

**THE RELATIONSHIP BETWEEN WORKING CAPITAL MANAGEMENT
AND FINANCIAL PERFORMANCE OF DEPOSIT TAKING SAVINGS
AND CREDIT CO-OPERATIVE SOCIETIES LICENSED BY SACCO
SOCIETIES REGULATORY AUTHORITY IN NAIROBI COUNTY**

BY

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DECLARATION

I declare that this research project is my original work and has never been submitted anywhere for a degree or qualification of the same in any other university or institution of higher learning.

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

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DEDICATION

This study is dedicated to my supervisor for his assistance, support and patience during the entire period of my study. Further, to my late parents, Meshack and Kerina, who bequeathed me with excellent upbringing coupled with a good education to ensure that I have reached this level of education. They indeed invested all they had on earth to ensure that I succeed in all my endeavours.

My brothers and sisters who went out of their way to encourage me through continued prayers towards the successful completion of this course. Also dedicated in this study are my children, Curtis and Everlyne, for their understanding during my long absence from home.

Finally I pay glowing tribute to my employer and colleagues at work for their understanding, including approving leave days, during the entire period of study.

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ABSTRACT

Working capital is an important matter during financial decision making since it forms part of investment in assets that requires appropriate financing and also when incurring liabilities. The objective of the study is to establish the relationship between working capital management and financial performance of deposit-taking SACCOs licensed by SASRA in Nairobi County.

The research was a casual study. The population of interest was all the deposit-taking SACCOs licensed by SASRA in Nairobi County as at 31 December 2011. There were 15 SACCOs that were sampled in the study of which complete data for 13 of them were available and analyzed. The study incorporated data for the last four years (2008 – 2011).

In order to analyze the effects of working capital management on the firm's financial performance, interest rate on members deposits as measure of financial performance was used as the dependent variable. The independent variable (working capital management) was measured by cash conversion cycle, current ratio, debt ratio and turnover growth. Spearman's Correlation analysis was used to establish the interdependence of working capital and financial performance variables. Regression analysis was used to establish the relationship between working capital management and financial performance.

Findings of the study indicated that efficient working capital management leads to better financial performance of a SACCO, hence a positive relationship existed between efficient working capital management and financial performance variable. The conclusion of the study was that when efficient working capital management leads to better financial performance, then one should expect a negative relationship between measures of working capital management and the financial performance variable.

It is recommended that SACCOs should manage their working capital efficiently and skillfully by holding it at an optimum level in order to achieve better financial performance.

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ABBREVIATIONS

| | |
|-------------|---|
| ANOVA | Analysis of Variance |
| CCC - | Cash Conversion Cycle |
| D.T. SACCOs | Deposit Taking Savings & Credit Co-operative Societies |
| ERP - | Enterprise Resource Planning |
| FOSA | Front Office Savings Activity |
| ICA | International Co-operative Alliance |
| ICPAK | Institute of Certified Public Accountants of Kenya |
| IFRS | International Financial Reporting Standards |
| JIT - | Just-In-Time |
| KUSCCO | Kenya Union of Savings and Credit Co-operatives Limited |
| MC | Management Committee |
| MOCDM | Ministry of Co-operative Development and Marketing |
| MRP - | Material Requirements Planning |
| NSE - | Nairobi Securities Exchange |
| OLS - | Ordinary Least Squares |
| PEARLS | Protection, Earnings, Assets, Return, Liquidity and Signs of Growth |
| ROA - | Return on Assets |
| ROE | Return of Equity |
| ROI - | Return on Investment |
| ROS - | Return on Sales |
| SASRA | Savings & Credit Co-operative Societies Regulatory Authority |
| SPSS - | Statistical Package for Social Sciences |
| TG - | Turnover Growth |
| UK - | United Kingdom |
| USA - | United States of America |
| WC - | Working Capital |
| WOCCU | World Council of Credit Unions |

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

This research work investigates the relationship between working capital management and financial performance of deposit taking Savings and Credit Co-operative Societies (SACCOs) licensed by the Sacco Societies Regulatory Authority (SASRA) for the period 2007 to 2011. Working capital management is an important component of corporate financial management because it directly affects a firm's profitability. Profitability was applied in this research project to represent financial performance. Profitability for the sake of this study has been measured using interest rate on members deposits of the various SACCOs that were sampled.

This study contributes to the literature on the relationship between the working capital management and the firm's profitability in at least two ways. First, it focuses on SACCOs where recently only limited research has been conducted on such organizations. Second, this study validates some of the finding of previous authors by testing the relationship between working capital management and the profitability of the firms. It is theoretically expected that there is a negative relationship between working capital management measures and profitability variables, if efficient working capital management leads to better financial performance.

1.1.1 Working Capital Management

Working capital is an important issue during financial decision making since its being a part of investment in assets that requires appropriate financing investment. However, working capital is always being ignored in financial decision making since it involves investment and financing in short term period. Further, it also acts as a restrain in financial performance, since it does not contribute to return on equity (Sanger, 2001). Though, it should be critical for a firm to sustain their short term investment since it will ensure the stability of a firm in a longer period. The crucial part in managing working capital is required in maintaining its liquidity in day-to-day

operations to ensure its smooth running and meets its obligations (Eljelly, 2004). However, this is not a simple task since managers must make sure that business operations are running in efficient and profitable manner. There are the possibilities of mismatch of current assets and current liabilities during this process. If this happens and a firm's manager cannot manage it properly then it will affect firm's growth and profitability. This will further result in financial distress and finally firms can go bankrupt.

Working capital management affects profitability of the firm, its risk, thus its value (Smith 1980). In other words, efficient management of working capital is an important component of the general strategy aiming at increasing the market value (Howorth and Westhead, 2003; Deloof, 2003; Afza and Nazir, 2007). Since the flexibility of net current assets is very high in terms of adapting to changing conditions and due to these characteristics they can often be applied to realize the main objective of financial management through policy changes.

1.1.2 Financial Performance

Corporate performance has been identified as a potential determinant of working capital financing policies. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Ooi, 1999). However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits. Titman and Wessels (1988) and Barton et al. (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to generate such funds from internal sources. Empirical evidence from previous studies (Chittenden et al., 1996; Coleman and Cole, 1999; Al-Sakran, 2001) appears to be consistent with the pecking order theory.

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is used as a general measure of a firm's overall financial health over a given period, and can be used to compare similar firms across industry or to compare industries or sectors in aggregation (Githinji, 2011). There are many

different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt. The most common ones are through financial ratios such as Returns on Assets (ROA), Returns on Investments (ROI) and Returns on Equity (ROE) (Opiyo, 2011).

It is expected that most individuals will join SACCOs which have been profitable due to their going concern basis. Tong and Ning (2004) found that there was limited evidence that investors prefer to invest in profitable firms. They found that profitability, usually measured as the ROE, is negatively related to average shares held by institutional investors.

From the World Council of Credit Unions (WOCCU) website (<http://woccu.com>), financial performance is measured through financial ratios in SACCOs and are based on Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity and Signs of growth (PEARLS). WOCCU's PEARLS is a financial performance monitoring system designed to offer management guidance for credit unions and other savings institutions. It is also a supervisory tool for regulators. It can be used to compare and rank institutions and can provide comparisons among peer institutions in one country or across countries. It is a set of financial ratios or indicators that help standardize terminology between institutions.

1.1.3 Relationship Between Working Capital Management and Financial Performance

According to the pecking order theory in the presence of asymmetric information, a firm would prefer internal finance over other sources of funds, but would issue debt if internal finance was exhausted. The least attractive alternative for the firm would be to issue new debt. Profitable firms are likely to have more retained earnings. Thus a negative relationship is expected between leverage and past profitability (Donaldson, 2001). Empirical evidence from previous studies appears to be consistent with the pecking order theory (Coleman and Cole, 2009). Most studies found a negative relationship between profitability and debt financing.

Some studies found that the number of days accounts payable has a negative relation to profitability. Deloof (2003), the best explanation for this is that less profitable firms wait longer to pay their bills. On the other hand, maintaining high inventory levels reduces the cost of possible interruptions in the production process or of loss of business due to scarcity of products, reduces supply costs, and protects against price fluctuations, among other advantages (Smith, 1980). Maintaining high levels of inventory also has disadvantages. Dimitrios (2008) points out that too much inventory demand more physical space, could lead to a financial distress, and increases the possibility of inventories' damages, deterioration and losses.

Van Horne and Wachowicz, Jnr (2009), lowering the level of current assets, while still being able to support sales, would lead to an increase in the firm's return on total assets. To the extent that the explicit costs of short-term financing are less than those of intermediate and long-term financing, the greater the proportion of the short-term debt to total debt, the higher is the profitability of the firm.

The theoretical importance of the working capital component over the profitability ratio is very clear, that is, the lesser the time a firm needs to realize cash from its customers relative to the time it requires to pay off its creditors, the better it is for its liquidity position and thus reduces the risk of dependency on external and more expensive sources of capital. So firms with lesser duration of cash conversion cycle are considered to be more efficient.

Theoretically, leaving other things constant, level of investment in current assets has a bearing on the profitability of the firm. Excess of investment in working capital casts a negative impact on the profitability of a firm and positive impact on the liquidity. Studies on the association of level of investment in current assets and the profitability have always claimed inverse relationship in the research on the degree of association both at micro and macro levels.

The operating cycle theory looks explicitly at one side of working capital that of current assets and therefore gives income statement measures of firm's operating activities, that is, about production, distribution and collection. Receivables, for instance, are directly affected by the credit collection policy of the firm and the frequency of converting these receivables into cash

matters in the working capital management. By granting the customers more liberal credit policy, the profitability will be increased but at the same time liquidity will be sacrificed. The same analysis goes for other components of current asset account. However, the operating cycle theory tends to be deceptive in that it suggests that current liabilities are not important in the course of firm's operation.

Efficient working capital management involves managing short-term assets and short-term liabilities in a way that provides balance between eliminating potential inability to cope with short-term debts and avoiding unnecessary holdings in these assets. Johnson and Soenen (2003) also reported that efficient working capital management is one of the crucial characteristics of financially flourishing firms. Most of the empirical research into the relationship between working capital management and profitability has confirmed the notion that reducing current assets in comparison to total assets reduces working capital investment; therefore, it would positively affect the firm's profitability.

1.1.4 SACCOs in Kenya

The International Co-operative Alliance (ICA) traces the earliest co-operative society to 1844, The Rochdale Co-operative Store in Great Britain, since then co-operatives have spread all over the world such that today there is no modern nation devoid of one or many forms of co-operatives. Co-operatives exist in various forms and types covering the entire spectrum of business activities from informal village groupings to organized micro-credit organizations to the very large players in agricultural production and banking sectors. Globally, in 2009, McKillop (2011) estimates that there were 49,330 credit unions in 98 countries with an estimated asset base of 1,354 billion US dollars. The huge membership makes co-operative societies a truly global business phenomena and an area of great interest to researchers (Makokha, 2011).

In Kenya, the history of the co-operative movement can be traced to the 1908 when the European farmers at Lumbwa near Kericho first established co-operative production and marketing. Co-operatives organized by Africans were not found until the 1930's and their development was nevertheless very slow due to lack of encouragement by the colonial government. The colonial

government considered it impossible to find it among Africans, people who would command trust to their fellow members especially in keeping of accounts and business operations (Ongore, 2001; Oyoo, 2002).

Government involvement in co-operatives started in 1931 when the first co-operative ordinance was enacted in order to regularize the operations of co-operative societies. Hitherto, co-operatives were registered under the business law (Okundi, 2011). After independence in 1963, the government continued to promote and support the co-operative movement, which was seen as a means to enable majority of Kenyans to participate in the modern economy within a short time, especially to acquire land, capital and engage in agricultural and agro business activities (Mudibo, 2006).

A co-operative society is defined by the ICA statement on the co-operative identity as an autonomous association of persons united voluntarily to meet their common economic, social, cultural needs and aspirations through a jointly owned, democratically controlled enterprises. Co-operatives are economic units for mobilization of resources for the benefit of individual co-operators and by extension for national development (ICA, 2005).

The operations of SACCOs were generally under the control of the government before liberalization in 1997 (Oyoo, 2002). This is evident from the 1985 Ministry of Co-operative Development and Marketing (MOCMD) circular which confined investments by SACCOs to fixed deposits and to some extent, real estate. Financial investments in bonds and private companies were discouraged unless they guaranteed certain rights or a high degree of control (Gachara, 1990). These guidelines led to excess liquidity and therefore led to low returns for the co-operative. With the current competitive market economy, it may be difficult for such policies to apply (Okundi, 2011).

SACCOs provide financial services to millions, including the poor and low-income people in many countries including Kenya. SACCOs are user-owned financial intermediaries. Members typically share a “common bond” based on a geographic area, employer, community, or other affiliation. Members have equal voting rights, regardless of how many shares they own. Saving

and credit are their principal services, although many offer money transfers, payment services, and insurance as well. Sometimes SACCOs join together to form second-tier associations for the purposes of building capacity, liquidity management, and refinancing. Second-tier associations also play a useful monitoring role (Okundi, 2011). A good example of second-tier organization is the Kenya Union of Savings and Credit Co-operatives Limited (KUSCCO Ltd).

SACCOs are member-owned financial institutions that offer savings and credit services to their members. In response to the changes in the external environment and in an effort to provide better services to its members, SACCOs introduced the Front Office Services Activity (FOSA). This is basically a banking function of a co-operative, which emerged as a result of dissatisfaction with the services of commercial entities. FOSA acts as channels through which members are paid their salaries thus circumventing the effect of delayed remittance, partial remittance and non-remittance of check-offs from the employers. It acts as a one-stop shop for all the financial services that SACCO members need at affordable rates (Mwololo, 2011).

SASRA is a Semi-Autonomous Government Agency under the Ministry of Cooperative, Development and Marketing. It is a creation of the Sacco Societies Act 2008 and was inaugurated in 2009 charged with the prime responsibility to license and supervise deposit taking SACCOs in Kenya.

1.2 Research Problem

An efficient working capital management is crucial for the success of a SACCO. In spite of such great importance of working capital management, it is queer that so far it could not attract as much attention of the researchers in as it desires. A brief review of the different efforts of research in the field is attempted in the following paragraphs.

The establishment of SASRA falls within the Government of Kenya's reform process in the financial sector which has the dual objectives of protecting the interests of SACCO members and ensuring that there is confidence in the public towards the SACCO sector and spurring Kenya's economic growth through the mobilization of domestic savings.

Mathuva (2009) examined the influence of working capital management components on corporate profitability by using a sample of 30 firms listed on Nairobi Securities Exchange for the period 1993-2008. He used Pearson and Spearman' correlations, the pooled ordinary least squares and the fixed effects regression models to conduct data analysis. The key findings of his study were that there exists a highly significant negative relationship between the time it takes for firms to collect cash from their customers and profitability, there exists a highly significant positive relationship between the period taken to convert inventories to sales and profitability and there exists a highly significant positive relationship between the time it takes for firms to pay its creditors and profitability.

