DETERMINANTS OF LIQUIDITY OF SAVINGS AND CREDIT CO-OPERATIVE ORGANISATIONS IN NAIROBI COUNTY

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DECLARATION

I declare that this project is my original work and has not been submitted for examination in any other university.

Signed ..... Date 17th December 2019

Natalie Agiso 094924 **2019**

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

Signed ..... Date 17/12/19

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I would like to take this golden opportunity to thank God for taking me through this process of research and I also appreciate the continuous support and motivation I have been receiving from the university, my friends and all the parties I came across during this course. I genuinely appreciate the support and constructive critique I have gotten from my supervisor Dr. James Ndegwa. Through his guidance, I managed to do my research well in accordance with the required guidelines.

DEDICATION

I dedicate this project to my mom, dad and sister.

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ABBREVIATIONS

CAR;	**Capital adequacy ratio**
GDP;	**Growth domestic product**
SACCOS;	**Savings and credits Cooperative Societies**
SASRA;	**Sacco Society Regulatory Authority**

ABSTRACT

Liquidity is the ability of a financial institution or the ability of an organization to meet its financial obligation as they fall due. Liquidity is an important aspect in a company when achieving overall short and long-term financial objectives while also maximizing the owner's wealth and protecting them against the dynamics in the market. In SACCOs, liquidity is important, as lack of liquidity or liquid assets leads to bankruptcy as the institution will not be able to cover for its cash demands as they fall due. Therefore, managing liquidity is a top priority of deposit taking SACCOs. To manage liquidity effectively a good understanding of the factors affecting liquidity is critical. The current study wanted to find out the determinants of liquidity of SACCOs in Nairobi County alongside other factors such as capital adequacy ratio, collection policy, and the credit policy. This study is based on two theories, which are Liquidity Preference theory, and free cash flow theory. The study used a descriptive research design. To facilitate this, research was done on deposit taking SACCOs operating within Nairobi. The data collection involved a questionnaire based on a five-point Likert scale. The study relied on secondary and primary data sources. Descriptive statistics were employed to analyze quantitative data. The study employed the ordinal regression analysis model using the Statistical Package for Social Sciences (SPSS). Data was presented in the form of tables. From the results capital adequacy ($r=0.745$, $p<0.05$) was found to adequately affect the liquidity in SACCOs. This shows that SACCOs associated with high levels of capital being liquid as compared to SACCOs with relatively less capital. Therefore, the effect of capital adequacy in SACCOs should not be underestimated as highly affect the level of liquidity in SACCOs. To effectively maintain, favorable levels of liquidity, it was recommended that financial institutions should capitalize on reviewing of credit policies and growth of their firms to increase their capital and assets to efficiently maintain an appropriate level of liquidity. This would ensure that both short and long-term financial obligations are adequately met and operations of the SACCOs run smoothly.

CHAPTER 1

INTRODUCTION

1.1 Background study.

The first credit unions in Europe were established by Frank Hermann Schelze Delitzch in the 1850s in Germany to allow those unable to access financial services the opportunity to borrow from the resources pooled together by members. The idea was a decade later taken to rural German by Friedrich Wilhelm Raiffesisen (WCCU, 2017). The concept greatly spread to North America in the early twentieth century. Credit union national association, the national association of credit union within the United States was, founded in 1934. Two decades later a vote was passed for credit unions to expand outside North America (WCCU, 2017).

The leading SACCO in Africa was established in Ghana in the year 1959. The major nations that followed suit in entering the SACCO membership were; Uganda, Nigeria, Tanzania, and Kenya. The development of SACCOS resulted to the creation of the African Confederation of Cooperative Society Savings and Credit Association (ACCOSCA) in 1965. The sole purpose and objectives for the formation of ACCOSCA were to promote SACCO principles, offer SACCO insurance and educate members on SACCO issues (Clement, Martin, & Jagongo, 2012).

The earliest cooperative in Kenya was established in 1908 at Kipkelion by white settlers. It was registered under the company's act and its main aim was to grant dairy and agricultural support to white settlers. Since then regulatory reforms have been instituted to streamline SACCO operations for maximum returns to members (Ronald, & Muturi, 2015). According to Ronald and Muturi (2015), Kenyan SACCOs contribute 45% of the country's GDP and to date, the sector has mobilized over Ksh 200 billion deposits and assets totaling to Ksh 210 billion. These resources give SACCOs a basis to compete in a liberalized economy. SACCOs were generally controlled by the government before liberalization in 1997. The cooperative Act of 2004 guides the formation and management of cooperatives in Kenya. In July 2013, the World Council of Credit Unions recognized Kenya SACCOs as the fastest growing subsector in the world (WOCCU, 2013).

1.1.1 Determinants of Liquidity in SACCOS

Savings mobilization plays an important role in that it contributes to the growth and development of the economy (Odhiambo, 2013). Kiragu, (2014) a major source of funding in SACCOS is the saving deposits members make. According to the SACCO Societies Act, (2008), the savings contributed on a monthly basis by members are used for lending to those in need. According to Fayo, (2019) saving in Kenyan SACCOS

are estimated to be over seven hundred and thirty two billion Kenyan shillings and therefore make up to 30% of the national savings. At the end of 2017, the asset base was estimated to be over one trillion Kenyan shillings and the loan portfolio was around seven hundred billion Kenyan shillings.

SACCOS are prohibited to grant a loan or credit facility to a member when the loan or credit facility, in the aggregate, exceeds such limit of the SACCOS core capital (SACCO Societies Act, 2008). Loans to members in Kenya's SACCO subsector increased by 23% in 2011 to stand at 221 billion up from 179.9 billion (SASRA2012). The ability of a financial institution to meet demand for deposit withdrawals and other cash outflows is a visible indicator of its viability (Muraguri, 2014). There was a financial crisis in 2007 whereby financial institutions were unable to roll over their short term financing which in return led to a major liquidity crisis among other factors had detrimental effects on the global economy. SACCOS use the following fund investment channels; loans, liquid investments such as money transfer services, deposits, bonds, treasury bills and non -financial investments such as land and buildings. In a low interest environment, SACCOS' main problem over the years is the ability to generate meaningful income. SACCO Societies are prohibited from investing in non-earning assets or property and equipment in excess of 10% of total assets, of which land and buildings shall not exceed 5% (SACCO Societies Act, 2008). SACCO Societies are also required to dispose of the investment in property acquired for the purpose of future expansion if the property remains unutilized for 2 years from the date of acquisition (Ademba, ghju2010).

Default on loan repayments poses the greatest risk to the stability of the multi-billion shilling savings and credit co-operative movement (SASRA, 2013). The risk of defaults on personal loans granted by SACCOs is high, as the debts are secured only by member guarantees (Maina, Kinyariro & Muturi, 2016). The regulator has also warned that reliance on expensive bank loans, instead of members' share contributions, raised the probability of the SACCOs defaulting on their debt (Keitany, 2013). This is indicated by SACCOs' low liquidity and solvency ratios especially since borrowing costs have sharply increased over the past periods.

