCIETY LTD	201,230	9,461	8,800		
18	TAI/KIAMBU TG SACCO SOCIETY LTD	83,960	54,459	47,677		
19	UN SACCO SOCIETY LTD	139,774	120,864	121,000		
20	WANANDEGE SACCO SOCIETY LTD			3,493	3,139	2,964

Source: SASRA Regulated SACCOs Financial Statements and Reports (2007-2011)

APPENDIX VII: "ANOVA" AND RESIDUAL OUTPUT" for 2011 Data

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.997593309
R Square	0.995192411
Adjusted R Square	0.993389565
Standard Error	314141.1375
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	1.63E+14	5.45E+13	552.0119	0.00
Residual	8	7.89E+11	9.87E+10		
Total	11	1.64E+14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-223378.408	125795.4	-1.77573	0.113689	-513463	66706.36	-513463	66706.36
Deposits	1.34344429	0.14725	9.123544	1.68E-05	1.003885	1.683004	1.003885	1.683004
Interest	-1.37338727	0.596085	-2.30401	0.050156	-2.74796	0.001186	-2.74796	0.001186
Capital	1.288799478	4.545726	0.283519	0.783978	-9.19366	11.77126	-9.19366	11.77126

RESIDUAL OUTPUT

Observation	*Predicted Loans*	*Residuals*
1	1020415.975	10904.02
2	13012700.77	7737.229
3	965154.7179	100615.3
4	878405.2671	-743938
5	-1333.90029	144227.9
6	488587.8445	60619.16
7	-158412.367	197974.4
8	535280.456	322348.5
9	1448682.7	-38680.7
10	6121656.216	170346.8
11	450588.2991	-97502.3
12	4967505.02	-134652

Source: Research Findings

APPENDIX VIII: "ANOVA" AND RESIDUAL OUTPUT" for 2010 Data

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.999538574
R Square	0.999077362
Adjusted R Square	0.998731372
Standard Error	114037.8024
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	1.12656E+14	3.76E+13	2887.595	0.00
Residual	8	1.04037E+11	1.3E+10		
Total	11	1.1276E+14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-25534.0481	41390.02612	-0.61691	0.554439	-120980	69911.52	-120980	69911.52
Deposits	1.329728874	0.071990952	18.47078	7.6E-08	1.163717	1.49574	1.163717	1.49574
Interest	-1.07551495	0.430027068	-2.50104	0.036882	-2.06716	-0.08387	-2.06716	-0.08387
Capital	-2.28780554	1.199591064	-1.90715	0.092938	-5.05407	0.478456	-5.05407	0.478456

RESIDUAL OUTPUT

Observation	*Predicted Loans*	*Residuals*
1	1035787.778	-129787.7784
2	10853827.68	23782.31626
3	697662.9561	172815.0439
4	826590.4551	114045.5449
5	108153.3118	4194.688151
6	530468.6595	-72286.65953
7	11513.55582	13152.44418
8	567207.778	101787.222
9	1387394.17	-138809.1701
10	5365265.409	30577.59085
11	331247.4943	-41863.49431
12	4073467.748	-77607.74794

Source: Research Findings

APPENDIX IX: "ANOVA" AND RESIDUAL OUTPUT" For 2009 Data

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.94662795
R Square	0.89610448
Adjusted R Square	0.86776934
Standard Error	1283849.31
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	1.5638E+14	5.21E+13	31.6252	0.00
Residual	11	1.8131E+13	1.65E+12		
Total	14	1.7451E+14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	602933.625	484140.873	1.245368	0.238872	-462653	1668521	-462653	1668521
Deposits	1.00383399	0.21119577	4.753097	0.000597	0.538995	1.468673	0.538995	1.468673
Interest	0.18553467	3.56683043	0.052017	0.959448	-7.66501	8.036076	-7.66501	8.036076
Capital	-6.92638963	11.1012871	-0.62393	0.545397	-31.3602	17.50738	-31.3602	17.50738

RESIDUAL OUTPUT

Observation	*Predicted Loans*	*Residuals*
1	5152883.65	-832246.65
2	1145412.93	-210612.93
3	9063422.42	-219346.42
4	1051193.7	-253986.7
5	1157668.56	-293337.56
6	4092791.14	-260015.14
7	610870.984	-610870.98
8	11440986	685115.951
9	1000582.53	-616959.53
10	978448.107	-165764.11
11	1557522.3	-539566.3
12	541981.396	3858018.6
13	272704.147	-272704.15
14	2862707.56	409912.435
15	1249792.51	-677636.51

Source: Research Findings

APPENDIX X: "ANOVA" AND RESIDUAL OUTPUT" For 2008 Data

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9454763
R Square	0.8939253
Adjusted R Square	0.8541473
Standard Error	1156115.1
Observations	12

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	9.01118E+13	3E+13	22.47286	0.000298
Residual	8	1.06928E+13	1.34E+12		
Total	11	1.00805E+14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	649892.56	456120.7784	1.424826	0.192029	-401924	1701709	-401924	1701709
Deposits	1.0643152	0.375523874	2.834214	0.022007	0.198356	1.930275	0.198356	1.930275
Interest	-2.1399209	4.394070416	-0.487	0.63932	-12.2727	7.992824	-12.2727	7.992824
Capital	-12.703967	23.4973545	-0.54066	0.603468	-66.889	41.48103	-66.889	41.48103

Source: Research Findings

APPENDIX XI: "ANOVA" AND RESIDUAL OUTPUT" for 2007 Data

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.91021
R Square	0.828483
Adjusted R Square	0.699845
Standard Error	1293283
Observations	8

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	3.23E+13	1.08E+13	6.440436	0.051896
Residual	4	6.69E+12	1.67E+12		
Total	7	3.9E+13			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	679402.9	652738.7	1.04085	0.356719	-1132890	2491696	-1132890	2491696
Deposits	0.800539	0.262713	3.047198	0.038133	0.07113	1.529949	0.07113	1.529949
Interest	1.410761	3.703681	0.380908	0.722638	-8.87231	11.69383	-8.87231	11.69383
Capital	-8.00016	19.50658	-0.41013	0.702729	-62.1591	46.15879	-62.1591	46.15879

RESIDUAL OUTPUT

Observation	*Predicted Loans*	*Residuals*
1	4093096	-343349
2	1413818	-468918
3	6559504	496173.8
4	1185946	-525152
5	133407.8	-133408
6	679402.9	2220597
7	2793253	-393253
8	1121103	-852692

Source: Research Findings