Sustained interest in SACCOs has not been the preserve of regulators; researchers have also studied various aspects of their operations. Ouma (1988), Gachara (1990) and Oyoo (2002) are examples of such studies. Irungu (2005) in his study opens up debate on a potent fear that SACCOs were a threat to commercial banks in intermediation. Such would be the case if SACCOs are operating at similar or at least comparable efficiency levels as banks and offering competing products. Mudibo (2005) brings to the fore weak governance, weak supervision, limited product range, low marketing and inadequate human resource as the major constraints in the co-operatives sector. Mudibo's assertions regarding constraints facing SACCOs depicts them as operating at a lower efficiency than commercial banks' lending doubts to the declarations by Irungu (2005).

Notwithstanding the appreciable contributions made by deposit taking SACCOs in financial intermediation, little is known about the effect of working capital on their financial performance measured by interest rate on members deposits. This discourse is partially a reflection of the growing interest in the field of deposit taking SACCOs with regard to working capital management and financial performance. This study strives to answer the following question: is there a relationship between working capital management and financial performance of deposit taking SACCOs licensed by SASRA in Nairobi County?

Studies carried out earlier on SACCOs by MBA students at the School of Business, University of Nairobi from 1974 to date have lacked sufficient evidence on the relationship between working capital management and financial performance of deposit taking SACCOs. Anthony (2009) highlighted lack of adequate working capital, bad leadership and succession problems characterized by mismanagement, lack of modern business techniques as well as lack of expertise in making strategic decisions like management of working capital.

1.3 Objective of the Study

To establish the relationship between working capital management and financial performance of deposit-taking SACCOs licensed by SASRA in Nairobi County.

1.4 Value of the Study

Specifically, the findings of this study, it is hoped, will be beneficial to various key stakeholders as discussed in the subsequent sections below.

The management of deposit taking SACCOs in Nairobi will gain a better understanding of the factors influencing working capital management; the challenges in working capital management; and the relationship between working capital management and financial performance in SACCOs, and on the basis of the findings of the study, the management of the SACCOs may undertake management of working capital from an informed position.

The Sacco Societies Regulatory Authority (SASRA) and other regulatory bodies that are responsible for the licensing, regulation and supervision of deposit taking SACCOs, including policy formulation, monitoring and evaluation will make informed decisions on the basis of the findings, when executing their mandates with respect to management of working capital and financial performance.

The study will significantly contribute to the growing body of research on the relationship between of working capital management and It is theoretically expected that there is a negative relationship between working capital management measures and profitability variables, if efficient working capital management leads to better financial performance.

The findings may also be used as a source of reference for other academicians and researchers. Further, academic researchers may need the study findings to stimulate further research in this area and as such form a basis of good background for further researches.

This study will enlighten members of deposit taking SACCOs to ensure that competent, honest and reliable individuals are elected to the management committees. They will ensure that members of the management committees are held responsible and accountable for the efficient and effective governance of the co-operatives for achievement of their objectives, prosperity and sustainability.

The general membership will be encouraged to fully participate in decision-making and also enable them to acquire basic financial management skills requisite for interpretation of financial statements as well as to provide adequate direction and leadership.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In order to address the aim of the research, it is of importance to have established a sound literature base around which the study is built. This chapter presents a review of the literature related to the purpose of the study. The chapter is organized according to the specific objectives in order to ensure relevance to the research problem. The review has been undertaken in order to eliminate duplication of what has been done and provide a clear understanding of existing knowledge base in the problem area. The literature review is based on authoritative, recent, and original sources such as journals, books, thesis and dissertations.

2.2 Theoretical Review

There are basically several theories of working capital, which include the Baumol model, the Miller – Orr model and Continuous Review model. These theories are examined below with their implications.

2.2.1 Baumol Model

Baumol model (Baumol, 1952) of cash management provides a formal approach for determining a firm's optimal cash balance under certainty. It considers cash management similar to an inventory management problem. This model makes the following assumptions: the firm is able to forecast its cash needs with certainty; the firm's cash payments occur uniformly over a period of time; the opportunity cost of holding cash is known and it does not change overtime and the firm will incur the same transaction cost whenever it converts securities to cash.

The optimum cash balance, C^* , is obtained as shown below:

$$\begin{aligned} \text{Holding cost} &= k(c/2) \\ \text{Trading cost} &= c(T/c) \\ \text{Total cost} &= k(c/2) + c(T/c) \end{aligned}$$

$$C^* = \sqrt{\frac{2cT}{k}}$$

2.2.2 Miller – Orr Model

A limitation of the Baumol model is that it does not allow cash flows to fluctuate. Firms in practice do not use their cash balance uniformly nor are they able to predict daily cash inflows and outflows. The Miller-Orr model (Miller and Orr, 1966) overcomes this shortcoming and allows for daily cash flow variation. It assumes that net cash flows are normally distributed with a zero value at mean and standard deviation. The model provides for two control limits – the upper control limit and the lower control limit as well as a return point. If the firm's cash flows fluctuate randomly and it hits the upper limit, then it buys sufficient marketable securities to come back to a normal level of cash balance. Similarly, when the firm's cash flows go below the lower limit, it sells sufficient marketable securities to bring the cash balance back to normal level.

Determining the distance between the upper and lower limits (called Z) is as follows:

The difference between the upper limit and lower limit depends on the following factors: the transaction cost, the interest rate and the standard deviation(s) of the net cash flows. The formula for determining the distance between upper and lower control limits called (Z) is as follows:

$$\text{Upper limit} = \text{lower limit} + 3Z$$

$$\text{Return point} = \text{lower limit} + Z$$

The net effect is that the firm holds the average cash balance equal to:

$$\text{Average cash balance} = \text{lower limit} + \frac{4}{3} Z$$

2.2.3 Continuous Review Model

Dollan (1920) states that the model frequently presented is the continuous review model (re-order point / economic order quantity model). This model is very easy to derive; hence it is extremely popular. This view is also supported by Lin (1980). However, an assumption implicit

in continuous review models is that a perpetual inventory is maintained so that it is practical to release a replenishment order on the day the re-order point is reached. Thus, continuous review models assume that point of sale information is being collected. The continuous review technique, while very practical for a computerized inventory system collecting point of sale data is not practical for manual systems handling numerous different items.

According to Cox (1935), there are dozens of variations of the continuous review inventory model. The version derived here has the following assumptions: The item under consideration is independent of all other items (no joint replenishment), demand for the item varies (is random), but the average demand is constant overtime, lead time is known and constant, holding costs and replenishment costs are known and constant and the inventory position is maintained at all times. Under these circumstances, a continuous review model calls for an order, of size Q, to be placed whenever the reorder point, S, is reached. The formulae for Q and S are as follows:

$$\begin{aligned} Q &= 2dr / h \\ S &= Dk v \end{aligned}$$

Where d = annual demand for the item, r = replenishment cost per occurrence, h = holding cost per item per year, D = average demand during lead time, v = standard deviation during lead time, and k = management determined variable.

The management factor determining the level of safety stock, k, should be set at a value of 2 or 3. A k value of 2 will result in a small number of stock outs during approximately 2.4 percent of all replenishment cycles. A k factor of 3 eliminates stock outs almost entirely (less than 1 percent), but causes considerably more inventory to be held as safety stock at all times.

2.3 Working capital

Working capital refers to the difference between current assets and current liabilities. This is one measure of the extent to which a firm is protected from liquidity problems.

2.3.1 The Concept of Working Capital

Working capital is a part of a firm's current assets. Depending on the source, working capital can be defined in different ways. Working Capital is defined as a company's total investment in

current assets or assets that a company expects to be converted into cash within a year or less (Keown; Martin; Petty; and Scott, 2005). The investment in working capital involves carrying costs and shortage costs, so the firms have to find the trade off between them. From the financial view, the working capital is calculated as current assets less current liabilities (Levy and Sarnat 1994). From operational perspective, working capital is calculated as shown in equation 1.

Equation 1: *Working capital = Inventories + Accounts receivable – Accounts payable*

Successful working capital management requires the right balance between liquidity and profitability. To be able to pay salaries and other payments when needed, sufficient level of liquidity is required. At the same time, a company's inventories need to be big enough in order to avoid disruptions in production and keep customers satisfied. On the other hand, if inventories were too large, profit would be lost because of extra holding costs and interest costs of the capital involved. Large inventories may also lead to losses through deterioration. (Mott 2005; Arnold, 1998).

2.3.2 Components of Working Capital

The components of working capital include current assets and current liabilities. Current assets majorly comprise of account receivables, inventory, and cash whereas current liabilities comprise of account payables and accruals.

Current Assets

Gentry et al (1990) describes that “receivables represent delay in the inflow of cash, which must be financed by the firm”. Shim and Siegl (2000) point out that accounts receivable management includes selecting the good credit customers and speeding up the collections from the customers. Firms have to know that holding accounts receivable occurs the opportunity cost; meanwhile, the funds are tied up in account receivables than benefiting by investing elsewhere. Mathur (2003) remark that the third largest and most important item of assets in firms is the accounts receivable besides the capital investment in plant and machinery, stocks of inventory.

Fazzari and Petersen (1993) explain that the three major components of current assets are accounts receivable, inventories and cash and cash equivalents. Larsson and Hammarlund (2005) define the different items included within this area as: payables systems, receivables systems, management of liquid funds, currency management and risks, short term financing, accounts payables and accounts receivables.

According to Michalski (2008), if firms tie up too much funds in accounts receivables due to too generous trade credit policy, this does increase the high opportunity cost to the firm. Moreover, possibilities of bad debts from risky customers occur more costly to firms, although the generous credit policy could increase the sales. However, the firm should decide its level of accounts receivable so that the benefits are more than the costs.

Mathur (2003) explains that inventories include raw materials, consumable stores and spares (working-in-progress and finished goods). Inventory is viewed as an asset and a liability. Smith (1980) explains with a case analysing that “the tightened inventory policy reduces necessary borrowing to a lower level than does faster collection of receivables or slower payments of current liabilities.” Dimitrios (2008) points out that on one hand, too much inventory demand more physical space, could lead to a financial distress, and increases the possibility of inventories’ damages, deterioration and losses. Moreover, holding large amount of inventory frequently indicates for inefficient and careless management, not efficiently planned and scheduled, less consideration for process and procedures. On the other hand, too little inventories might lead to the interruption of operations in manufacture, increase the possibility of losing sales and consequently lower the profitability of the firms.

Current Liabilities

Current liabilities have to compromise between the risk and the return. Current liabilities are one of the flexible financial resources of firms. Current liabilities could be used as short-term financing recourse to meet the firms’ need. However, due to the nature of short-term debt, it has to “be repaid or rolled over more often”, so it increases the possibility that firms’ financial condition may be distressed, because the funds may not be available as it is needed. Keown *et al* (2006).

Brealey and Meyers (2006) define accounts payables that the firm purchases raw materials but does not pay its bills right after. The time interval is called the period of account payable. Delaying payment is described as stretching the accounts payable. Accounts payable is one of source of short-term financing recourse. Shim and Siegl (2000) argue that long-term debt financing has less liquidity risks than short-term debt financing since the long-term financing's repayment period is longer, but this advantage also present the long-term financing to have higher expenditures than short-term financing due to the greater uncertainties of long-term financing.

Cash conversion cycle is an important measurement of the working capital management. Gentry *et al* (1990) describe the cash conversion cycle measure the number of days while the funds are invested in inventories and accounts receivable minus the number of days that payment to suppliers is performed. Kim *et al* (1998) explain that the cash cycle is measured as average inventory age plus the collecting period of accounts receivable minus the average period of accounts payable. Shin and Soenen (1998) define the cash conversion cycle as the continuing cash flow from suppliers to inventory to accounts receivable and back into cash.

Brealey and Meyers (2006) demonstrate that the total time period starting from initially purchasing the raw materials and finally payment collected from customers is the inventory and accounts receivable period. The time period between the firms purchases its raw materials from the suppliers and the firm collects its payment from the customer is defined as the firm's cash conversion cycle (CCC). The longer the cash conversion cycle, the more the firm must invest in working capital. Vice versa, the shorter cash conversion cycle, the fewer funds are tied up in the working capital.

2.3.3 Working Capital and Policies

Mathur (2003) describes that working capital policy may broadly be divided into three categories as: Conservative policy, Aggressive policy and Moderate policy. Under the conservative policy, the company may prefer to hold rather heavy cash and bank balance in current account or investments in readily marketable securities, meanwhile with higher stocks of raw materials and finished goods, in the preparing for reducing the risks for out of the stock and loss of sales.

Aggressive or restrictive working capital policy may result in a disproportionately losses by risks of stock outs and the consequential loss of production as well as losing the sales and negatively influence of the profitability of the company. A moderate policy, the level of working capital will be moderate, neither too high nor too low, but just right.

2.4 Working Capital Management

2.4.1 Concept of Working Capital Management

According to Bhattacharya (2006), the concept of working capital was perhaps first evolved by Karl Marx, though in a somewhat different form, and the term he used was “variable capital”. Guthmann and Dougall (1948) defined working capital as current assets minus current liabilities and their view was elaborated by Park and Gladson (1963). This definition is also known as “net working capital”. Current assets are sometimes called as “gross working capital”. The current assets can be divided to four primary components: (1) cash and cash equivalents; (2) marketable securities; (3) accounts receivable; and (4) inventory, and the three major items of current liabilities are: (1) accounts payable; (2) expenses payable, including accrued wages and taxes; and (3) notes payable (Cheng et al. 2009). Working capital management is an essential part of short-term finance of a firm. Especially during the financial crisis, the importance of working capital management was highlighted by many companies. Working capital management is an important source of liquidity and value enhancement, but attention should be also paid to it on the good times – not only when facing problems (Buchmann 2009, p. 350).

2.4.2 Portfolio of Working Capital Management

Working capital management includes the portfolio combination management of the cash management, inventory management and trade credit policy management.

Cash is an important element of corporate liquidity in firms. Shim and Siegl (2000) explain that the ideal of cash management is to have the idle cash invested for return and meanwhile have the sufficient liquidity. “Cash management involves accelerating cash inflow and delaying cash outflow”. For example, it could speed up the payment collection from the buyer by extending shorter payment terms, so that accelerates the cash inflow.

There are advantages and disadvantages of cash holdings. Brealey and Meyers (2006) clarify that the advantage to “holding large amounts of ready cash, they reduce the risk of running out of cash and having to borrow more on short notice”. On the other hand, there is expenditure to keep excessive cash balances rather than investing the money to earn interest.