Determinants of liquidity in SACCOS are factors that influence the level of liquidity a SACCO holds which will inform members about its' ability to meet current obligations. The minimum statutory ratio of 15% is required to be maintained and the external borrowings also form part of the indicator of liquidity status of the SACCO, this has been capped at 25% of total assets. The following factors should be considered when assessing the determinants of liquidity of a SACCO; credit risk policy, capital adequacy and collection method or rather collection policy.

Capital adequacy can be referred to as the statutory minimum reserves of capital that a financial institution must have. It can be affected by the level of; return on assets and equity, total assets, total equity, debt and lastly the size of financial institutions. Debt collection methods refer to the pursuing of payment owed by a debtor. This includes the collection policy implemented. Credit risk policy can be referred to as terms and

conditions set for lending someone goods or money and it is normally in written form. There are quite a number of factors that affect credit policy and some of them are; credit terms, collection policy, size of a firm and lastly average loan duration time.

1.1.2 Liquidity

Liquidity simply refers to the degree to which an asset can be converted into cash. Exposure to credit risk can lower the liquidity of a SACCO. Various factors affect liquidity factors like level of inflation, line of credit, bad debt, net cash flows, interest rate and also the level of inflation. SACCOS should pay attention to the measurement and management of liquidity failure to do so may lead to a shortage of liquidity leading to an inability to meet its obligations when they are due hence financial distress (Harvey and Roper, 2004).

The SACCO supervision report ascertains that the liquidity of a financial institution is its, ability to raise funds in assets and to settle its, liabilities in due time. Liquidity risk management involves an analysis of the statement of financial position and also an analysis of how needs can be satisfied (Osoro 2015). To be able to manage liquidity effectively, financial institutions need to look at long-term positions and exposure to large depositors (Navdeep 2014).

The best level of liquidity is when it is optimum, its' not advisable to have an extremely high level of liquidity because assets earn nothing. According to Balbina (2017) efficient management of liquidity benefits financial institutions for it helps in; prevention of bankruptcy, ensure financial stability, the achievement of both long-term and short-term financial objectives and lastly maximization of wealth and offers protection against adverse market changes.

Liquidity risk can be referred to as the level of marketability of an investment and whether it can be bought and sold quickly enough to cater for obligations. There are two types of liquidity risks namely; market liquidity risk this is the inability to easily exit a position whereas funding or rather cash flow liquidity risk is the chief concern of a corporate treasurer who asks whether the firm can fund its liabilities. In this study, we will solely focus on funding or rather cash flow liquidity risk.

1.1.3 SACCOs in Nairobi County.

Sacco's can be referred to as an association of innumerable people with the same mindset registered under the ministry of cooperative development and marketing in Kenya and has the power to take deposits from and loan its' members. SACCOs are also considered as one of the most important cooperatives in the Republic of Kenya. As reported by Melania and Justin (2015), their sole purpose of existence is to mobilize savings and advance loans to their members. Loans advanced to its members normally have a lower interest compared to other financial institutions like banks, (Clement, Ambrore and Martin 2013). Some of the roles

played by SACCOs in Kenya are; promotion of savings culture, to cater to their member's needs by offering social-economical and financial benefits and they lastly assist in the creation of wealth and they do this through the mobilization of resources (Ngombe and Mwikamba, 2004). In Kenya, the SACCO subsector is divided into two segments that are; principally defined or consider the nature of savings and deposits they receive from members.

There are two types of SACCOs in Kenya, one of them being non-deposit-taking SACCOs, which are SACCOs that receive savings from their members and use the deposits as collaterals for credit facilities advanced to them. These savings cannot be withdrawn by members but can be reimbursed after the member withdraws from the SACCO. On the other side of the coin, deposit-taking SACCOS mobilize savings and members are permitted to withdraw the deposits from the savings account this is similar to how banks operate. According to SASRA, there are currently 163 licensed deposit-taking SACCOS in Kenya. The widespread of SACCOs in Kenya is indeed a confirmation that majority of Kenyan households derive their livelihoods directly or indirectly from the SACCOs (Joachim, 2007).

1.2 Statement of the problem

Low liquidity levels pose a threat to financial institutions in that; it hinders them from meeting their financial obligations. Institutions that have an improper balance between credit risk management and liquidity, (their liquidity level is low) are unable to use their extra finances to invest or rather exploit more profitable investment opportunities. Low liquidity levels can be caused by either, the possession of a lot of non- liquid assets hence cash is tied up or high-interest rates, therefore, making it expensive to borrow loans.

In Kenya, various studies concerning financial institutions have been done; Odhiambo (2016) did research to showcase the relationship between credit risk management practices and liquidity ratios in commercial banks. Emmanuel (2016) researched the effects of credit risk management practices on the liquidity of SACCOs. John (2017) did research on financial factors affecting the liquidity of SACCOS in Kirinyaga County. It is quite evident that there is hardly any empirical literature that elaborates or showcases the determinants of liquidity of SACCOS. Some of the problems SACCOs face are; competition against each other, mismanagement, fraud and also bad loans that have put shillings 1 trillion on a path of instability that, if not reversed could have adverse effects on the entire economy.

According to SASRA and a recent study by FSD (2013), there was a revelation that SACCOs are facing severe liquidity problems and a majority of them are unable to meet the demands of their clients for loans and withdrawal of savings. Given this situation, clients despite their loyalty are getting anxious about the

future of SACCOs. If this situation is not rectified, we may witness the demise of SACCOs, which will be a terrible loss for Kenyans. There is, therefore, need to understand the determinants of liquidity in Kenyan SACCOS. It is against this background that this study sought to assess the determinants of liquidity in deposit taking SACCOs a case study of Nairobi County. This then brings us to our research question what are the determinants of liquidity of SACCOS in Nairobi County?

1.3 Objectives

1.3.1 General objective.

To assess the determinants of liquidity of SACCOS located in Nairobi County.

1.3.2 Specific Objectives.

i. To assess the effect of credit policy on the liquidity of SACCOs located in Nairobi County.

ii. To assess the effect of capital adequacy on the liquidity of SACCOs in Nairobi County.

iii. To assess the effect of debt collection methods (collection policy) on the liquidity of SACCOs located in Nairobi County.

1.4 Research questions.

i. What are the effects of credit policy on the liquidity of SACCOs located in Nairobi County?

ii. What are the effects of capital adequacy on the liquidity of SACCOs located in Nairobi County?

iii. What are the effects of debt collection methods (collection policy) on the liquidity of SACCOs located in Nairobi County?