Keown *et al* (2006) describe that cash management is a trade-off of risk-return. A large cash investment minimizes the chances of liquidity risk, but it decreases the profitability of company.

Brealey and Meyers (2006) explain that firms store the inventories to minimize the risk of running out of the stock and losing sales as well as customers. However, holding inventories increases costs, such as the funds which are tied up in inventories, which could not have the interest earnings instead; storage and insurance have to be paid, furthermore, spoilage, damage and loss of goods lead to the costs to firms. Bhattacharya (2006) points out that inventory management has become an important key point in a firm’s working capital management. Running out of stock is risky for production and marketing consequences the shortage will cause. Excessive stocking reduces the profitability of the firm and thus results in holding cost. In recent years firms have benefited from the Material Requirements Planning systems (MRP), Just-in-Time (JIT), ERP management and lean management to reduce significantly their inventory amount to free up the tied up the investment in the inventory.

Trade Credit Policy Management involves the following steps: First, firms should decide the sales terms on which firms sell their goods to their customers. Second, firms should have decision-making on what evidence firm requires from their customer who owes the payment. Third, firms should analyse the risky customers and non-risky customers who are likely to pay their bills, this is called credit analysis. Fourth, firms should draw up the credit policy, it means to what extent the firms allow their customers to pay their bills on credit terms. Fifth, firms make sales on credit and have the problem collecting the payment when the bills become due which is called collection policy (Brealey and Meyers, 2006).

Aggressive working capital management is described as maximizing the profitability of the firms. Jose *et al* (1998) examines the relationship between profitability and management of ongoing liquidity needs by measuring a cross-section of firms during the period of over twenty-years and

find the strong evidence that aggressive working capital policies improve the profitability of the firms. The aggressive liquidity management leads to a shorter cash conversion cycle by reducing the inventory period and the accounts receivables period while increasing the accounts payables period. Abel (2008) explains that “A strong efficient working capital management implies that inventory and accounts receivable are quickly converted to cash and stretching accounts payable leads to a decreased cash conversion cycle and increased cash availability”.

2.4.3 Working Capital Management Strategies

There are three factors driving working capital levels. These includes: inventory, accounts receivables and bills payables. In effect account receivables and payables are different ways of financing inventory. Companies need to handle the three simultaneously across the board to drive fundamental reductions in asset levels. Given the wide range of possible actions, management focus is critical. A realistic plan with clear priorities is the best approach, since an overly ambitious agenda can stretch internal capabilities and deliver suboptimal results (Dittmar and Smith, 2005). Instead, companies should focus on the most promising actions that would not impair flexibility and performance. These actions will vary depending on the industry and the company’s condition, but they should have three overall objectives:

Excess inventory is one of the most over looked sources of cash, in most cases accounting for almost half the savings from working capital management. By cutting across enterprise processes as well as processes involving suppliers and customers, companies can minimize inventory throughout the value chain. With raw materials, companies can often achieve substantial gains by redefining optimal safety stock levels and batch sizes. This requires a thorough analysis of customer demand patterns; customer forecast, quality, and supplier lead times (Dittmar and Smith, 2005).

Many companies are early payers and late collectors. Other companies have cash flows problems caused by a mismatch in timing between incurred costs and receipt of customer payments. One way to ensure a steadier flow of cash is to better align incurred costs with customer payments by asking for a down payment and setting up series of staggered payments to ensure that most receivables have been collected by the time of delivery. Companies should also slowdown their

payment terms and conditions against best practices and negotiating with their valued customers. The goal of shortening customers' payment terms, however, must balance the risk of jeopardizing the relationship (Dittmar and Smith, 2005).

Companies are at one end of the business, and then companies that are slow in payment use the unpaid payables as a source of financing at the other end. Between these two extremes is a more effective, integrated approach to payment renegotiation that takes into account all aspects of the customer - supplier relationship, from price and payment terms to delivery time frames. Companies should benchmark terms and conditions against industry best practices and eliminate early payments, except when attractive discounts are offered. When renegotiating payment conditions they should consider the length of their relationship with suppliers as well as competitive loyalties. Moreover, linking supplier's payment terms to their performance in areas such as delivery accuracy, complaint ratios, and other lead time can improve underlying processes and reduce working capital. Overall by analyzing each component of working capital along the line, companies can identify and remove the obstacles that slow cash flow (Dittmar and Smith, 2005).

2.4.4 Measuring Working Capital Management

Some related researches are presented below measuring the influence of working capital in a company's profitability. Shin and Soenen (1998) investigated American companies during the period between 1975 and 1994 totaling 59,985 observations. The variables used were profitability, measured by return on assets (ROA) and return on sales (ROS), and cash conversion cycle. Their research found strong evidence of a negative relation between profitability and cash conversion cycle meaning that shorter the days of working capital the higher the profitability. Their findings also indicate a positive impact in the shareholder's value.

Lazaridis and Tryfonidis (2006) investigated the relationship that is statistically significant between corporate profitability, the cash conversion cycle and its components. They used a sample of 131 companies listed in the Athens Stock Exchange for the period of 2001-2004. The dependent variable is profitability measured by gross operating profit. The research findings show negative relationship between cash conversion cycle, financial debt and profitability, while

fixed financial assets have a positive coefficient. The authors conclude that companies can create more profit by handling correctly the cash conversion cycle and keeping each different component to an optimum level.

Similar results were also shown in Deloof (2003) research with Belgian companies from 1992 to 1996. He found negative relationship between gross operating profit and accounts receivable, inventory and accounts payable. The latter might indicate that less profitable companies wait longer to pay their bills taking advantage of credit period granted by their suppliers.

The most common measures for working capital include the number of days inventories (how many days it takes to turn over the value of entire inventory) and the number of days accounts receivable and payable (how long in average it takes to get payment and pay invoices).

Other measures include current ratio (ratio between short-term assets and liabilities). A value under one could mean liquidity problems. Quick ratio is similar but takes account of the fact that it may take time to convert inventory into cash (Planware, 2010). Net liquid balance measures financial decisions of a firm that are irrelevant to the operation cycle. Working capital requirement comes directly from the narrower definition of working capital and measures the needed working capital (Chiouand Cheng 2006). The cash conversion cycle is a popular measure of working capital management used in many studies (e.g. Deloof, 2003 and Jose *et al.* 1996). It is the time between purchase of raw materials and getting finished goods paid. Longer cash cycle means more investment on working capital. Reducing cash conversion cycle to a reasonable minimum generally leads to improved profitability, but in some cases longer cash cycle might increase profitability because it leads to higher sales (Deloof, 2003).

According to Jose *et al.* (1996), the cash conversion cycle is introduced by Gitman (1974) and later refined by Gitman and Sachdeva (1982). Amount of working capital can change during a financial year of a firm. Usually numbers at the end of financial year are good estimates, but if the operation of a firm is very seasonal they can be misleading. In the statistical studies of working capital management that use financial data, number of days inventories, accounts

receivable, accounts payable and cash conversion cycle are nearly always used as a measures of working capital management.

2.5 Effect of Working Capital Management on Financial Performance

Jose *et al.* (1996) found a negative correlation between the cash conversion cycle and profitability and later studies have confirmed their finding. Jose *et al* further assert that the shorter cash conversion cycle and lesser number of days accounts receivable leads to better profitability but correlations of number of days accounts payable and numbers of days inventory to profitability are conflicting in studies. Deloof (2003) discusses to some extent the relation of working capital management to profitability caused by profitability affecting working capital management, and not vice versa. He argues that the negative relation between inventory and profitability may be caused by declining sales resulting in a larger inventory.

Shin and Soenen (1998) analyze the relation between the cash conversion cycle and profitability for a sample of firms listed on the US stock exchange during the period 1974-1994. Their results show that reducing the cash conversion cycle to a reasonable extent increases firms' profitability. More recently, Deloof (2003) analyzes a sample of large Belgian firms during the period 1992-1996. His results confirm that Belgian firms can improve their profitability by reducing the number of day accounts receivable are outstanding and reducing inventories. Moreover, he finds that less profitable firms wait longer to pay their bills. Most of these companies' assets are in the form of current assets. Also, current liabilities are one of their main sources of external finance in view of their difficulties in obtaining funding in the long-term capital markets (Petersen and Rajan, 1997) and the financing constraints that they face (Whited, 1992; Fazzari and Petersen, 1993). Teruel and Solano (2007), also find a significant negative relation between an organization's profitability and the number of days accounts receivable and days of inventory.

2.6 Financial Performance Measurement

Kitaka (2001) refers to the work of Terence (1989), who provided a basis for measurement of financial performance. Several methods are available to measure financial performance and they can be broadly categorized into two:

- (a) Accounting based methods
- (b) Market based methods

Accounting based methods rely on published financial statements to extract information on profitability, earnings per share, return on capital employed, return to shareholders equity, return on total assets and the growth rate of the enterprise.

These methods largely apply ratio analysis in each of the key areas. Musyoki (2003) identifies challenges to the use of accounting based methods. He notes the fact that the accounting information (on which they are based) is produced up to three months after the end of the accounting period. It is therefore historical and may thus have less value in making judgements about the present let alone the future of the company. The use of International Financial Reporting Standards guides the process of making estimates on matters such as depreciation which further brings in subjectivity.

Market based methods are external and are based on the price that an external party would offer for the whole or part of the company. These methods are more robust in the sense that in perfect markets, managers have little influence on the price per share, which is equilibrium of the forces of demand and supply. These methods are also closer to the desire of the shareholder as they reflect more closely to the price they will gain should they choose to dispose their shareholding in the open market. Musyoki (2003) concurs with other scholars who note the absence of perfect markets anywhere in the world as the main drawback of market based methods. Kaplan (1992) notes that it is unfair to use share price as a means to evaluate the work of managers since it is affected by interplay of factors beyond their control.

This study used the accounting based method to measure the financial performance of SACCOs. In this regard, financial performance has been measured by use of interest rate paid on members deposits which acts as a return on funds invested by members. The use of interest rate on members deposits as a measure of financial performance is justified as follows:

Firstly, SACCOs are generally guided by a conservative saving and credit philosophy that places the members needs ahead of institutional profits. This is the reason why SACCOs are not profit-oriented like commercial enterprises and therefore are able to distribute interest on members deposits leaving very minimal net surplus to be distributed as dividends. However, since SACCOs are not profit-driven financial institutions that does not mean operating at a loss.

Secondly, the interest expense paid to members is deducted from the SACCOs income for distribution to the members before determination of the net surplus. In the corporate world, unlike SACCOs, a company's financial performance would be measured by using profit after tax which guides directors in making dividend distribution decisions. The income of SACCOs which is derived purely from mutual transactions is not subject to taxation and therefore when interest is distributed to the members it is an indication of good financial performance.

Thirdly, interest rate acts as a measure of return on the deposits invested by the members and also for comparison of financial performance of the current period to prior periods. Where the interest rate paid on members deposits increases it means that the SACCO had a better financial performance when compared to prior periods. However, where the interest rate paid on members deposits decreases it means that the SACCO had a bad financial performance in the current period when compared to prior periods.

Fourthly, a major basis used by regulators and members for the comparison of financial performance between different SACCOs is by use of interest rate paid on members deposits. Members of SACCOs during their Annual General Meetings are usually eager to know what the board of directors has recommended to be paid as interest rate on their deposits for a particular year. The members and regulators then use the interest rate recommended on the members deposits as a yardstick to compare the financial performance of two or more SACCOs.

Finally, interest rate is used by members to measure the financial success of SACCOs since when no recommendations are made to pay interest on deposits then this can be used by the members as a reason to vote out the directors as non-performers. This is unlike companies where financial performance may be measured by profits after tax available for distribution.

2.7 Empirical Review

Prior studies reported that working capital management may have an important effect on the firm's profitability. Shin and Soenen (1998), Lazaridis and Tryfonidis (2006), Raheman and Nasr (2007), among others, measured working capital with cash conversion cycle, which consists of stockholding period, debtors' collection period and creditors' payment period. These researchers supported that greater investment in working capital (the longer cash conversion cycle) leads to reduction in the firm's profitability (Banos-Caballero *et al*, 2010, and Nazir and Afza, 2003, 2009).

A recent working paper by Chatterjee (2010) analyses the impact of working capital management on the profitability of the listed companies in the London Stock Exchange (a sample of 30 UK companies for a period of 3 years from 2006-2008). The findings are in line with those of previously mentioned studies: as the cash conversion cycle increases it will lead to decreasing profitability of the firm, and managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level. The researcher also found that, there is a significant negative relationship between the liquidity and the profitability of the UK firms and that there exists a positive relationship between size of the firm and its profitability. The results suggest that the managers can increase corporate profitability by reducing the number of day's accounts receivable and inventories and less profitable firms wait longer to pay their bills.

Empirical evidence has shown that in most developing economies, SACCOs have brought millions of citizens into cohesive financial institutions which are succeeding very well in providing financial services to their members for improving their standards of living (Temu, 1999; Chirwa, 1997). Nevertheless, the existing literature has also indicated that these farmers associations in rural areas have been experiencing problems including diseconomies of scale, high interest rates on borrowings and very short term loans (Chirwa, 1997).

Mudibo (2005), carried out a study on co-operative governance in the East African experience and concluded that structures, continuity, balance of composition and accountability are factors affecting performance in SACCOs and results in service satisfaction leading towards stimulation of better financial performance.

Mutisya (2010), on his research paper on investigation into the factors contributing to poor financial management in SACCOs in Kenya, revealed that overreliance on borrowing negatively affected effective financial services delivery. He further pointed out that poor investment decisions also impacted negatively on SACCOs financial performance as it pushed them towards investing in non-profitable business ventures. He recommended a need for SACCOs to come up with investment policies, dividend policies and liquidity management policies to guide them in decision making.

2.8 Conclusions

The optimal level of working capital management could be achieved by a firm that manages well the trade-off between profitability and liquidity. When the working capital requirements are not properly managed and are allocated more than required, it renders the management inefficient and reduces the benefits of short-term investments. On the other hand, if the working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short-term liquidity crisis, leading to the degradation of company credit, as it cannot respond effectively to temporary capital requirements.

From the above empirical literature, some studies dealt with governance problems that are affecting SACCOs and other forms of co-operative societies. None of the studies has studied the relationship between working capital management financial performance of SACCOs.

A study which analysed the impact of working capital management on the profitability of listed companies was done at London Stock Exchange where 30 companies were sampled for the period 2006 to 2008. SACCOs are not listed on the securities exchange markets thus it would be difficult to assume that they also depict similar results when compared to listed companies. This study therefore is motivated by the above two research gaps.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In the previous chapter, literature pertaining to the study was reviewed and research gaps identified. This chapter addresses the methodology for the research. This chapter discusses the criteria for determining the appropriate methodology for the study. It covers a description of the study design, target population, sample design, data collection methods, research procedures and data analysis and presentation.