1.5 Scope of the study

The study's main focus is to investigate the determinants of liquidity of SACCOs in Nairobi County. There are currently 14,000 cooperative societies in Kenya of which 5000 of them are SACCOs. I chose Nairobi County as my main focus because it is not only the capital city but it is also a large contributor of an enormous portion to the national wealth and GDP in Kenya. The study will include a number of dependent and, independent variables and also suggests a number of theories that elaborates more on the determinants of liquidity of SACCOs in Nairobi County.

1.6 Significance of the study.

The study strives to be of benefit to policy makers in setting laws or strategies in SACCOs and to inspire and motivate them to implement strategies that ensure that there is a commendable level of liquidity while short-term obligations in SACCOS are being met. The findings of the study will provide useful information to

future scholars and researchers for there is little to no empirical data regarding this study. The study will be of great importance to finance practitioners since it will give them insight on the determinants of liquidity. The study might be useful to SASRA in the formulation and implementation of regulations on how to manage investments of SACCO's finances or funds and business continuity as a way of marketing SACCOS. SACCOS in Kenya will benefit from this study in that, SACCOS will get to know whether factors studied will help in solving the liquidity crisis currently being faced. They will also get to know how factors like capital adequacy level, debt collection method or rather collection policies and credit policies implemented correlate with liquidity.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, I solely focus on the theoretical foundation, empirical and conceptual framework and lastly the research gap in my field of study

2.1 Theoretical review.

2.1.1 Liquidity preference theory

This theory proposes that the sole purpose of demand for money is to, remain liquid. It was first proposed by Keynes (1989) whose aim was to elaborate more on the correlation between supply and demand of money and the determination of interest rates. The demand for money as an asset was theorized to depend on the interest forgone by not holding bonds or stock or rather less liquid assets.

Keynes suggests that interest rates are a reward for parting with liquidity. In addition, he proposes that money is the most liquid asset and that liquidity is an attribute to an asset moreover, the more quickly an asset is converted into an asset the more liquid it is said to be. This theory is formulated in terms of three motives: transactions demand, precautionary demand, and speculative demand.

Transactions demand refers to the amount of money held by households to carry out current transactions. This demand arises because payments and receipts of income are not perfectly synchronized. For instance, individuals receive income only at particular intervals (weekly or monthly) and yet they pay for most goods and services on a daily basis. Transactions demand is likely to depend on an individual's money income and institutional arrangements; how often people are paid.

Assuming that the institutional arrangements are constant, the money income will be the main determinant of transactions demand. Therefore in an economy, we can expect the total demand for money for transactions purposes to depend directly on the level of national income in the sense that a rise in GDP or rather national income will lead to a rise in the total value of transactions

Precautionary demand is the amount of money held to provide for unforeseen eventualities or circumstances for example; a motorcycle breakdown. It arises because individuals are uncertain about the degree to which payments and receipts will be synchronized. It also depends on money in the national income or GDP in the sense that; the higher the total value of transactions, the more money will be needed to guard against unexpected transactions. Although the interest rate is likely to influence the precautionary demand, we assume that the precautionary demand is interest inelastic. According to Kregel, (1988) this motive proposes that people prefer to have liquidity in the case of unexpected eventualities.

Speculative demand refers to the desire to hold one's assets in liquid form so as to take advantage of market movements regarding the uncertainty and expectation of future changes in interest rates. Keynes argued that individuals would have some conception of "the normal" rate of interest. If current interest were greater than an individual's expectation of the normal rate, an individual would expect it to fall in the near future since a fall in interest rate would lead to capital gain for bondholders, the theory predicts that an abnormally high-interest rate will lead to a large demand for bonds and consequently, a small demand for speculative money demand balances. Speculative demand emphasizes on the fact that when the interest rate decreases people demand for more money to have in possession until the interest rate increases, which will lead to a decrease in bond price so that the bond yield could be at par with the interest rate(Kregel,1988).

Some of the criticisms of this theory are as follows; Keynes did not include savings as a source of investible funds, secondly there is no elaboration on the various types of interests prevailing in the market at the same time and lastly, the theory only concentrates on effects of interest rates in the short-run and not in the long-run. In conclusion, a financial institution that gives loans to borrowers is at a high risk of facing liquidity problems especially if the creditors are unable to pay the loan in due time. This may be detrimental to the firm for it prevents them from investing in profitable projects with high rates of return. However, this theory's significance outweighs the criticisms and the criticisms are as follows; it helps in discovering the fact that the more quickly an asset is converted into cash or money the more liquid it is said to be, it is also an eye-opener because it encourages people to take advantage of the changes in interest rates and bond prices (speculative demand), it also gives insight on the correlation between interest rates and the supply and demand of money (the higher the demand for money the higher the interest rates) This theory is applicable to my study in the sense that it sheds light on the fact that, institutions need to have adequate liquidity by holding more cash for profitable investments and to sustain the confidence of depositors in meeting or settling short term obligations.

2.1.2 Free Cash-flow theory.

Jensen came up with this theory in 1986 he proposed that free cash flows should be paid out to investors, so as to avoid mismanagement of funds by managers. Managers have an incentive to hoard money so as to increase the number of assets in their control and to realize discretionary power over the firm investment decision. Firms with poor investment opportunities are expected to hold more cash to ensure the availability of funds to invest in growth projects, even if the Net Present Value of these projects is negative. This would lead to the destruction of shareholder value and, even if the firm has a large investment program and a low market-to-book ratio.

Some of the criticisms of this theory are as follows it promotes short-termism by discouraging investments that bring long term profits. Furthermore, greater reliance on debt increases the vulnerability to interest rate

hikes and excess debt financing may make the projects the firm undertakes riskier. The advantages of this theory are; it plays an important role in reducing agency costs, and it also proposes that free cash flows should be paid out to investors so as to prevent mismanagement of funds. This theory relates to this study because it puts emphasis on the fact that; management of liquidity is essential so as to ensure there is a balance between meeting the current obligation to mitigate liquidity shortfall and investing in the interest of shareholders wealth maximization.

2.2 Empirical framework.

2.2.1 Effects of credit policy on Liquidity.

A study on the effects of credit policy on the liquidity of SACCOs was conducted by Bablina (2016). This study mainly focused on SACCOs in Nairobi County and her objectives were to assess how credit policies, credit terms, loan duration, collection methods and capital adequacy in Nairobi county SACCOs affected liquidity. Her research design was descriptive in nature, collected secondary data and lastly analyzed data using the regression analysis. The conclusion made regarding this study was that credit policies like; loan duration frequency of loan installments, debt collection method, credit terms and size of the firm affects liquidity. There is also a positive correlation between a good credit policy and the liquidity of SACCOs in Nairobi County. On the other side of the coin, she proposed that loan durations and credit policies do not necessarily affect the level of liquidity of an institution and this is due to the fact that implementation of credit policies may be extremely ineffective.

A similar study was done by Kereotu, James and Bingilar Paymaster Frank in 2014. The study was descriptive in nature and was to investigate the effects of credit policy on the liquidity of manufacturing firms in Nigeria in 2014. Their objectives were to assess the effects of credit policy and collection period on liquidity and lastly to investigate on the effect of collection policy on the cash flow of a manufacturing firm.

From the findings of this study, the researchers ascertain that; the credit period allowed to firms by suppliers once setting credit standards or rather efficiently implemented credit policies and credit assortment periods can minimize the problem of cash flow and liquidity of firms. Firms have a more robust likelihood of maintaining a fascinating level of liquidity if their credit period is frequently adjusted. There is, however, no specific counseled credit policy for organizations Brigham (1999) credit policy ought to be established by putting a number of factors into consideration, factors like; the share market of the business, and level of competition.

2.2.2 Effects of capital adequacy on liquidity.

Nyaundi (2005) did a study on the effects of capital adequacy requirements on the liquidity of Commercial Banks in Kenya. His main objectives were to assess the effects of economic methodology was descriptive in nature and secondary data was collected. He concluded that capital adequacy, the size of the bank and GDP

growth rate have significant effects on the liquidity rate of commercial banks in Kenya. The size of the bank has the greatest impact on liquidity according to his findings compared to the other factors. He also proposed that capital adequacy is required to maintain a balance between operational credit and market risk exposure of the financial institutions. In addition, he proposed that liquidity is one of the most important monetary stability indicators since liquidity shortage in a bank can cause a general crisis in the banking sector because of their interconnected operations. Banks with sufficient capital ought to be in a position to acquire additional liquidity from the central bank against adequate collateral. Since liquidity is a major component of financial risk, it would seem logical that banks ought to put aside reserves of capital to mitigate this risk. There is evidence that they already do. According to Hartmann (2004), if banks endogenize the capital decision, they will keep capital reserves higher than those needed by the minimal regulative capital quantity in order to possess a buffer against shocks to asset prices. Nevertheless, the reality is that banks put aside liquidity reserves abstracts from the difficulties of implementing a common regulatory approach to managing liquidity.

Parvesh Kumar Aspal, Afroze Nazneen in 2014 conducted a study on the effects of capital adequacy on Indian Private Sector banks. This study was conducted in India and the main variables that were examined were; liquidity, management efficiency, loan, asset quality, and sensitivity and what effects they had on capital adequacy. The research methodology applied was analytical in nature and both primary and secondary data were collected. The conclusion came to was that loans have a significant effect on capital adequacy in that an increase in loan advancement leads to an increase in interest income and profitability. It also further reveals that liquidity has a significant influence on capital adequacy whereby an increase in bank liquidity leads to a reflection of the ability to meet credit demands and cash - flow requirements. Lastly, sensitivity towards market risks positively correlates with capital adequacy.

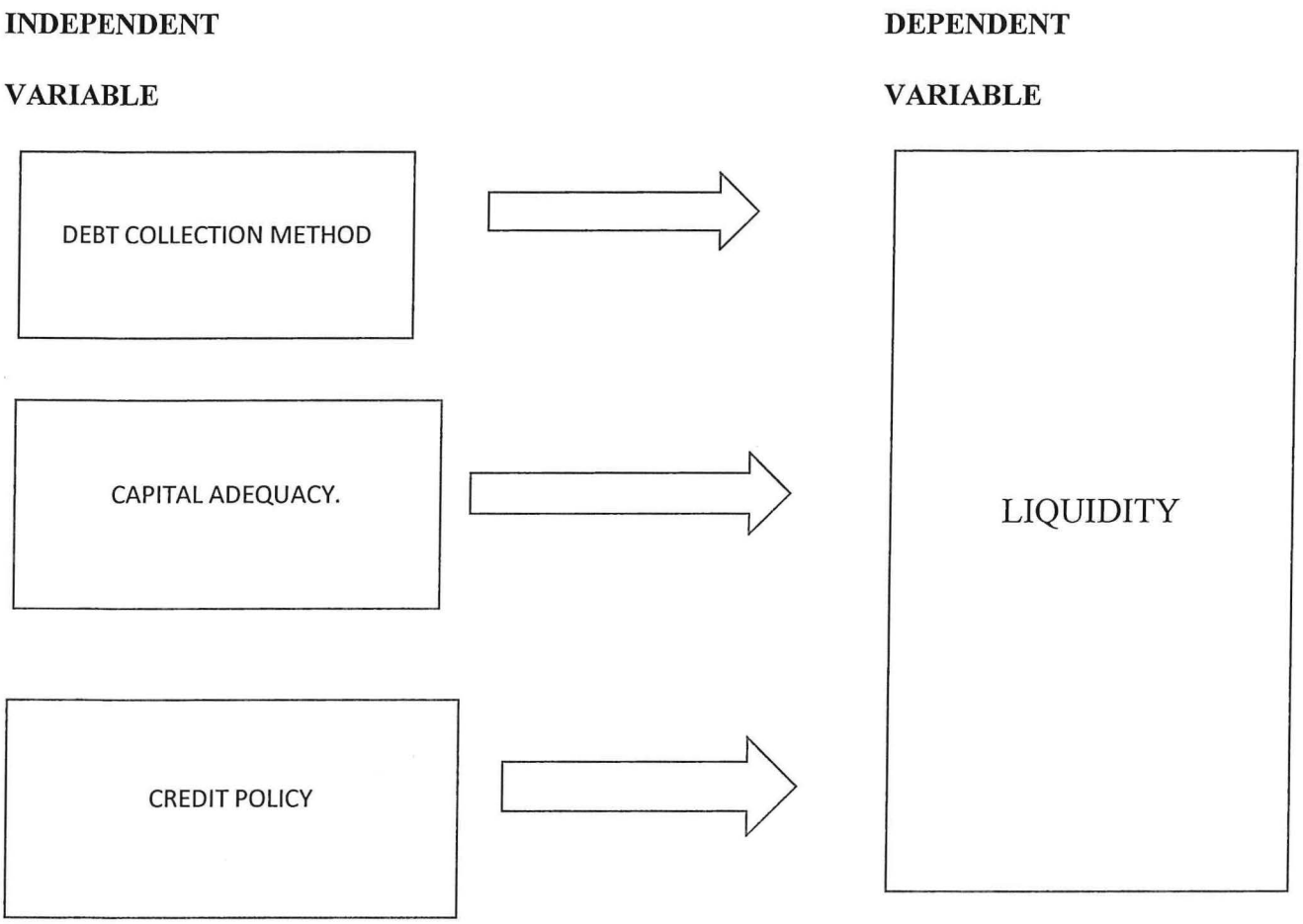
2.2.3 Effects of debt collection methods on liquidity.