3.2 Research Design

The research problem was studied using a causal study research design. Mugenda and Mugenda, (1999) stated that a causal study is an in-depth investigation of an individual group, institution or phenomenon whose purpose is to determine the relationship that has been caused by phenomenon of the study. The research sought to assess the relationship between working capital management and financial performance of deposit taking SACCOs licensed by SASRA operating in Nairobi County. It is theoretically expected that there is a negative relationship between working capital management measures and profitability variables, if efficient working capital management leads to better financial performance of deposit taking SACCOs licensed by SASRA in Nairobi County.

3.3 Population of the Study

Brink (1996) defines a population as the entire group of people that is of interest to the researcher. The population of interest was all the deposit taking SACCOs licensed by SASRA operating in Nairobi County as at 30 October 2012, whose number stood at thirty three. A sample of all the deposit taking SACCOs licensed by SASRA in Nairobi was undertaken. The main respondent for the study was SASRA which has data for licensed deposit taking SACCOs. The study incorporated data for the period 2008 to 2011.

3.4 Data Collection Procedure

Secondary data was collected from the selected respondents with the aid of self-administered data collection sheets. A cover letter, endorsed by the University of Nairobi, was attached with a copy of the data collection sheet. The letter explained the nature and benefits of the study, and included general instructions on how to complete the data sheets, besides clearly laying down terms of protection on confidentiality of information provided. The data sheet was hand delivered to the main respondent. Duration of one week was be given to the respondent to complete the data collection sheets and return them by email. During this period, a follow up was made using telephone calls and emails as reminders and as a means of enhancing a higher response rate.

3.5 Data Analysis

According to Marshall and Rossman (1999), data analysis is the process of bringing order, structure and interpretation to the mass of collected data. Statistical Package for Social Sciences (SPSS) version 19.0 was used as an aid in the analysis. The researcher preferred SPSS because of its ability to cover a wide range of the most common statistical and graphical data analysis and is very systematic. The SPSS was used to generate percentages and frequencies. In order to analyze the effects of working capital management on the firm's financial performance, interest rate on members deposits as a proxy for financial performance was used as the dependent variable. With regards to the independent variables, working capital management was measured by Cash Conversion Cycle (CCC). CCC focuses on the length of time between when a firm makes payment and when firm receives cash inflow. The lower the value is better since it reveals that the firm has high liquidity which means it easily converts its short term investment in current assets to cash. However, higher value of CCC indicate greater investment in current assets, and hence the greater the need for financing of current assets. CCC is calculated as the number of days accounts receivable (AR) minus the number of days accounts payable (AP).

In this respect, AR was calculated as $\text{accounts receivable} / [\text{turnover}/365]$. AR represents the number of days that a firm takes to collect payments from its customer. AP was calculated by $\text{accounts payable} / [\text{cost of sales}/365]$. This measure indicates the average time firm takes to pay their suppliers. The higher the value, the longer firms take to settle their payment commitments to their suppliers. Control variables were introduced as the Growth in Firm Turnover and its

Leverage. Turnover Growth (TG) was calculated by $(\text{Turnover}_1 - \text{Turnover}_0)/\text{Turnover}_0$. Leverage (DR) was measured by debt ratio as calculated by Total Debt over Total Assets. In addition, Current Ratio (CR) which is calculated by Current Assets divided by Current Liabilities was included as one of the independent variables. The reason was that current ratio has been used as measure of corporate liquidity conventionally.

3.5.1 Analytical Models

Correlation Analysis: Spearman's Correlation analysis was used to understand the relationship between working capital management and financial performance. If efficient working capital management increases financial performance, one should expect a negative relationship between the measures of working capital management and the financial performance variable.

Regression Analysis: A multivariate regression model was applied to determine the relationship between working capital management and financial performance.

The regression model was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$\text{Financial Performance} = b_0 + b_1 \text{CCC}_t + b_2 \text{Current Ratio}_t + b_3 \text{Debt Ratio}_t + b_4 \text{Turnover Growth}_t + \text{Error Term}$$

Where financial performance was measured by interest rate on members deposits of the SACCOs sampled in the study, CCC represents the Cash Conversion Cycle, Current Ratio represents the ration between Current Assets and Current Liabilities, Debt Ratio represents the ratio between Total Debt to Total Assets whereas Turnover Growth represents the growth in turnover between two consecutive periods.

The equation above was estimated using the regression-based framework pooled Ordinary Least Squares (OLS) as employed by Shin and Soenon (1998). The model of this study differs by using CCC as a comprehensive measure of working capital management. The data set used for this part

was pooled across the relevant SACCOs and years, where the fixed effects estimation assumes firm specific intercepts, which capture the effects of those variables that are particular to each firm and that are constant over time. Test of significance of the regression model was done using various measures, that is, ANOVA, Student (t) test, F-test, Correlation coefficient (R) and Coefficient of Determination (R^2).

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the data analysis, findings and discussions. Data was analysed using both correlation and regression models of analysis. At the end, this chapter also includes interpretation of the study findings.

4.2 Data Analysis

Secondary data pertaining to financial statements of selected SACCOs was collected with the aid of a data collection sheet. A total of 15 data sheets were sent out and 13 were returned completed, (86.7%) response rate. The completed data sheets captured financial information for a period of 4 years. For purposes of this study, the data that was analyzed covers a period of 4 years i.e. 2008, 2009, 2010 and 2011. Statistical Package for Social Sciences (SPSS) version 19.0 was used to aid in analysis. In order to analyze the effects of working capital management on the SACCOs' financial performance, interest rate on members' deposits was used as a measure of financial performance (dependent variable). With respect to the independent variables, working capital management was measured by cash conversion cycle (CCC). CCC focuses on the length of time between when a firm makes payment and when firm receives cash inflow. CCC is calculated as the number of days accounts receivable (AR) minus the number of days accounts payable (AP).

In this respect, AR was calculated as $\text{accounts receivable} / [\text{turnover}/365]$. AR represents the number of days that a firm takes to collect payments from its customers. AP was calculated by $\text{accounts payable} / [\text{cost of generating revenues}/365]$. This measure indicates the average time firm takes to pay their suppliers. Control variables were introduced as the Growth in Firm Turnover and its Leverage. Turnover Growth (TG) was calculated by $(\text{Turnover}_1 - \text{Turnover}_0) / \text{Turnover}_0$. Leverage (DR) was measured by debt ratio as calculated by Total Debt

over Total Assets. In addition Current Ratio (CR) which was calculated by Current Assets over Current Liabilities was included as one of the independent variables.

4.3 Correlation Analysis

Spearman’s Correlation analysis was used to determine the co-relationship between working capital management and financial performance. If efficient working capital management increases financial performance, one should expect a negative relationship between the measures of working capital management and financial performance variable.

4.3.1 Correlation between Current Ratio and Financial Performance

Findings of the correlation of current ratio as a measure of working capital management and financial performance variable are summarized and presented in Table 4.1 below.

Table 4.1: Correlation between Current Ratio and Financial Performance Variable

| | | Correlations | | | | |
|--------------------------------|------|-------------------------|-------|-------|-------|-------|
| Control Variables | | 2008 | 2009 | 2010 | 2011 | |
| Financial Performance variable | 2008 | Correlation | 1.000 | -.697 | .796 | -.202 |
| | | Significance (2-tailed) | . | .303 | .204 | .798 |
| | | Df | 0 | 2 | 2 | 2 |
| | 2009 | Correlation | -.697 | 1.000 | -.986 | .770 |
| | | Significance (2-tailed) | .303 | . | .014 | .230 |
| | | Df | 2 | 0 | 2 | 2 |
| | 2010 | Correlation | .796 | -.986 | 1.000 | -.660 |
| | | Significance (2-tailed) | .204 | .014 | . | .340 |
| | | Df | 2 | 2 | 0 | 2 |
| | 2011 | Correlation | -.202 | .770 | -.660 | 1.000 |
| | | Significance (2-tailed) | .798 | .230 | .340 | . |
| | | Df | 2 | 2 | 2 | 0 |

Source: Research Findings

The findings in Table 4.1 above indicate that efficient working capital management increases financial performance, and hence a negative relationship between the measure of working capital management (current ratio) and financial performance variable.

4.3.2 Correlation between Debt Ratio and Financial Performance Variable

Findings of the correlation of debt ratio as a measure of working capital management and financial performance variable are summarized and presented in Table 4.2 below.

Table 4.2: Correlation between Debt Ratio and Financial Performance Variable

| Correlations | | | | | | |
|--------------------------------|------|-------------------------|-------|-------|-------|-------|
| Control Variables | | | 2008 | 2009 | 2010 | 2011 |
| Financial Performance variable | 2008 | Correlation | 1.000 | .268 | -.945 | -.840 |
| | | Significance (2-tailed) | . | .732 | .055 | .160 |
| | | Df | 0 | 2 | 2 | 2 |
| | 2009 | Correlation | .268 | 1.000 | .056 | .289 |
| | | Significance (2-tailed) | .732 | . | .944 | .711 |
| | | Df | 2 | 0 | 2 | 2 |
| | 2010 | Correlation | -.945 | .056 | 1.000 | .972 |
| | | Significance (2-tailed) | .055 | .944 | . | .028 |
| | | Df | 2 | 2 | 0 | 2 |
| | 2011 | Correlation | -.840 | .289 | .972 | 1.000 |
| | | Significance (2-tailed) | .160 | .711 | .028 | . |
| | | Df | 2 | 2 | 2 | 0 |

Source: Research Findings

The findings in Table 4.2 above indicate that efficient working capital management increases financial performance, and hence a negative relationship between the measure of working capital management (debt ratio) and financial performance variable.

4.3.3 Correlation between Turnover Growth and Financial Performance

Findings of the correlation of turnover growth as a measure of working capital management and financial performance variable are summarized and presented in Table 4.3 below.

Table 4.3: Correlation between Turnover Growth and Financial Performance Variable

| Correlations | | | 2008 | 2009 | 2010 | 2011 |
|--------------------------------|------|-------------------------|-------|-------|-------|-------|
| Control Variables | | | | | | |
| Financial Performance variable | 2008 | Correlation | 1.000 | .232 | -.195 | .109 |
| | | Significance (2-tailed) | . | .768 | .805 | .891 |
| | | Df | 0 | 2 | 2 | 2 |
| | 2009 | Correlation | .232 | 1.000 | .357 | .963 |
| | | Significance (2-tailed) | .768 | . | .643 | .037 |
| | | Df | 2 | 0 | 2 | 2 |
| | 2010 | Correlation | -.195 | .357 | 1.000 | .160 |
| | | Significance (2-tailed) | .805 | .643 | . | .840 |
| | | Df | 2 | 2 | 0 | 2 |
| | 2011 | Correlation | .109 | .963 | .160 | 1.000 |
| | | Significance (2-tailed) | .891 | .037 | .840 | . |
| | | Df | 2 | 2 | 2 | 0 |

Source: Research Findings

The findings in Table 4.3 above indicate that efficient working capital management increases financial performance, and hence a negative relationship between the measure of working capital management (turnover growth) and financial performance variable.

4.3.4 Correlation between CCC and Financial Performance

Findings of the correlation of cash conversion cycle as a measure of working capital management and financial performance variable are summarized and presented in Table 4.4 below.

Table 4.4: Correlation between CCC and Financial Performance

| | | | Correlations | | | |
|--------------------------------|------|-------------------------|---------------------|-------|-------|-------|
| Control Variables | | | 2008 | 2009 | 2010 | 2011 |
| Financial Performance variable | 2007 | Correlation | 1.000 | .859 | .939 | -.553 |
| | | Significance (2-tailed) | . | .141 | .061 | .447 |
| | | Df | 0 | 2 | 2 | 2 |
| | 2008 | Correlation | .859 | 1.000 | .714 | -.294 |
| | | Significance (2-tailed) | .141 | . | .286 | .706 |
| | | Df | 2 | 0 | 2 | 2 |
| | 2009 | Correlation | .939 | .714 | 1.000 | -.361 |
| | | Significance (2-tailed) | .061 | .286 | . | .639 |
| | | Df | 2 | 2 | 0 | 2 |
| | 2010 | Correlation | .774 | .868 | .511 | -.661 |
| | | Significance (2-tailed) | .226 | .132 | .489 | .339 |
| | | Df | 2 | 2 | 2 | 2 |
| | 2011 | Correlation | -.553 | -.294 | -.361 | 1.000 |
| | | Significance (2-tailed) | .447 | .706 | .639 | . |
| | | Df | 2 | 2 | 2 | 0 |

Source: Research Findings

The findings in table 4.4 above indicate that efficient working capital management increases financial performance, and hence a negative relationship between the measure of working capital management (cash conversion cycle) and financial performance variable.

4.4 Regression Analysis

A multivariate regression model was applied to determine the relationship between working capital management and financial performance. The regression model is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$\text{Financial Performance} = b_0 + b_1 \text{CCC}_t + b_2 \text{Current Ratio}_t + b_3 \text{Debt Ratio}_t + b_4 \text{Turnover Growth}_t + \text{Error Term}$$

The equation above is estimated using the regression-based framework Pooled Ordinary Least Squares (OLS) as employed by Shin and Soenon (1998). Model of this study differs by using CCC as a comprehensive measure of working capital management. The data set to be used for this part was pooled across the firms and in a period of five years. Where the fixed effects estimation assumes firm specific intercepts, which capture the effects of those variables that are particular to each firm and that are constant over time.

4.4.1 Regression of Financial Performance on Current Ratio (Y on CR_t)

Assuming the other variables do not exist, the findings of the regression of dependent variable (Y) on the independent variable (CR_t) are presented below.

Where:

- CR1 - Current Ratio for 2008
- CR2 - Current Ratio for 2009
- CR3 - Current Ratio for 2010
- CR4 - Current Ratio for 2011
- FPI - Financial Performance Index

Linear

Table 4.5 Regression of Financial Performance on Current Ratio for the Year 2008

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .470 | .221 | -.039 | .480 |

| ANOVA | | | | | |
|------------|----------------|----|-------------|------|------|
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | .196 | 1 | .196 | .849 | .425 |
| Residual | .692 | 3 | .231 | | |
| Total | .888 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -3.640 | 3.949 | -.470 | -.922 | .425 |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -3.640 | 3.949 | -.470 | -.922 | .425 |
| (Constant) | 2.395 | .240 | | 9.971 | .002 |

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Credit Ratio for year 2008) and financial performance variable occurred.

Linear

Table 4.6 Regression of Financial Performance on Current Ratio for the Year 2009

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .250 | .062 | -.250 | 1.015 |

| ANOVA | | | | | |
|------------|----------------|----|-------------|------|------|
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | .206 | 1 | .206 | .200 | .685 |
| Residual | 3.091 | 3 | 1.030 | | |
| Total | 3.297 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | 3.732 | 8.344 | .250 | .447 | .685 |
| (Constant) | 1.693 | .508 | | 3.335 | .045 |

Source: Research Findings

Findings above show that decrease in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Current Ratio for year 2009) and financial performance variable occurred.

Linear

Table 4.7 Regression of Financial Performance on Current Ratio for the Year 2010

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .343 | .117 | -.177 | 1.395 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|------|------|
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | .776 | 1 | .776 | .399 | .573 |
| Residual | 5.840 | 3 | 1.947 | | |
| Total | 6.616 | 4 | | | |

The independent variable is FPI.

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -7.243 | 11.470 | -.343 | -.631 | .573 |
| (Constant) | 2.735 | .698 | | 3.921 | .030 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Credit Ratio for year 2010) and financial performance variable occurred.

Linear

Table 4.8 Regression of Financial Performance on Current Ratio for the Year 2011

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .267 | .071 | -.239 | .485 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|------|------|
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | .054 | 1 | .054 | .230 | .665 |
| Residual | .707 | 3 | .236 | | |
| Total | .761 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -1.912 | 3.990 | -.267 | -.479 | .665 |
| (Constant) | 1.860 | .243 | | 7.665 | .005 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Current Ratio for year 2011) and financial performance variable occurred.

4.4.2 Regression of Financial Performance on Debt Ratio (Y on DR_t)

Assuming the other variables do not exist, the findings of the regression of dependent variable (Y) on the independent variable (DR_t) are presented below.

Where:

- DR1 - Debt Ratio for 2008
- DR2 - Debt Ratio for 2009
- DR3 - Debt Ratio for 2010
- DR4 - Debt Ratio for 2011
- FPI - Financial Performance Index

Linear

Table 4.9 Regression of Financial Performance on Debt Ratio for the Year 2008

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .949 | .901 | .868 | .050 |

| ANOVA | | | | | |
|------------|----------------|----|-------------|--------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | .067 | 1 | .067 | 27.276 | .014 |
| Residual | .007 | 3 | .002 | | |
| Total | .075 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -2.132 | .408 | -.949 | -5.223 | .014 |
| (Constant) | .610 | .025 | | 24.564 | .000 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Debt Ratio for year 2008) and financial performance variable occurred.

Linear

Table 4.10 Regression of Financial Performance on Debt Ratio for the Year 2009

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .989 | .978 | .971 | .028 |

| ANOVA | | | | | |
|------------|----------------|----|-------------|---------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | .102 | 1 | .102 | 134.829 | .001 |
| Residual | .002 | 3 | .001 | | |
| Total | .105 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|---------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -2.629 | .226 | -.989 | -11.612 | .001 |
| (Constant) | .628 | .014 | | 45.574 | .000 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Debt Ratio for year 2009) and financial performance variable occurred.

Linear

Table 4.11 Regression of Financial Performance on Debt Ratio for the Year 2010

| Model Summary | | | | | |
|----------------------------------|----------------|-------------------|----------------------------|-------|------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| .856 | .733 | .644 | .113 | | |
| The independent variable is WPI. | | | | | |
| ANOVA | | | | | |
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | .105 | 1 | .105 | 8.240 | .064 |
| Residual | .038 | 3 | .013 | | |
| Total | .143 | 4 | | | |

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -2.665 | .929 | -.856 | -2.870 | .064 |
| (Constant) | .693 | .056 | | 12.262 | .001 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Debt Ratio for year 2010) and financial performance variable occurred.

Linear

Table 4.12 Regression of Financial Performance on Debt Ratio for the Year 2011

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .901 | .812 | .750 | .097 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|--------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | .123 | 1 | .123 | 12.985 | .037 |
| Residual | .028 | 3 | .009 | | |
| Total | .152 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -2.886 | .801 | -.901 | -3.603 | .037 |
| (Constant) | .693 | .049 | | 14.216 | .001 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Debt Ratio for year 2011) and financial performance variable occurred.

4.4.3 Regression of Financial Performance on Turnover Growth (Y on SG_t)

Assuming the other variables do not exist, the findings of the regression of dependent variable (Y) on the independent variable, turnover growth (SG_t) are presented below.

Where:

- SG1 - Turn Growth for 2008 - 2009
- SG2 - Turn Growth for 2009 - 2010
- SG3 - Turn Growth for 2010 - 2011
- FPI - Financial Performance Index

Linear

Table 4.13 Regression of Financial Performance on Turnover Growth for the Year 2008

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .327 | .107 | -.191 | .093 |

| ANOVA | | | | | |
|------------|----------------|----|-------------|------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | .003 | 1 | .003 | .360 | .591 |
| Residual | .026 | 3 | .009 | | |
| Total | .029 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -.460 | .766 | -.327 | -.600 | .591 |
| (Constant) | .093 | .047 | | 1.984 | .141 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Turnover Growth for 2008 - 2009) and financial performance variable occurred.

Linear

Table 4.14 Regression of Financial Performance on Turnover Growth for the Year 2009

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .259 | .067 | -.244 | .062 |

| ANOVA | | | | | |
|------------|----------------|----|-------------|------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | .001 | 1 | .001 | .216 | .674 |
| Residual | .011 | 3 | .004 | | |
| Total | .012 | 4 | | | |

| Coefficients | | | | | |
|--------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -.235 | .507 | -.259 | -.464 | .674 |
| (Constant) | .130 | .031 | | 4.218 | .024 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Turnover Growth for year 2009 - 2010) and financial performance variable occurred.

Linear

Table 4.15 Regression of Financial Performance on Turnover Growth for the Year 2010

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .497 | .247 | -.004 | .121 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | .014 | 1 | .014 | .985 | .394 |
| Residual | .044 | 3 | .015 | | |
| Total | .059 | 4 | | | |

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -.989 | .996 | -.497 | -.993 | .394 |
| (Constant) | .153 | .061 | | 2.516 | .086 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Turnover Growth for year 2010 - 2011) and financial performance variable occurred.

4.4.4 Regression of Financial Performance on Cash Conversion Cycle (Y on CCC_t)

Assuming the other variables do not exist, the findings of the regression of dependent variable (Y) on the independent variable (CCC) are presented below.

Where:

CCC1 - Cash conversion cycle for 2008

CCC2 - Cash conversion cycle for 2009

CCC3 - Cash conversion cycle for 2010

CCC4 - Cash conversion cycle for 2011

FPI - Financial Performance Index

Linear

Table 4.16 Regression of Financial Performance on Cash Conversion Cycle for the Year 2008

| Model Summary | | | | | |
|----------------------|----------------|-------------------|----------------------------|------|------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| .094 | .009 | -.322 | 10.954 | | |
| ANOVA | | | | | |
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | 3.200 | 1 | 3.200 | .027 | .881 |
| Residual | 360.000 | 3 | 120.000 | | |
| Total | 363.200 | 4 | | | |

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|-------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -14.706 | 90.055 | -.094 | -.163 | .881 |
| (Constant) | 44.000 | 5.477 | | 8.033 | .004 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Cash Conversion Cycle for year 2008) and financial performance variable occurred.

Linear

Table 4.17 Regression of Financial Performance on Cash Conversion Cycle for the Year 2009

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .499 | .249 | -.001 | 6.946 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | 48.050 | 1 | 48.050 | .996 | .392 |
| Residual | 144.750 | 3 | 48.250 | | |
| Total | 192.800 | 4 | | | |

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -56.985 | 57.104 | -.499 | -.998 | .392 |
| (Constant) | 43.750 | 3.473 | | 12.597 | .001 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Cash Conversion Cycle for year 2009) and financial performance variable occurred.

Linear

Table 4.18 Regression of Financial Performance on Cash Conversion Cycle for the Year 2010

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .539 | .291 | .054 | 7.257 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|-------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | 64.800 | 1 | 64.800 | 1.230 | .348 |
| Residual | 158.000 | 3 | 52.667 | | |
| Total | 222.800 | 4 | | | |

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -66.176 | 59.660 | -.539 | -1.109 | .348 |
| (Constant) | 39.000 | 3.629 | | 10.748 | .002 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Cash Conversion Cycle for year 2010) and financial performance variable occurred.

Linear

Table 4.19 Regression of Financial Performance on Cash Conversion Cycle for the Year 2011

| Model Summary | | | |
|----------------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| .748 | .560 | .414 | 2.517 |

| ANOVA | | | | | |
|--------------|----------------|----|-------------|-------|------|
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Regression | 24.200 | 1 | 24.200 | 3.821 | .146 |
| Residual | 19.000 | 3 | 6.333 | | |
| Total | 43.200 | 4 | | | |

| Coefficients | | | | | |
|---------------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| FPI | -40.441 | 20.689 | -.748 | -1.955 | .146 |
| (Constant) | 37.500 | 1.258 | | 29.802 | .000 |

Source: Research Findings

Findings above show that increase in efficient working capital management increases financial performance. A negative relationship between the measure of working capital management (Cash Conversion Cycle for year 2011) and financial performance variable occurred.

4.5 Interpretation of Findings

The study was concerned in establishing the relationship between working capital management and financial performance of deposit taking SACCOs licensed by SASRA in Nairobi County. This study examined the extent to which the use of alternative proxies for working capital management might provide different results when correlated or regressed with the financial performance variable.

Spearman's correlation analysis was used for the study data to see the relationship between variables such as those of working capital management and financial performance. Tables 4.1 to 4.4 present Spearman's correlation coefficients for all variables considered. This report

commences analysis of the correlation results between current ratio and financial performance for the period 2008 to 2011. Current ratio was used as a proxy for liquidity. Current ratio showed a negative relationship with financial performance. This means that when the liquidity of the SACCO is increased it will negatively affect financial performance measured through interest rate on members deposits. Debt ratio was used as a proxy for leverage. Debt ratio had also a negative relationship with the financial performance variable for the period 2008 to 2011. It means when the leverage was decreased then that put a positive impact on the SACCO's financial performance.

Turnover growth also showed a negative relationship with financial performance. This means that when the turnover of the SACCO increased, financial performance declined measured through interest rate on members deposits. Cash conversion cycle had a negative relationship with the financial performance variable for the period 2008 to 2011. It means when the cash conversion cycle was decreased then that put a positive impact on the SACCO's financial performance.

A shortcoming of Spearman's correlation results is that they do not allow identifying causes from consequences. Hence, regression analysis was used to investigate the impact of working capital management on financial performance. The determinants of financial performance are estimated with a fixed effects model. Fixed effects estimates assumes firm specific intercepts, which capture the effects of those variables that are particular to each firm and that are constant over time.

Tables 4.5 to 4.19 have been used to show the regression results of financial performance variable on the working capital management variables for the period 2008 to 2011. Regression of financial performance on current ratio indicates the result is negative; that is, the increase in liquidity will adversely affect the financial performance of the SACCO. We used financial debt ratio as a proxy for leverage; it shows a negative relationship with the dependent variable, which means that, when leverage of the SACCO increases, it will adversely affect its financial performance.

Regression of financial performance on turnover growth indicates the result is negative; that is, the increase in turnover meant a decline in financial performance, measured through interest rate on members deposits. We used cash conversion cycle to represent the period between when the SACCO disburses loans and when recoveries are made. The results show a negative relationship with the dependent variable, which means that, when cash conversion cycle of the SACCO increases, it will negatively affect its financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary and conclusions drawn from the research findings and the recommendations for practice and for further studies.

5.2 Summary

This study was based on the relationship between working capital management and financial performance of deposit taking SACCOs licensed by SASRA in Nairobi County. A total of 15 SACCOs were sampled for the study of which 13 SACCOs responded with all the data requested.

Financial performance was considered as a function of the interest rate paid on members deposits. Working capital management was considered a function of cash conversion cycle, debt ratio, turnover growth and current ratio. Data was collected and analyzed using correlation and regression models. SPSS version 19.0 was also used to aid in data analysis.

The conclusion of the study was that when efficient working capital management leads to better financial performance, then one should expect a negative relationship between measures of working capital management and the financial performance variable.

5.3 Conclusions

When the working capital requirements are not properly managed and are allocated more than required, it renders the management inefficient and reduces the benefits of short-term investments. On the other hand, if the working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short-term liquidity crisis, leading to the degradation of company credit, as it cannot respond effectively to temporary capital

requirements. Without working capital every aspect of the enterprise will cease to exist that is there will be no funds for the day-to-day running of the business which is the aim of every business enterprise. Well-managed working capital will produce an increased profitability to meet the financial needs of the company at all times.

Findings of the study indicate that efficient working capital management leads to better financial performance, hence a positive relationship existed between efficient working capital management and financial performance variable. The conclusion of the study was that when efficient working capital management leads to better financial performance, then one should expect a negative relationship between measures of working capital management and the financial performance variable.

5.4 Recommendations for Policy

Based on the findings of the study, it is expected that the stakeholders in the SACCOs, who include the management, the government and financial regulators will gain a better understanding of the relationship between working capital management and financial performance, and on the basis of the findings, the management of the SACCOs may undertake working capital management from an informed position, while the regulatory bodies formulate policies that will be supportive of efficient management of working capital. Based on the findings, the following recommendations are made:

Working capital management includes a portfolio combination management, that is, cash management, inventory management and trade credit policy management. Firms should, therefore, manage their working capital more efficiently and skillfully by holding it, at an optimum level to reduce the quantum of interest outgo and the corresponding rise in their profit.

The ideal of cash management is to have the idle cash invested for return and meanwhile have sufficient liquidity. SACCOs could enhance their cash management practices by speeding up the loan repayment collection from the members by extending shorter payment terms, so that it accelerates cash inflow. Negotiating a favorably paying condition from the suppliers of funds to prolong the time between the time SACCOs access credit and repay them in order to delaying the outflow of cash.

Firms may store inventories to minimize the risk of running out of the stock and losing sales as well as customers. However, holding inventories causes costs, such as the funds which are tied up in inventories could not have been used to earn interest instead; storage and insurance have to be paid, furthermore, spoilage, damage and loss of goods lead to the costs to firms. Inventory management thus is an important key point in a firm's working capital management. Running out of stock is risky for production and has marketing consequences in the form of shortage cost. Excessive stocking reduces the profitability of firms thereby results in high holding costs.

An efficient working capital management implies that inventory and accounts receivable are quickly converted to cash and stretching accounts payable leads to a decreased cash conversion cycle and increased cash availability. Working capital management involves a trade-off between profitability and risk, whereby decisions of the firm to pursue increase in profitability, increases also the risks. Therefore, firms have to reserve the cash as security to the risk and uncertainty which the firm is exposed to. Firms reducing inventories would increase the risk of out-of-stocks and sale losses; rely more on suppliers' just-in-time delivery which also increases risk. Shortening days of accounts receivable collections from or ungenerous credit terms to firm's buyers might lead to the lower volume of sales and consequently increase the risk of decreasing profitability. Extending the accounts payable might forego the discounts for early payments and increasing the probability of financial costs.