Ewelina Sokolowska and Jerzy Wisniewski researched on liquidity management by effective debt collection in a small industrial enterprise. The study was conducted in Poland in 2015. Their main objective was to of the study was to investigate whether statistical analysis of liquidity management can be a useful debt collection method. They looked at both the long term and short-term liquidity of a small enterprise and its effect on the performance metrics of debt collection. Their research methodology was descriptive in nature and both primary and secondary data were collected.

The study concluded that the management of liquidity in an exceedingly small enterprise will lead to an increase in operational security by reducing the possibility of bankruptcy. An efficient debt assortment technique plays a basic role in keeping liquidity at an optimal or rather desirable level. According to Balbina who did a study on the effects of credit policy on liquidity in 2016 in Nairobi county, and one of her

variables was to investigate the effects of collection methods on liquidity concluded that effective debt collective positively affected the liquidity of SACCOs. This simply means that effective debt collection methods lead to an increase in liquidity level of SACC

2.3 Conceptual framework.



The conceptual framework helps in the determination of both dependent and independent variables. Independent variables variation does not depend on that of another whereas dependent variables variation is highly dependable on that of another. In this case, the independent variables are as follows;

2.3.1 Debt collection methods (collection policies).

This refers to an investigation on how debt collection methods impact the liquidity of a SACCO. Debt collection methods refer to the pursuing of payment owed by a debtor. This includes the collection policy implemented. The collection policy should be strict and precise so as to ensure people pay the loan on time. The policy should fasten the debt collection procedure so as to avoid an increase in bad debt (Karuki 2010). There is a probability of the debt collection method being pricey because of using the resource to follow up on loan defaulters. The policy can attach savings of borrowers to the loan advanced to them as security. The borrowers can be reminded to pay by sending them letters or emails, calling them through the phone, having a face to face conversation with them or even suing them (if need be) and by doing this it may motivate them to pay faster.

The following factors need to be put into consideration so as to ensure a successful and efficient debt collection process; a focus on priority accounts, relying on one single source of information, contacting and communication with the debtors and lastly, accounts receivable management system has to be put into place.

2.3.2 Capital adequacy.

This can be referred to as the statutory minimum reserves of capital that a financial institution must have. It can be affected by the level of; return on assets and equity, total assets, total equity, debt and lastly the size of financial institutions. Willy and Mboya (2015) proposed that adequate capital can help cushion depositors and also play a role in protecting depositors' funds in return this contributes to the improvement of liquidity in an institution. Furthermore, it promotes the confidence people have in institutions, it also helps out people to figure out the safety and soundness of financial institutions. So as to maintain a commendable level of capital adequacy the following factors should be considered; the size of the SACCO, the return on assets, the influence of management decisions in view of the conditions existing in the market and assets weighted by the risk asset ratio. It can be measured by; dividing the total equity of the SACCO by total assets. The capital adequacy ratio enables one to know the amount an institution has in comparison to risks.

2.3.3 Credit policy.

This can be referred to as terms and conditions set for lending someone goods or money and it is normally in written form. There are quite a number of factors that affect credit policy and some of them are; credit terms, collection policy, size of a firm and lastly average loan duration time. According to Ingham (2002) credit policy as a rendezvous whenever one party provides resources in form of a product or a loan to a different party and therefore the second party arranges to acquire the goods or loans at a later date thus making it a

debt. The debtor then makes arrangements to repay the resources of equivalent quantity or worth. Efficiencies in credit policies will be noted when the following factors are considered; credit evaluation of the borrower, credit limit authority of the SACCO, accounts review of the borrower and lastly credit limit of the borrower.

2.3.4 Liquidity

Liquidity simply refers to the degree to which an asset can be converted into cash. Exposure to credit risk can lower the liquidity of a SACCO. There are various factors that affect liquidity factors like level of inflation, line of credit, bad debt, net cash flows, interest rate and also the level of inflation. SACCOS should pay attention to the measurement and management of liquidity failure to do so may lead to a shortage of liquidity leading to an inability to meet its obligations as and when they become due hence financial distress (Harvey and Roper, 2004).

2.4 Research Gap.

Atieno (2016) conducted a study on the effects of credit policy on the liquidity of SACCOs in Nairobi County whereas Kereotu and Paymaster (2014) conducted a similar study but its effects on manufacturing firms in Nigeria. Their objectives were; to investigate the effects of collection policy on liquidity and to assess the effects of cash flows on collection policy. Bablina also evaluated the effects of collection policy on liquidity but she added some variables to investigate, which were; effects of capital adequacy, size of firm and credit terms on liquidity. Both their research designs were descriptive in nature and had a similar conclusion that stated, efficiently implemented credit policies had a significant positive effect on liquidity.

Nyaundi (2015) studied the effects of capital adequacy requirements on the liquidity of Commercial banks in Kenya whereas Aspal, Nazneen (2014) researched on effects of capital adequacy on Indian sector banks. David's main objectives were to assess the impact of economic growth, deposits of non -equity liabilities and risk level on the liquidity of banks in Kenya. On the other hand, Aspals main independent variables were; liquidity, management efficiency, loan asset quality, and sensitivity and what effects they had on capital adequacy. Nyaundi's methodology was descriptive whereas Aspals' was analytical in nature. Despite the differences in variables, they had a similar conclusion on liquidity which as; both liquidity and capital adequacy positively correlate with each other.

Furthermore, Sokolowska and Wisniewski (2014) conducted a study on liquidity management by effective debt collection in small industry enterprise while Atieno (2016) conducted a study on the effects of credit policy on liquidity. Ewelina's, objective was to determine whether statistical analysis of liquidity management can be a useful debt collection method. Bablinas' study was conducted in Nairobi, Kenya while Ewelina was in Poland and both their research design was descriptive in nature. They both concluded that an effective debt collection method will lead to a desirable level of liquidity.

From a survey of relevant literature, it was found that there are no studies specific to Nairobi County in regard to the assessment of determinants of liquidity of SACCOS in Nairobi County in Kenya. This study was therefore conducted in order to fill the gaps in literature by studying determinants of liquidity of SACCOs in Nairobi County.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter will entail the research methodology used by the researcher to carry out the study. It aims to elaborate on the research design, the target population, data collection methods, research philosophy, data analysis technique, research quality and lastly ethical issues or rather challenges faced during the research process.

3.1 Research Design

Research design is a framework that consists of procedures or rather techniques whereby a researcher decides to integrate a variety of variables in a logical manner in an attempt to solve a research problem. Mark and Adrian (2009) posit that research design is a plan of how a researcher will go about to attain relevant information that will assist in answering certain research questions.