There are three factors driving working capital levels. These include: inventory, accounts receivables and bills payables. In effect account receivables and payables are different ways of financing inventory. Firms need to handle the three factors driving working capital levels (inventory, accounts receivables and bills payables) simultaneously across the board to drive better financial performance. Given the wide range of possible actions, management focus is critical. A realistic plan with clear priorities is the best approach, since an overly ambitious agenda can stretch internal capabilities and deliver suboptimal results. Instead, SACCOs should focus on the most promising actions that would not impair flexibility and financial performance. These actions will vary depending on the industry and the SACCO's condition, but they should have three overall objectives discussed above.

5.5 Limitations of the Study

Firstly, the presentation and disclosures in the financial statements of the SACCOs sampled were not uniform. There were significant changes in the way financial statement disclosures were prepared from year to year and this made collection and analysis of data to be cumbersome.

Secondly, the study was based on secondary data wholly obtained from audited financial statements. Many studies point to several reasons to discount the use of such information with the main reasons being that they are historical and they apply estimates. In the process of making such estimates, however judicious one may be there is always room for bias. Further accounting data suffers from allocation differences and errors, which limit comparability.

Thirdly, study was limited to licensed deposit-taking SACCOs and there is a reason to believe that regulations cause market distortions. There is therefore an opportunity to compare these findings with a similar sample from the non-deposit-taking SACCOs.

Fourthly, the study was aimed at covering a period of five years but this was not possible since SASRA, where data was collected from, was inaugurated in 2009 and therefore data was available for only four years. The reporting timeframe could also not allow collection of data from individual SACCOs using questionnaires since the researcher expected the responsible parties within the SACCOs to be away or too busy.

5.6 Recommended Areas of Further Research

The findings of this study, it is hoped, will contribute to the existing body of knowledge and form basis for future researchers. The following areas of further researcher are thus suggested:

Whereas the current study focused on responses from the management of the SACCOs with respect to working capital management practices and the impact on their impact on financial performance, future studies could focus on the financial regulatory bodies.

Other researchers could consider studying the whole population of co-operatives in Kenya to ascertain whether similar results will be achieved.

Given the importance of the views of employees, strategists and practitioners, an exploration of their experiences should be undertaken through further research studies, using the same conceptual framework, so that a more holistic understanding of working capital management can be established and a fully coordinated approach adopted to policy, practice, education and training.

It is expected that as SASRA and ICPAK continue making efforts to improve the record keeping among deposit-taking SACCOs, the use of financial statements will improve. A significant reduction in the differences in financial statements presentation will occur once SACCOs adopt the MKOPA SACCO template was developed by ICPAK and approved by SASRA for use among SACCOs. It is important that another study among SACCOs using similar template be conducted and results compared.

REFERENCES

- Afza T., and Nazir, M.S. (2007). Is it better to be aggressive or conservative in managing working capital? Paper presented at Singapore Economic Review Conference (SERC) on August 02-04, Singapore.
- Agarwal, N. K. (1977). *Management of Working Capital*. PhD Dissertation. Delhi School of Economics.
- Al-Sakran, S.A. (2001). Leverage Determinants in the absence of Corporate Tax System: The Case of non-financial publicly traded corporations in Saudi Arabia, *Managerial Finance*, Vol. 27 No.10/11, pp.58-86.
- Arnold, G. (2008). *Corporate Financial Management*, 4th edition, Pearson Education Limited.
- Arthur, J. (1992). *Basic financial management* (p. 649). New Jersey: Prentice Hall Publishers.
- Banos-Caballero S. Garcia-Teruel, P. and Martinez-Solano, P. (2010). *Accounting and Finance*, Vol 50, pp. 511-527, September.
- Barton, S.L., Hill, N.C., Srinivsan, S. (2009), "An empirical test of stakeholder theory predictions of capital", *Financial Management*, Vol. 18 No.1, pp.36-44.
- Baumol, W.J. (1952). *The transaction demand for cost: An inventory theoretic approach*. *Quarterly journal of Economics*, Vol 52, pp 545 – 556.
- Bhattacharya, H. (2006). *Working Capital Management: Strategies and Techniques*, Prentice Hall, New Delhi.
- Blinder, A. S. and Maccini, L.J. (1991). *The resurgence of inventory research: what have we learned?* *Journal of Economic Survey*, 5(4), 291-328.
- Brealey, C. and Myers, J. (2006). *Corporate Finance*, Eighth edition, McGraw hill.
- Brown, M., Askew, M., Baker, D., Denvir, H. and Millett, A. (2003). *Is the National Numeracy Strategy Research-Based?* *British Journal of Educational Studies*, 46, 4, 362-385.
- Buchmann, P. (2009). Return of the King: Working Capital Management zur Vermeidung von Liquiditätsengpässen in der Krise. *Controlling & Management*. Vol. 53, Issue 6, p. 350-355.
- Chatterjee, M. (2010). *Indian Steel Industry - Its Growth and Structure of Production & Market*, *Steel Scenario Journal*, Vol. 10/Q2.

- Chiou, Jeng-Ren., and Cheng, L. (2006). *The determinants of working capital management*. The Journal of American Academy of Business, Cambridge, 10, 149-155.
- Chittenden, F., Hall, G. and Hutchinson, P. (1996). *Small firm growth, access to interest on corporate capital structure*, Journal of Finance, Vol. 43 pp.271-81.
- Coleman, S., Cole, R. (2009). "‘Small Firms’ use of financial leverage: evidence from the 2003 National Survey of Small Business Finances", University of Hartford, Hartford, CT, working paper.
- Cox, J.F. (1985). *Inventory Management Techniques*, Journal of Small Business Management. Available at <http://www.allbusiness.com/management>.
- Deloof, D. (2003). *Does working capital management affect profitability of Belgian firms?* Journal of Business Finance and Accounting, 30, 573 – 587.
- Deloof, M. and Jegers, M. (1996). *Trade credit, product quality, and intra-group trade: Some European evidence*, Financial Management, Vol. 25, No. 3, pp 945-68 (1996).
- Dittmar, A. and Smith, J.M. (2005). *Internal corporate governance and corporate cash holdings*, The Journal of Financial and Quantitative Analysis, Vol. 38, No. 1, pp 111-133 (2003).
- Dollan, W.E. (1980). *Purchasing Management and Inventory Control for Small Business*, Small Business Management Series No. 41, U.S. Small Business Administration Available at <http://www.allbusiness.com/management>
- Donaldson, G. (2001). *Corporate debt capacity: a study of corporate debt policy and the determination of corporate debt capacity*. Boston, MA, Harvard Graduate School of Business Administration, Division of Research, Harvard University.
- Eljelly, A. (2004). *Liquidity-profitability tradeoff: an empirical investigation in an emerging market*. International Journal of Commerce & Management, 14(2), 48 – 61.
- Faulkender, M. and Wang, R. (2006). *Corporate Financial Policy and the Value of Cash*. forthcoming in the Journal of Finance.
- Fazzari, S. and Petersen, B. (1993). *Working capital and fixed investment: new evidence on financing constraints*. The Rand Journal of Economics, 24, 328-42.
- Garcia-Teruel, P. J. and Pedro, M.N. (2007). *Effects of Working Capital Management on SME Profitability*, International Journal of Managerial Finance, Vol. 3, No. 2, pp. 164-177.
- Gentry, J. A., R. Vaidyanathan, Hei Wee Lee (1990). "A Weighted Cash Conversion Cycle", Financial Management, Spring 1990, pp 90-99.

- Gitman, L.J. (1974). "Estimating Corporate Liquidity Requirements: A Simplified Approach", *The Financial Review*, Vol. 9, pp. 79-88.
- Gitman, L.J. and Sachdeva K. S. (1982). A framework for estimating and analyzing the required working capital investment. *Review of Business and Economic Research* 17, no. 3 pp. 36-44.
- Hawawini, G., Viallet, C., and Vora, A. (1986). Industry influence on corporate working capital decisions. *Sloan Management Review*. 27(4), 15-24.
- Howorth, C. and Westhead, P. (2003). The Focus of Working Capital Management in UK Small Firms. *Management Accounting Research*, 14, 26-35.
- Jose M.L, Lancaste, C and Stevens, J.L. (1996). *Corporate returns and cash conversion cycles*. *Journal of Economics and Finance*, 9 Volume 20, Number I, Pages 33-46
- Kaiser, K. and Young, S.D. (2009). "Need Cash? Look Inside Your Company", *Harvard Business Review*, vol. 87, no. 5.
- Kamula W. (2011). *Relationship between Working Capital Management and Profitability of cement companies in Kenya, Unpublished MBA Project*, University of Nairobi.
- Karanja C. (2011). *The Effect of Budgetary Control Process in Nyeri County Saccos, Unpublished MBA Project*, University of Nairobi.
- Keown, A. J., Martin, J. D., Petty, J. W., and Scott, D. (2006). *Foundations of Finance*, 4ed: Pearson Education, New Jersey
- Keown, A.J. Martin, J.D. Petty, J.W. and Scott, D.E. (2005). *Financial Management: Principles and Applications* 10th Edition (p. 646). New Jersey: Pearson Prentice Hall.
- Kieschnick.R, LaPlante, M. and Moussawi.R. (2009). Working capital management, agency costs, and firm value.
- Kim, C. S., Mauer, D. C., and Sherman, A. E. (1998). *The determinants of corporate liquidity: theory and evidence*. *Journal of Financial and Quantitative Analysis*, 33(3), 335-359.
- Kim, Y. and Chung, K. (1990). *An Integrated Evaluation of Investment in Inventory and Credit: A Cash Flow Approach*. *Journal of Business Finance and Accounting* 17, 381- 390.
- Krueger, T. (2002). *An analysis of working capital management results across industries* *Mid-American Journal of Business* 20 (2): 11–8 Volume 7 Number 1 Spring 2009
- Lamberson, M. (1995). *Changes in working capital of small firms in relation to changes in economic activity*. *Mid-American Journal of Business* 10(2): 45-50.

- Larsson, C. G. and Hammarlund, L. F. (2005). Cash Management för företag. 9th ed. Studentlitteratur, Lund.
- Lazaridis, I., and Tryfonidis, D. (2006). *Relationship between working capital management and profitability of listed companies in the Athens stock exchange*. Journal of Financial Management and Analysis, 19(1), 26-35.
- Levy, H. and Sarnat, M. (1994). Capital Investment & Financial Decisions. 5th edition. Prentice Hall. 782 p.
- Makokha (2011). *Relationship between Magnitude of Investment and Performance among Deposit Taking Savings and Credit Co-operative societies in Kenya*, Unpublished MBA Project, University of Nairobi.
- Malombe (2011). *The Effects of Dividend Policy on Profitability of SACCOs with FOSAs in Kenya*, Unpublished MBA Project, University of Nairobi.
- Marshall, C and Rossman, G. (1999). Designing qualitative research. 3rd Ed., Thousand Oaks-CA: Sage, 2000.
- Mathuva, D. (2009). *The influence of working capital management components on corporate profitability: a survey on Kenyan listed firms*, Research Journal of Business Management, 3: 1-11.
- Matoha, D. (2007). *Research on Working Capital Management of Publishing Companies*, Unpublished Undergraduate, Research Work, University of Dar es salaam, Tanzania
- Michalski, G. (2008). *Value-based inventory management*, Romanian Journal of Economic Forecasting, vol. 9, no. 1, pp. 82-90.
- Miller, H. M. and Orr D. (1966). *A model of the Demand for Money by Firms Merton H. Miller and Daniel Or* The Quarterly Journal of Economics Vol. 30, No. 3, pp.413 – 435.
- Mott, G. (2005). Accounting for Non-Accountants. A manual for managers and students. 6th edition. London, Kogan Page. 344 p.
- Mugenda, O. and Mugenda, A. (1999). Research Methods: Quantitative and Qualitative Approaches. Act Press.
- Mwololo (2011). *The Relationship between Corporate Governance and Financial Performance of SACCOs with Front Office Services Activity in Nairobi*, Unpublished MBA Project, University of Nairobi.
- Myers, S.C. (1984). *The capital structure puzzle*” the Journal of Finance, Vol. 39 No.3, pp.575-92.

- Nazir, M and Afza, T. (2003). The focus of Working Capital Management in UK Small Firms, *Managerial Accounting Research*, Vol. 14, June.
- Nazir, M. A. and Afza, T. (2009). *Working Capital Requirements and the Determining Factors in Pakistan*, *Journal of Applied Finance*, Vol. 15, Issue 4, pp. 28-38.
- Neuman, W.L. (1997). *Social Research Methods: Qualitative and Quantitative Approaches*, 3rd ed., Allan and Bacon, Needham Heights, MA.
- Ng, C. K., Smith, J.K. and Smith, R.L. (1999). *Evidence on the determinants of credit terms used in Inter-firm trade*, *Journal of Finance*, 54, 1109-1129.
- Nwankwo, O. (2005). *Dimensions of Financial Management* (p. 451). Enugu: Jones Communication and Publishers.
- Okundi (2011). *Financial Challenges Facing Savings and Credit Co-operative Societies in Kenya: The Case of SACCOs in Nairobi*, *Unpublished MBA Project*, University of Nairobi.
- Ongore V.O. (2001). *Managerial Response to the Deregulation of the Co-operative Sector: The Case of SACCOs in Nairobi*, *Unpublished MBA Project*, University of Nairobi.
- Ooi, J. (1999). *The determinants of capital structure: evidence on UK property companies*, *Journal of Property Investment and Finance*, Vol. 17 No.5, pp.464-78.
- Opiyo (2011). *The Relationship between Financial Performance and Corporate Governance: Evidence from Savings and Credit Co-operatives based in Nairobi*, *Unpublished MBA Project*, University of Nairobi.
- Oyoo M. (2002). *Evaluation of Financial Performance of Savings and Credit Co-operative Societies before and after Deregulations: The Case of SACCOs based in Nairobi*, *Unpublished MBA Project*, University of Nairobi.
- Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: An Analysis of Mauritian Small Manufacturing Firms. *International Review of Business Research Papers*. 2(2), 45 - 58.
- Park, C. and Gladson, J.W. (1963). *Working Capital*. Macmillan, New York.
- Petersen, M. and R. Rajan, R. (1997). "Trade credit: theories and evidence." *Review of Financial Studies*, 10, 661-691.
- Planware (2010). *Business Planning Papers: Managing Working Capital*. [Cited 15.12.2010] [Available at: <http://www.planware.org/workingcapital.htm>]

- Raheman, A. and Nasr, M. (2007). Working Capital Management and Profitability: Case of Pakistani Firms. *International Review of Business Research Papers*, (3), 279-300.
- Rehman, A. (2006). "Working Capital Management and Profitability: Case of Pakistani Firms", Unpublished Dissertation, COMSATS Institute of Information Technology, Islamabad, Pakistan.
- Respini, L. (2000). The Corporation and the Triple Bottom Line. <http://www.dow.com/dow-news/speeches/10-18-00.htm>
- Sanger, J. S. (2001). "Working capital: A modern approach", *Financial Executive*, 69.
- Sartoris, W. and Hill, W. (1983). *A Generalized Cash Flow Approach to Short-Term Financial Decisions*, *Journal of Finance* 38, 349-360.
- Schiff, M. and Lieber, Z. (1974). *A Model for the Integration of Credit and Inventory Management*, *Journal of Finance* 29, 133-140.
- Shin, H.H. and Soenen, L. (1998). Efficiency of working capital management and corporate profitability. *Financial Practice and Education*, 8(2), 37-45.
- Siddarth, M. R. and Das, G. (1994). Working capital turnover in pharmaceutical companies. *The Management Accountant*, March:151-3.
- Smith, K. (1980). "Profitability versus liquidity tradeoffs in working capital management, in readings on the management of working capital", New York, St. Paul: West Publishing Company.
- Soenen, L. A. (1993). *Cash conversion cycle and corporate profitability*, *Journal of Cash Management*, 13 (4), 53-58.
- Teruel, P. J. G. and Solano, P. M. (2007). *Effects of working capital management on SME profitability*, *International Journal of Managerial Finance*, (3), 164-177.
- Titman, S., Wessels, R. (2008). *The determinants of capital structure choice*, *Journal of Finance*, Vol. 43 No.1, pp.1-19.
- Tong, S., Ning, Y. (2004). *Does capital structure affect institutional investor choices?* *The Journal of Investing*, Vol. 28 pp. 53-66.
- Van Horne, J. C. (1980). *Financial Management and Policy*. Englewood Cliffs: Prentice Hall International.
- Van Horne, J. C. and Wachowicz, J. M. (2009). "Fundamentals of Financial Management", (13 ed.). Essex, Pearson Education Limited.

Wang, W. (2002). *Liquidity management, operating CFO Magazine's, Working Capital Survey*”, Performance and Corporate Value: evidence from Do Selected Firms Work for Shareholders? Japan and Taiwan” Journal of Multinational Copyright, University of Nebraska-Lincoln. Financial Management, 12: 159-169.

Weinraub, H. and Visscher, S. (1998). *Industry practice related to aggressive/conservative working capital policies*, Journal of Financial and Strategic Decisions 11(2), 39-46.

Weston, J. F. and Brigham, E. F. (2005). *Intermediate Financial Management* (2nd ed), The Dryden Press.

Whited, T.M. (1992). *Debt, liquidity constraints, and corporate investment: evidence from panel data*, Journal of Finance, Vol. 47, pp. 1425-60.

<http://www.cooperative.go.ke>

<http://www.sasra.go.ke>

<http://www.woccu.com>

APPENDIX I: DATA COLLECTION SHEET

This data collection sheet has been designed to collect information from SASRA and/or the Heads of the Finance function in various deposit taking SACCOs licensed by SASRA in Nairobi County and is meant for academic purposes only. Please complete the data sheet as instructed. Do not write your name or any other form of identification on the questionnaire. All the information in this data sheet will be treated in confidence.

RELATIONSHIP BETWEEN WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF DEPOSIT TAKING SACCOs LICENSED BY SASRA IN NAIROBI COUNTY

Please provide information that will assist in completion of the tables below:

Table 1: Working Capital of SACCOs over the last Four (4) Years

| Year/Working Capital Variable | 2008 | 2009 | 2010 | 2011 |
|-------------------------------|------|------|------|------|
| Accounts Receivables (A) | | | | |
| Accounts Payables (B) | | | | |
| Current Assets | | | | |
| Current Liabilities | | | | |

Table 2: Financial Performance of SACCOs over the last Four (4) Years

| Year/Performance measure | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|------|------|------|------|
| Total Revenue | | | | |
| Total Assets | | | | |
| Net Income | | | | |
| Total Debt | | | | |
| Members Deposits | | | | |
| Loans to Members | | | | |
| Interest on Members Deposits | | | | |
| Interest rate on Members Deposits | | | | |
| Dividend Amount | | | | |
| Dividend Rate | | | | |

**APPENDIX II: LIST OF DEPOSIT TAKING SACCOs LICENSED BY SASRA IN
NAIROBI COUNTY**

| <i>NO.</i> | <i>NAME OF SOCIETY</i> | <i>POSTAL ADDRESS</i> | <i>DATE LICENSED</i> |
|-------------------|---|-----------------------------------|-----------------------------|
| 1. | STIMA SACCO SOCIETY LTD | P.O. Box 75629 – 00100 NAIROBI | 19/12/2011 |
| 2. | U.N. SACCO SOCIETY LTD | P.O. Box 30552 -00100 NAIROBI | 19/12/2011 |
| 3. | CHAI SACCO SOCIETY LTD | P.O. Box 278 – 00200 NAIROBI | 19/12/2011 |
| 4. | NACICO SACCO SOCIETY LTD | P.O. Box 34525 – 00100 NAIROBI | 19/12/2011 |
| 5. | MWITO SACCO SOCIETY LTD | P.O. Box 56763 – 00200 NAIROBI | 19/12/2011 |
| 6. | COMOCO SACCO SOCIETY LTD | P.O. Box 30135- 00100 NAIROBI | 19/12/2011 |
| 7. | MWALIMU NATIONAL SACCO SOCIETY LTD | P.O. Box 62641- 00200 NAIROBI | 19/12/2011 |
| 8. | WANANDEGE SACCO SOCIETY LTD | P.O. Box 19074 – 00501 NAIROBI | 19/12/2011 |
| 9. | KENYA POLICE STAFF SACCO SOCIETY LTD | P.O. Box 51042 – 00200 NAIROBI | 19/12/2011 |
| 10. | NATION STAFF SACCO SOCIETY LTD | P.O. Box 22022 – 00400 NAIROBI | 19/12/2011 |
| 11. | ORTHODOX DEVELOPMENT SACCO SOCIETY LTD | P.O. Box 43582 – 00100 NAIROBI | 19/12/2011 |
| 12. | KINGDOM SACCO SOCIETY LTD | P.O. Box 8017 – 00300 NAIROBI | 19/12/2011 |
| 13. | AFYA SACCO SOCIETY LTD | P.O. Box 11607 –00400 NAIROBI | 19/12/2011 |
| 14. | HARAMBEE SACCO SOCIETY LTD | P.O. Box 47815 – 00100 NAIROBI | 19/12/2011 |
| 15. | JAMII SACCO SOCIETY LTD | P.O. Box 57929 – 00200 NAIROBI | 19/12/2011 |
| 16. | SHERIA SACCO SOCIETY LTD | P.O. Box 34390 – 00100 NAIROBI | 19/12/2011 |
| 17. | ASILI SACCO SOCIETY LTD | P.O. Box 49064 00100 NAIROBI | 19/12/2011 |
| 18. | SAFARICOM SACCO SOCIETY LTD | P.O. Box 66827 – 00800 NAIROBI | 19/12/2011 |
| 19. | KENPIPE SACCO SOCIETY LTD | P.O. Box 314 – 00507 NAIROBI | 19/12/2011 |

| | | | |
|-----|---------------------------------|-----------------------------------|------------|
| 20. | AIRPORTS SACCO SOCIETY LTD | P.O. BOX 19001-00501 NAIROBI | 19/12/2011 |
| 21. | CHUNA SACCO SOCIETY LTD | P.O BOX 30197-00100 NAIROBI | 19/12/2011 |
| 22. | UKULIMA SACCO SOCIETY LTD | P.O BOX 44071-00100 NAIROBI | 19/12/2011 |
| 23. | WANA-ANGA SACCO SOCIETY LTD | P.O BOX 34680-00100 NAIROBI | 19/12/2011 |
| 24. | NAKU SACCO SOCIETY LTD | P.O BOX 78355-00507 NAIROBI | 19/12/2011 |
| 25. | WAUMINI SACCO SOCIETY LTD | P.O BOX 66121-00800 NAIROBI | 19/12/2011 |
| 26. | HAZINA SACCO SOCIETY LTD | P.O. BOX 59877 – 00200 NAIROBI | 16/3/2012 |
| 27. | KENYA BANKERS SACCO SOCIETY LTD | P.O. BOX 73236 – 00200 NAIROBI | 16/3/2012 |
| 28. | NASSEFU SACCO SOCIETY LTD | P.O.BOX 43338 – 00100 NAIROBI | 15/06/2012 |
| 29. | FUNDILIMA SACCO SOCIETY LTD | P.O.BOX 62000 – 00200 NAIROBI | 15/06/2012 |
| 30. | MAISHA BORA SACCO SOCIETY LTD | P.O.BOX 30062 – 00100 NAIROBI | 15/06/2012 |
| 31. | NAFAKA SACCO SOCIETY LTD | P.O.BOX 30586 – 00100 NAIROBI | 15/06/2012 |
| 32. | KENVERSITY SACCO SOCIETY LTD | P.O.BOX 10263 – 00100 NAIROBI | 15/06/2012 |
| 33 | MAGEREZA SACCO SOCIETY LTD | P.O.BOX 53131 – 00200 NAIROBI | 15/06/2012 |

Source: SASRA, October 2012

**APPENDIX III: DATA COLLECTED FROM DEPOSIT TAKING SACCOS LICENSED
BY SASRA IN NAIROBI COUNTY**

1. COMOCO SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|-------------|-------------|
| Working Capital | | | | |
| Account Receivables | 51,105,465 | 86,730,359 | 72,506,429 | 61,385,887 |
| Account Payables | 27,014,928 | 45,785,842 | 49,635,823 | 52,068,808 |
| Current Assets | 368,993,079 | 455,053,382 | 494,310,446 | 514,143,222 |
| Current Liabilities | 136,932,363 | 188,714,781 | 212,848,578 | 131,829,026 |
| Financial Performance | | | | |
| Total Revenue | 41,581,191 | 47,143,504 | 47,668,475 | 75,293,968 |
| Total Assets | 246,609,728 | 461,862,525 | 524,943,721 | 520,221,821 |
| Net Surplus | 4,379,780 | 2,814,673 | 2,152,039 | 3,635,723 |
| Total Debt | 20,927,912 | 45,785,842 | 49,635,823 | 52,068,808 |
| Members Deposits | 220,430,148 | 251,937,428 | 289,386,618 | 310,091,276 |
| Loans to members | 303,963,798 | 366,699,915 | 397,874,930 | 405,440,379 |
| Interest on members deposits | 23,873,162 | 27,675,656 | 26,329,075 | 31,664,210 |
| Interest rate on members deposits | 10% | 10% | 8% | 8.5% |
| Dividend amount | 1,030,147 | 550,368 | 564,050 | 650,286 |
| Dividend rate | 22.9% | 10% | 10% | 10% |

2. CHUNA SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|---------------|---------------|---------------|---------------|
| Working Capital | | | | |
| Account Receivables | 84,280,988 | 65,813,404 | 55,396,134 | 19,130,615 |
| Account Payables | 43,769,779 | 53,289,135 | 61,645,380 | 59,192,403 |
| Current Assets | 148,968,226 | 126,436,591 | 107,578,909 | 73,109,471 |
| Current Liabilities | 44,866,202 | 54,302,326 | 64,348,165 | 64,640,659 |
| Financial Performance | | | | |
| Total Revenue | 97,149,118 | 109,160,007 | 121,383,124 | 149,946,639 |
| Total Assets | 1,210,216,169 | 1,286,670,842 | 1,378,438,636 | 1,536,791,658 |
| Net Surplus | 2,643,577 | 3,167,136 | 4,664,074 | 4,125,424 |
| Total Debt | 280,596,778 | 242,809,479 | 196,386,701 | 210,952,892 |
| Members Deposits | 818,092,851 | 920,006,420 | 1,098,782,477 | 1,234,599,736 |
| Loans to members | 748,302,559 | 1,006,744,743 | 1,248,301,101 | 1,438,049,461 |
| Interest on members deposits | 50,721,757 | 52,303,345 | 59,150,000 | 54,379,078 |
| Interest rate on members deposits | 6.2% | 5.7% | 5.7% | 4.6% |
| Dividend amount | 770,600 | 742,200 | 766,800 | 918,400 |

Dividend rate 10.0% 10% 10% 10%

3. MWALIMU NATIONAL SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|----------------|----------------|----------------|----------------|
| Working Capital | | | | |
| Account Receivables | 51,105,465 | 86,730,359 | 72,506,429 | 61,385,887 |
| Account Payables | 27,014,928 | 45,785,842 | 49,635,823 | 52,068,808 |
| Current Assets | 2,937,114,789 | 2,593,050,560 | 2,040,551,295 | 2,687,256,104 |
| Current Liabilities | 2,139,368,404 | 2,376,127,152 | 1,417,829,288 | 1,868,035,611 |
| Financial Performance | | | | |
| Total Revenue | 1,337,129,313 | 1,598,469,457 | 2,290,717,472 | 2,454,366,778 |
| Total Assets | 12,409,800,430 | 14,933,305,280 | 17,119,571,954 | 19,305,419,928 |
| Net Surplus | 136,593,596 | 252,354,675 | 687,779,100 | 458,906,390 |
| Total Debt | 0 | 983,333,333 | 783,333,333 | 583,333,333 |
| Members Deposits | 9,786,708,199 | 10,861,999,542 | 12,210,493,709 | 13,566,751,569 |
| Loans to members | 9,267,279,571 | 12,126,102,315 | 13,771,637,278 | 14,846,920,766 |
| Interest on members deposits | 851,489,288 | 966,717,959 | 1,072,441,749 | 1,355,545,340 |
| Interest rate on members deposits | 8.7% | 8.9% | 9.3% | 10.0% |
| Dividend amount | 3,424,350 | 3,541,050 | 4,418,806 | 5,924,688 |
| Dividend rate | 15.0% | 15% | 11% | 11% |