The research design will be descriptive in nature. According to Mugenda (2008), descriptive research designs are normally structured and precisely intended to gauge the features outlined in a research question. Descriptive statistics will be employed and it can be defined as a set of numbers that are used to summarize and describe data. The word data refers to the information that has been collected from an experiment, a survey, or a historical record (Joseph, Robert & David, 2002). Mugenda and Mugenda (2008) asserted that descriptive statistics allow significant explanation of measurements by the use of minimal statistics. Some of the main advantages of using a descriptive research design are; a subject will be observed quantitatively in its, natural state, it is quite an inexpensive method and lastly, it consumes less time using this method. This is, therefore, the most appropriate technique that will showcase determinants of liquidity of SACCOS in Nairobi County.

3.2 Target population.

The target population is the total group of individuals from which the sample might be drawn from (Kothari, 2005). A population can be referred to as elements, individuals or units that meet the selection criteria .for a group to be studied. A study population is representative when every element has an equal chance to be included in the final sample that is to be drawn (Mugenda & Mugenda, 2003). The study population will consist of all the 41 SASRA regulated deposit SACCOs registered under the societies Act in Nairobi, Kenya (SASRA Report, 2018). The SACCOs that will be included in the study are registered and licensed by SASRA. SASRA is a regulatory authority under the ministry of industrialization and enterprise development whose main responsibility is to license and supervise deposit-taking SACCOS in Kenya.

3.3 Sampling and Sampling procedure.

A sample is a miniature proportion of a target population selected for analysis. According to Orodho, (2012), any declaration made regarding the sample ought to be factual about the populace. Mugenda and Mugenda posit that when the target population is small, the whole population was sampled thus the researcher sampled all the licensed deposit taking SACCOs in Nairobi County. This study, therefore, used the census method.

3.4 Data collection method.

Primary data will be gotten from a questionnaire based on a 5-point Likert scale distributed to officers in the credit department and finance department.

3.5 Data analysis

Kothari, (2004) proposes that data analysis entails categorizing, organization and analyzing raw data. Ordinal regression method and descriptive statistics were employed to analyze quantitative data using the Statistical Package for Social Sciences (SPSS). This will enable the researcher to determine whether the independent variables predict the dependent variable and the effect the independent variables have on the dependent variables.

3.6 Analytical model.

The model below will be used

$Y=\beta 0+\beta 1X1+\beta X2+\beta X3+\beta X4+\beta X5$

Y=Liquidity Level.

Liquidity level; Measured based on a 5-point Likert scale questionnaire.

X1= credit policy; Loan ratio; Measured based on a 5 point Likert scale questionnaire.

X2=capital adequacy; Measured based on a 5 point Likert scale questionnaire.

.X3=collection policy or debt collection technique; Measured based on a 5 point Likert scale questionnaire.

β 0 is constant, $\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$ is Regression coefficients of independent variables.

3.5.1 Table of operationalization.

INDEPENDENT VARIABLES.		SOURCE OF INFORMATION.
Capital adequacy.	Measured based on a 5-point Likert scale questionnaire. A core capital of not less than 4% of total assets, which shall graduate to 10% by the fourth year. A core capital not less than 5%nof their totals deposit liabilities, which shall gradually graduate to 8% by the fourth year. An institutional capital of not less than 2% of its total assets, which shall graduate to 8% by the fourth year.	SASRA (2010). Capital Adequacy for Deposit Taking SACCOs. SACCOs Society Act (2008). Capital Adequacy Requirements.
Debt collection method (collection policy).	Measured based on a 5-point Likert scale questionnaire. Focusing on priority accounts. Relying on one single source of information. Accounts receivable management system.	Sokolowska and Wisniewski (2014). Liquidity management by effective debt collection in small industrial enterprises in Poland. David, M. (2014). The Effect of Credit Policy On Profitability of Manufacturing Small & Medium Sized Enterprises in Nairobi County. Unpublished MBA Project, University of Nairobi. Bablina Atieno Nyakando.

		(2014). Impact of Credit Policy on The Liquidity of SACCOS in Nairobi County. Research Paper.
Credit policy.	Measured based on a 5-point Likert scale questionnaire. Loan duration frequency of loan installments. Credit terms. Credits limit authority of SACCO. Credit evaluation. Credit limit of borrower.	Ayodele, U., Thomas, T. & Raphael, A. (2014). Impact of Credit Policy on The Performance of Nigerian Commercial Banks using Zenith Bank Plc. Research Paper. Biety Bablina Atieno Nyakando. (2014). Impact of Credit Policy on The Liquidity of SACCOS in Nairobi County. Research Paper.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0 Introduction.

This chapter showcases the results of data analysis and an interpretation of the same. The chapter is divided into various sections such as background information, which introduces the trends of the SACCO deposits, the performance of the loans and equity. In addition, through the use of correlation and ordinal regression models the relationship between the dependent and independent variables and the effects of the variables on the liquidity of SACCOs in Nairobi County will be established, lastly a section on the discussion of the study.

4.1 Response rate

The number of questionnaires that were administered to all the respondents was 40 questionnaires. However, the study did not achieve a response of 100% as there were some non-response incidences where the researcher could not access all the respondents of the study. Therefore, out of the 40 targeted respondents, 28 gave adequate information by answering the questionnaires completely and returned the questionnaires accordingly. However, 12 respondents did not give a response to the study making a non-response of 30%. Thus, the study realized a response rate of 70% (28 / 40) as shown in Table 4.1. This implies that the response is good according to Mugenda and Mugenda (2003) who posit that a response rate of 50% is adequate, 60 % is good and above 70% is very good. Saunders, Lewis, and Thorn (2007) suggested that an average response rate of 30 % to 40% is reasonable for a deliver and collect survey method.

Table 4.1.1 Response rate

Questionnaires	**Frequency**	**Percentage**
Collected	28	70%
Uncollected	12	30%
Targeted	**40**	**100%**

4.3 Descriptive Statistics

Descriptive statistics has been used to show the quantitative relationship between the study variables. The table below shows the mean, median, minimum, and maximum and standard deviation values.

Table 4.2 Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Liquidity	28	.19	.81	.4279	.209195
Credit policy	28	2	5	3.19	.25629
Collection policy/ Debt collection method	28	1	5	2.679	.204085
Capital Adequacy	28	3	5	4.1918	.16226
Valid N (listwise)	28				

From the findings above the mean on liquidity is 0.4297, a minimum of 0.19 and a maximum of 0.81 while the standard deviation is 0.209 this is an indication that; SACCOs have sufficient current assets to finance their short-term obligations. The capital adequacy is 4.19 revealing that SACCOs have sufficient capital to enhance sustainability and efficiency in their financial system. The mean of collection policy is 2.679 revealing that SACCOS do not have sufficient mechanisms to collect debt issued to its members.