4. WAUMINI SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|---------------|---------------|
| Working Capital | | | | |
| Account Receivables | 11,598,360 | 14,966,003 | 14,285,937 | 25,489,796 |
| Account Payables | 28,139,919 | 4,675,268 | 9,218,367 | 15,531,815 |
| Current Assets | 327,516,495 | 384,511,804 | 188,389,600 | 265,215,387 |
| Current Liabilities | 129,589,864 | 105,465,472 | 122,476,718 | 144,142,606 |
| Financial Performance | | | | |
| Total Revenue | 78,268,696 | 89,134,615 | 105,435,113 | 123,101,204 |
| Total Assets | 790,917,171 | 934,282,905 | 1,149,361,057 | 1,372,655,346 |
| Net Surplus | 3,643,755 | 2,572,405 | 5,337,633 | 19,520,702 |
| Total Debt | 0 | 0 | 4,445,851 | 12,974,620 |
| Members Deposits | 638,870,548 | 776,834,090 | 875,219,003 | 1,186,155,336 |
| Loans to members | 672,070,745 | 805,872,590 | 954,632,449 | 1,103,004,043 |
| Interest on members deposits | 46,600,000 | 58,699,600 | 68,475,454 | 70,099,768 |
| Interest rate on members deposits | 8.0% | 8.2% | 8.5% | 7.5% |
| Dividend amount | 1,945,334 | 962,179 | 5,264,791 | 4,694,738 |
| Dividend rate | 10.0% | 10.0% | 10.3% | 8.5% |

5. WANA ANGA SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|-------------|-------------|
| Working Capital | | | | |
| Account Receivables | 131,339,633 | 14,120,780 | 7,597,910 | 19,010,180 |
| Account Payables | 26,126,172 | 5,321,995 | 3,969,347 | 4,791,802 |
| Current Assets | 153,034,592 | 195,792,513 | 252,447,599 | 156,498,856 |
| Current Liabilities | 30,014,255 | 34,329,442 | 40,158,376 | 45,209,553 |
| Financial Performance | | | | |
| Total Revenue | 62,813,733 | 87,069,526 | 99,354,713 | 127,980,763 |
| Total Assets | 417,181,103 | 503,323,859 | 603,811,524 | 812,605,415 |
| Net Surplus | 1,786,448 | 1,430,948 | 4,014,368 | 5,797,799 |
| Total Debt | 3,888,083 | 0 | 0 | 0 |
| Members Deposits | 184,041,069 | 219,689,430 | 270,638,002 | 324,543,751 |
| Loans to members | 385,593,313 | 451,056,453 | 516,858,534 | 647,564,618 |
| Interest on members deposits | 23,005,134 | 28,120,247 | 34,641,664 | 37,322,531 |
| Interest rate on members deposits | 12.8% | 12.8% | 12.8% | 11.5% |
| Dividend amount | 702,400 | 887,200 | 1,492,500 | 3,095,220 |
| Dividend rate | 20.0% | 20% | 25% | 15% |

6. STIMA SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|---------------|---------------|---------------|---------------|
| Working Capital | | | | |
| Account Receivables | 70,858,706 | 74,348,571 | 79,424,957 | 113,263,481 |
| Account Payables | 66,857,774 | 50,466,646 | 53,442,210 | 54,461,203 |
| Current Assets | 727,300,346 | 523,354,911 | 532,121,785 | 989,564,664 |
| Current Liabilities | 218,712,196 | 51,431,577 | 59,243,489 | 55,420,134 |
| Financial Performance | | | | |
| Total Revenue | 513,068,905 | 637,049,242 | 812,020,744 | 1,013,191,790 |
| Total Assets | 4,598,911,903 | 5,124,312,279 | 6,283,238,958 | 7,632,596,170 |
| Net Surplus | 66,141,259 | 108,829,130 | 123,762,370 | 183,016,667 |
| Total Debt | 418,750,000 | 463,750,000 | 465,000,000 | 668,666,673 |
| Members Deposits | 3,485,213,536 | 3,839,823,466 | 4,677,351,408 | 5,481,844,282 |
| Loans to members | 2,878,615,743 | 4,381,058,949 | 5,395,843,087 | 6,292,002,888 |
| Interest on members deposits | 276,621,825 | 322,691,677 | 379,297,850 | 451,862,303 |
| Interest rate on members deposits | 10.7% | 10.8% | 11.0% | 11.0% |
| Dividend amount | 1,107,500 | 950,398 | 1,040,760 | 24,147,623 |
| Dividend rate | 10.7% | 11% | 11% | 12% |

7. NACICO SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|---------------|---------------|---------------|---------------|
| Working Capital | | | | |
| Account Receivables | 224,306,924 | 239,918,573 | 217,236,479 | 115,659,788 |
| Account Payables | 172,186,784 | 167,327,868 | 118,802,042 | 57,946,428 |
| Current Assets | 976,700,784 | 1,027,081,601 | 1,133,581,033 | 1,762,418,526 |
| Current Liabilities | 172,606,163 | 167,327,868 | 1,022,950,755 | 938,748,229 |
| Financial Performance | | | | |
| Total Revenue | 158,527,507 | 169,829,672 | 181,906,040 | 235,531,409 |
| Total Assets | 1,543,555,345 | 1,603,701,767 | 1,698,457,876 | 2,343,434,525 |
| Net Surplus | 28,543,391 | 34,138,232 | 48,051,131 | 27,111,888 |
| Total Debt | 216,657,955 | 270,090,166 | 230,869,760 | 815,412,515 |
| Members Deposits | 720,325,315 | 721,815,426 | 904,148,713 | 880,583,493 |
| Loans to members | 590,649,444 | 542,909,762 | 685,472,366 | 1,374,105,251 |
| Interest on members deposits | 0 | 0 | 1,683,960 | 45,000,000 |
| Interest rate on members deposits | 0.0% | 0.0% | 3.6% | 5.0% |
| Dividend amount | 21,000,000 | 26,000,000 | 35,000,000 | 8,800,000 |
| Dividend rate | 3.6% | 3% | 4% | 5% |

8. NASSEFU SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|-------------|-------------|
| Working Capital | | | | |
| Account Receivables | 32,587,493 | 27,736,666 | 30,434,917 | 83,659,801 |
| Account Payables | 12,233,441 | 18,602,567 | 38,941,103 | 27,721,299 |
| Current Assets | 239,625,779 | 241,120,414 | 269,903,965 | 399,771,143 |
| Current Liabilities | 72,833,735 | 81,855,808 | 67,096,864 | 47,585,971 |
| Financial Performance | | | | |
| Total Revenue | 83,664,377 | 98,484,110 | 111,704,983 | 127,883,629 |
| Total Assets | 680,692,600 | 713,248,330 | 780,005,352 | 914,648,089 |
| Net Surplus | 4,263,802 | 4,287,575 | 7,836,032 | 14,286,240 |
| Total Debt | 178,681,543 | 149,934,781 | 148,125,284 | 232,838,700 |
| Members Deposits | 387,853,750 | 435,250,516 | 485,073,490 | 526,224,070 |
| Loans to members | 415,170,332 | 445,618,591 | 480,282,072 | 673,350,432 |
| Interest on members deposits | 31,707,684 | 33,467,536 | 35,622,212 | 23,454,439 |
| Interest rate on members deposits | 8.0% | 7.0% | 7.5% | 5.0% |
| Dividend amount | 451,220 | 456,368 | 3,067,670 | 3,419,943 |
| Dividend rate | 11.0% | 10% | 10% | 7% |

9. NATION STAFF SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|-------------|-------------|
| Working Capital | | | | |
| Account Receivables | 30,881,943 | 49,348,871 | 56,964,051 | 42,552,435 |
| Account Payables | 17,992,251 | 23,671,326 | 23,649,473 | 8,631,443 |
| Current Assets | 466,497,664 | 494,448,704 | 125,899,701 | 113,579,715 |
| Current Liabilities | 459,482,683 | 488,806,844 | 77,015,067 | 67,035,448 |
| Financial Performance | | | | |
| Total Revenue | 54,644,213 | 62,845,736 | 67,028,719 | 77,502,180 |
| Total Assets | 468,119,226 | 499,265,109 | 617,013,917 | 677,144,172 |
| Net Surplus | 4,815,886 | 3,593,926 | 3,779,331 | 7,026,713 |
| Total Debt | 0 | 0 | 0 | 0 |
| Members Deposits | 378,487,368 | 402,693,555 | 500,200,794 | 574,229,617 |
| Loans to members | 409,889,840 | 415,542,942 | 556,474,023 | 483,138,213 |
| Interest on members deposits | 43,000,000 | 46,000,000 | 45,000,000 | 47,500,000 |
| Interest rate on members deposits | 11.4% | 11.4% | 10.0% | 10.0% |
| Dividend amount | 0 | 0 | 1,000,000 | 2,219,078 |
| Dividend rate | 0.0% | 0% | 11% | 17% |

10. KENYA POLICE STAFF SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|---------------|---------------|---------------|---------------|
| Working Capital | | | | |
| Account Receivables | 329,419,278 | 530,512,489 | 474,155,198 | 972,171,951 |
| Account Payables | 103,376,684 | 486,049,288 | 392,362,251 | 539,665,355 |
| Current Assets | 4,035,016,790 | 4,917,859,714 | 6,089,760,261 | 1,471,009,445 |
| Current Liabilities | 728,824,196 | 4,862,935,615 | 5,998,825,643 | 1,061,658,481 |
| Financial Performance | | | | |
| Total Revenue | 422,329,184 | 533,895,222 | 728,761,891 | 936,811,976 |
| Total Assets | 4,316,847,345 | 5,185,138,403 | 6,427,563,418 | 7,722,609,795 |
| Net Surplus | 30,054,491 | 31,869,918 | 94,815,445 | 178,968,412 |
| Total Debt | 125,000,000 | 41,666,666 | 177,777,778 | 193,055,562 |
| Members Deposits | 3,306,060,263 | 4,024,755,565 | 4,880,430,866 | 5,967,332,758 |
| Loans to members | 3,315,422,655 | 3,832,775,670 | 4,909,841,529 | 5,951,214,070 |
| Interest on members deposits | 280,000,000 | 352,000,000 | 440,000,000 | 490,000,000 |
| Interest rate on members deposits | 8.5% | 8.8% | 9.0% | 9.1% |
| Dividend amount | 8,800,000 | 10,000,000 | 12,000,000 | 16,500,000 |
| Dividend rate | 11.9% | 12.6% | 15.1% | 16% |

11. FUNDILIMA SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|-------------|-------------|
| Working Capital | | | | |
| Account Receivables | 17,226,773 | 18,468,438 | 20,552,947 | 22,018,016 |
| Account Payables | 17,425,372 | 21,430,309 | 13,810,127 | 6,942,394 |
| Current Assets | 360,207,513 | 345,703,112 | 66,079,122 | 67,571,877 |
| Current Liabilities | 72,207,492 | 52,875,157 | 45,019,389 | 58,571,511 |
| Financial Performance | | | | |
| Total Revenue | 37,416,813 | 40,750,682 | 42,729,989 | 41,843,204 |
| Total Assets | 373,987,727 | 362,255,399 | 392,214,208 | 482,246,648 |
| Net Surplus | 2,109,292 | 1,661,579 | 1,611,338 | 6,466,626 |
| Total Debt | 88,354,230 | 58,750,000 | 43,750,000 | 74,583,332 |
| Members Deposits | 235,900,881 | 254,103,008 | 286,286,526 | 326,550,180 |
| Loans to members | 307,112,295 | 292,750,150 | 322,365,474 | 403,091,334 |
| Interest on members deposits | 23,594,088 | 21,000,000 | 24,922,792 | 23,235,101 |
| Interest rate on members deposits | 10.0% | 8.3% | 8.6% | 7.0% |
| Dividend amount | 978,600 | 1,050,000 | 1,810,386 | 726,120 |
| Dividend rate | 29.9% | 32.2% | 26.3% | 7.5% |

12. KENVERSITY SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|-------------|-------------|
| Working Capital | | | | |
| Account Receivables | 27,867,191 | 43,408,358 | 48,180,785 | 9,845,091 |
| Account Payables | 789,659 | 5,098,842 | 1,388,977 | 1,605,227 |
| Current Assets | 150,312,661 | 157,465,334 | 200,846,968 | 182,999,391 |
| Current Liabilities | 66,723,213 | 110,194,532 | 111,512,286 | 145,173,325 |
| Financial Performance | | | | |
| Total Revenue | 61,473,560 | 82,269,167 | 92,854,983 | 113,119,557 |
| Total Assets | 544,465,940 | 674,650,277 | 734,792,659 | 848,130,626 |
| Net Surplus | 1,262,751 | 2,990,393 | 1,174,956 | 20,545,960 |
| Total Debt | 20,111,080 | 70,541,666 | 48,117,149 | 34,033,815 |
| Members Deposits | 470,833,231 | 534,180,360 | 549,504,422 | 624,149,445 |
| Loans to members | 441,051,648 | 573,300,914 | 602,784,334 | 752,983,082 |
| Interest on members deposits | 35,871,803 | 47,004,258 | 52,256,389 | 54,925,151 |
| Interest rate on members deposits | 8.1% | 9.8% | 9.5% | 8.8% |
| Dividend amount | 207,000 | 313,200 | 338,400 | 345,300 |
| Dividend rate | 10.0% | 10% | 10% | 10% |

13. JAMII SACCO

| | 2008 | 2009 | 2010 | 2011 |
|-----------------------------------|-------------|-------------|---------------|---------------|
| Working Capital | | | | |
| Account Receivables | 49,762,888 | 56,101,739 | 63,305,689 | 69,573,279 |
| Account Payables | 53,509,576 | 56,490,674 | 56,406,661 | 25,820,770 |
| Current Assets | 63,330,411 | 86,593,078 | 126,431,919 | 112,153,423 |
| Current Liabilities | 89,478,990 | 58,761,173 | 76,315,942 | 100,714,402 |
| Financial Performance | | | | |
| Total Revenue | 84,408,914 | 95,731,715 | 117,579,174 | 154,420,722 |
| Total Assets | 801,102,531 | 937,943,359 | 1,079,349,412 | 1,260,339,955 |
| Net Surplus | 2,971,239 | 3,378,827 | 6,114,400 | 22,790,146 |
| Total Debt | 63,452,690 | 70,480,996 | 78,290,145 | 66,528,664 |
| Members Deposits | 492,519,078 | 554,532,445 | 628,915,104 | 920,102,973 |
| Loans to members | 681,913,413 | 797,206,539 | 870,477,551 | 1,065,769,946 |
| Interest on members deposits | 34,906,581 | 42,781,329 | 50,334,295 | 74,603,470 |
| Interest rate on members deposits | 6.5% | 7.0% | 8.0% | 8.5% |
| Dividend amount | 937,175 | 1,565,021 | 2,576,901 | 4,258,611 |
| Dividend rate | 10.0% | 10% | 10% | 10% |

Source: SASRA, October 2012

APPENDIX IV: INTRODUCTORY LETTER TO COLLECT DATA

**UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAMME**

P.O. Box 30197
Nairobi, Kenya

Date:.....

TO WHOM IT MAY CONCERN

The bearer of this letter

Registration No.....

Is a bona fide continuing student in the Master of Business Administration (MBA) degree programme in this University.

He/She is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her to collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you

MBA ADMINISTRATOR
MBA OFFICE, AMBANK HOUSE