4.4 Correlation Analysis

The relationship between both the direction (positive or negative) and the strength of the relationship between the variables was investigated. This was important in order to assess whether any relationship exists between the variables. Correlation was done using Pearson product-moment correlation coefficient. The classification employed is strong (0.7 and over), moderate (0.4 and less than 0.7) and weak (0 to less than 0.4). Correlation analysis was also used to determine the existence of multicollinearity between the independent variables. Multicollinearity exists when independent variables are highly correlated ($r>=0.9$) and tends to lead to a poor regression model.

Table 4.3 Correlation Analysis

	Liquidity	**Credit Policy**	**Collection policy/ debt collection technique**	**Capital Adequacy**
Liquidity	1			
Credit Policy	.658	1		
Collection Policy	.456	.088	1	
Capital Adequacy	.745	.405	.119	1

The table shows a moderate correlation that exists between liquidity and credit policy as r=0.658. There is a strong relationship between capital adequacy and liquidity as r=0.745. There is a moderate relationship between the collection policy and liquidity as r=0.456. The findings also revealed the extent of multicollinearity amongst variables was minimal as the was a weak relationship between collection policy and credit policy as r=0.088, a moderate relationship between credit policy and capital adequacy as r=0.405 and a weak relationship between collection policy and capital adequacy as r=0.119

4.6 Regression Analysis and Hypothesis Testing

Regression analysis is a statistical process that is concerned with establishing the relationship between variables in a study. Due to the ordinal nature of the study, the following mechanism was used to evaluate whether the model was a good fit for the data.

Table 4.4 Goodness-of-Fit

	Chi-Square	Df	Sig.
Pearson	256.258	300	.968
Deviance	107.856	300	1.000

Table 4.6 was used to test the significance of the model and thus the goodness of fit of the model. The model had a Pearson significance of 0.968 and a deviance significance of 1.00 this shows that the model was a good fit for the research study

Table 4.5 Pseudo R-Square

Cox and Snell	.972
Nagelkerke	.974
McFadden	.547

Table 4.7 shows the coefficient of determination, which is determined by R square which is 97.4%. This shows that 97.4% of the variance dependent variable is determined by the independent variables.

4.6.1 Model of Coefficients

The study conducted tests on coefficients the analytical model that establishes the relationship between the independent variables; credit policy, collection policy and capital adequacy and the dependent variable; liquidity. The results are shown in the table 4.8 below

Table 4.6 Model of Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.657	.396		-.685	.494
Credit policy	.452	.145	.141	4.561	.375
Capital Adequacy	.621	.033	.342	.913	.000
Collection policy	.241	.007	.114	.212	.532

According to the results capital Adequacy ($p<0.05$) is a significant determinant of liquidity as $p=0.000$. The results of the regression model are given by;

$Y=-0.657+0.452X1+0.621X2+0.241X3+e$

Where Y is liquidity while X1, X2, and X3 are credit policy, capital adequacy and collection policy respectively. From the results, other factors held constant a marginal improvement in credit policy would result into an increase in liquidity by 0.452 units. An increase in capital, holding other factors constant, would result into an increase in liquidity by 0.621 units. Finally, a marginal improvement in the debt collection technique would result into an overall increase in liquidity by 0.241 units other factors held constant. This, therefore, shows that liquidity in SACCOs is highly attributed to capital adequacy followed by credit policy and debt collection policy or rather debt collection method.

4.7 Summary of Findings

The findings established the model was a good fit of data as determined by the coefficient of determination that revealed a 97.4% of the variance of the dependent variable is determined by the independent variables.

.4.7.1. Credit policy and liquidity of SACCOs in Nairobi County

The findings established that there was a moderate positive correlation between liquidity and credit policy. The findings also established that a unit increase in credit policy would result to a 0.452-unit increase in liquidity other factors held constant

4.7.2 Capital adequacy and liquidity of SACCOs in Nairobi County

The findings established that SACCOs have sufficient current assets to finance their short-term obligations and sufficient capital to enhance sustainability and efficiency in their financial systems. The findings also established that there is a strong relationship between capital adequacy and liquidity. The findings also established that a unit increase capital adequacy would result to a 0.621 increase in liquidity other factors held constant.

4.7.3. Debt collection Method and liquidity of SACCOs in Nairobi County

The findings established that SACCOs do not have sufficient mechanisms to collect debt issued to its members. There is a moderate relationship between the collection policy. The findings also established other factors held constant a unit increase in collection method would result to a 0.241 increase in liquidity.

CHAPTER FIVE

5.0 Introduction

This chapter provides a summary of the findings in chapter four, conclusions drawn from the study, recommendations made, limitations of the study and suggestions made for further research.

5.1 Discussion of findings

The study sought to establish the determinants of liquidity in SACCOs in Nairobi County. The study shows that credit policy and capital adequacy are determinants of SACCOs in Nairobi County. However, the collection policy was not a significant predictor of liquidity in SACCOs in Nairobi County. The study sought to establish the determinants of liquidity in SACCOs in Nairobi County. With respect to Correlation, the research study established a strong correlation between Capital adequacy and liquidity as r=0.745, a moderate correlation between liquidity and collection policy as r=0.456 and a moderate correlation between credit policy and liquidity as r= 0.658.

From the results capital adequacy ($r=0.745$, $p<0.05$) was found to adequately affect the liquidity in SACCOs. This shows that SACCOs associated with high levels of capital being more liquid as compared to SACCOs with relatively less capital. Therefore, the effect of capital adequacy in SACCOs should not be underestimated as highly affect the level of liquidity in SACCOs. The results also showed that credit policy (r=0.658) affected the levels of Liquidity in SACCOs. This shows that SACCOs with improved credit policies as compared to SACCOs with unfavorable credit policies. This also establishes the significance of liquidity in meeting the credit need of members in SACCOs. The results also established that no multicollinearity was established between variables in the study. However, there was a moderate correlation between capital adequacy and credit policy as r=0.405 revealing to some significant extent terms of credit adequately affected the levels of capital in SACCOs. From a descriptive point of view SACCOs in Nairobi County have sufficient capital to enhance their sustainability. They also have enough liquidity to meet their obligations. However, SACCOs in Nairobi County have not devised enough mechanisms to manage their debt collection.

5.2. Conclusions

5.2.1 Credit policy and Liquidity in SACCOs

The study concluded that credit policies affect the level of liquidity in SACCOs. Credit policies influence how SACCOs obtain revenues from members through interests. A good credit policy would thus reflect high levels of liquidity, which in turn would enable SACCOs to meet member's needs with respect to finances.

Bablina Atieno did a past study on the effects of credit policy on the liquidity in 2016 and the conclusion made that credit policy is an insignificant determinant of liquidity but it affects liquidity based on the correlation findings. There is a moderate positive correlation between a good credit policy and the liquidity of SACCOs in Nairobi County.

Kereotu, James and Bingilar Paymaster Frank did a similar study in 2014. The study was descriptive in nature and was to investigate the effects of credit policy on the liquidity of manufacturing firms in Nigeria in 2014. The conclusion made was that efficiently implemented credit policies and credit assortment periods can minimize the problem of cash flow and liquidity of firms but credit policies and loan durations are not a significant determinant of liquidity.

5.2.2 Capital Adequacy and Liquidity in SACCOs

The study also concluded that capital adequacy affects the liquidity in SACCOs. This is because the level of capital is crucial in determining the level of cash available for lending, meeting financial obligations and financial stability. This, in turn, reflects to smooth operations in SACCOs due to favorable liquidity.

Nyaundi did a past study on the effects of capital adequacy requirements on the liquidity of Commercial Banks in Kenya in 2005. He concluded that capital adequacy has a significant effect on the liquidity rate of commercial banks in Kenya. He proposed that capital adequacy is required to maintain a balance between operational credit and market risk exposure of the financial institutions. In addition, he proposed that liquidity is one of the most important monetary stability indicators since liquidity shortage in a bank can cause a general crisis in the banking sector because of their interconnected operations. Banks with sufficient capital ought to be in a position to acquire additional liquidity from the central bank against adequate collateral.

Parvesh Kumar Aspal, Afroze Nazneen in 2014 conducted a study on the effects of capital adequacy on Indian Private Sector banks. One of the objectives was to assess the effects of liquidity on capital adequacy it revealed that liquidity has a significant influence on capital adequacy whereby an increase in bank liquidity leads to a reflection of the ability to meet credit demands and cash - flow requirements.

5.2.3 Debt collection method and Liquidity in SACCOs

The study concluded that the collection method or rather collection technique is not a significant determinant of liquidity in SACCOs. This can be attributed to the fact implementation of debt collection is not effective in majority of SACCOs even if the policies are well developed. In addition, policies can be poorly developed affecting money collected by SACCOs with respect to debt.

A past study was done by Ewelina Sokolowska and Jerzy Wisniewski researched on liquidity management by effective debt collection in a small industrial enterprise. The study concluded that the management of liquidity in an exceedingly small enterprise would lead to an increase in operational security by reducing the possibility of bankruptcy. An efficient debt assortment technique plays a basic role in keeping liquidity at an optimal or rather desirable level.

According to Balbina who did a study on the effects of credit policy on liquidity in 2016 in Nairobi county, and one of her variables was to investigate the effects of collection methods on liquidity concluded that debt collection methods was an insignificant determinant of liquidity, however, effectively implemented debt collection policies positively affected the liquidity of SACCOs. This simply means that effective debt collection methods lead to an increase in liquidity level of SACCOs.

5.3. Recommendations of the study

The study found that credit policy was a significant determinant of the level of liquidity in SACCOs in Nairobi. Thus, favorable credit policies should be established and maintained to ensure that the liquidity levels of SACCOs are maintained at appropriate sustainable levels. It is therefore recommended that relevant personnel and departments in SACCOs should invest in

research of favorable policies with respect to credit that would enhance and develop the level of liquidity in their firms.

The study also found that SACCOs need to develop policies that would improve their debt collection period from members. As the study established that majority of SACCOs in Nairobi lacked sufficient mechanisms to collect debt from members. A long collection period may result in default payments, which will reflect bad debts especially in instances of unsecured loans and other forms of credit.

To maintain effective levels of liquidity SACCOs need to have adequate levels of capital. This can be attained by increasing the number of members and increasing the levels of members' contributions. SACCOs should, therefore, increase their publicity through the right forms of advertisements to attract more members as an increase in the levels of capital will mitigate risks against liquidity levels.

5.4. Suggestions for further area of research

Due to the nature of the study financial and time constraints, the research was only restricted to SACCOs in Nairobi, which is an urban area, characterized by high population and diverse social classes. Nairobi also being the capital city of Kenya is highly affected by different financial and economic cycles. This may not be the case with rural areas that are generally characterized by relatively low population and low levels of income. The study, therefore, recommends that a study of the same nature be conducted with respect to SACCOs in rural areas and SACCOs in Kenya so as to cover a wider geographical range.

SACCOs only cater to the financial needs of its members who are usually individuals with the same profession, place of residence or social class. This is not the same case with other financial institutions such as banks and micro-financial institutions. The study, therefore, recommends that a study be conducted that highlights the determinants of liquidity in other financial institutions distinct from SACCOs. The recommended suggestions would complement the findings of this study

5.5. Limitations of the study

The researcher experienced hostility from various SACCOs during the submission of questionnaires. Additionally, some SACCOs failed to respond to issued questionnaires this in

return lowered the response rate of the study. The researcher also experienced some limitations of accessing data from various SACCOS, as they did not renew their licenses while a few were no longer in operations.

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APPENDIX I: QUESTIONNAIRE

Dear respondent,

The aim of this questionnaire is to investigate on the **determinants of liquidity of SACCOs in Nairobi County.** The research is solely for academic purposes hence confidentiality will be maintained. Your support will be highly appreciated.

Please tick and fill when need be.

SECTION A: BACKGROUND INFORMATION

1. Name of SACCO .....

SECTION B: CAPITAL ADEQUACY.

2. To what extent are the following factors considered to ensure that, the capital adequacy level is maintained so as to ensure the fulfillment of short-term obligations.

1. Not at all. 2 .to a little extent 3. To a moderate extent.

4 .to a great extent 5. To a very great extent.

	1	2	3	4	5
A core capital not less than 4% of total assets, which					

shall graduate to 10% by the fourth year.					
A core capital not less than 5% of its total deposit liabilities, which shall graduate to 8% by the fourth year.					
An institutional capital of not less than 2% of its total assets, which shall graduate to 8% in its fourth year.					

SECTION C: CREDIT POLICY.

3. To what extent are the following factors considered to ensure efficiency in the credit policy so as to ensure the fulfillment of short-term obligations.

1. Not at all. 2 .to a little extent 3. To a moderate extent.

4 .to a great extent 5. To a very great extent.

	1	2	3	4	5
Credit limits authority of the SACCO.					
Credit evaluation.					
Accounts review of borrower.					
Credit limit of borrower.					
Debt collection method.					
Credit terms.					
Loan duration frequency of loan installments.					

SECTION D: DEBT COLLECTION METHOD (COLLECTION POLICY).

4. To what extent are the following factors considered to ensure efficiency in the debt collection techniques so as to ensure the fulfillment of short-term obligations.

1. Not at all. 2 .to a little extent 3. To a moderate extent.

4 .to a great extent 5. To a very great extent.

	1	2	3	4	5
Focusing on priority accounts.					
Relying on one single source of information.					
Contacting debtors often.					
Accounts receivable management system.					
Spending more time on delinquent customers.					

project

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