THE EFFECT OF WORKING CAPITAL MANAGEMENT POLICY ON
PROFITABILITY OF FIRMS LISTED AT THE NAIROBI SECURITIES
EXCHANGE

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DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university.

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14/11/2012
DEDICATION

This research paper is dedicated to my family who support me in everything with their love and inspiration, to my friends who helped me finish the project and gave me the drive and discipline to tackle any task with enthusiasm and determination. And most of all, to the Almighty God who gives me strength and good health while doing this.
ACKNOWLEDGEMENTS

I would like to acknowledge and extend my heartfelt gratitude to my supervisors, Herick Ondigo and Duncan Elly, who made the completion of this project possible. The constant reminders and much needed motivation, encouragement, assistance and support renewed my strength at every single stage of this study.

Most especially to my family and friends who gave me the drive as I had to balance between the demands of a rigorous academic program and an equally demanding work environment and to God who made all things possible.
ABSTRACT

Working Capital Management policy has its effect on liquidity as well as on profitability of the firm. To achieve this objective, the study used secondary data obtained from the annual reports and financial statements of selected sample of 32 Kenyan firms listed on Nairobi Securities Exchange for a period of 5 years from 2007 – 2011, was studied the effect of different variables of working capital management policy including the aggressiveness or conservativeness of the policy on the return on assets. The size of the firm as well as the leverage has been used as control variables. Pearson’s correlation and regression analysis (general least square with cross section weight models) are used for analysis. The results show that there is a strong negative relationship between variables of the working capital management and profitability of the firm apart from the aggressiveness of the policy adopted. It was found out that that there is a significant negative relationship between working capital policy adopted and profitability.

The results indicate that the model examined in this study is significant with an adjusted $R^2$ of 57.8% and also that all the independent variables had a significant relationship individually with the ROA. The study concluded that working capital management policy affects profitability of the company and if the firm can effectively manage its working capital, it can lead to increasing profitability. Therefore, it will be important for a firm’s management to understand the relationship that exists between various working capital components and profitability and the direction that they affect the profit for effective management of the working capital. To the government and regulatory bodies, it is important to develop appropriate guidelines that will
suggest the appropriate level of working capital that need to be held by a firm and even consider
giving incentives in form of tax rebates those firms maintain an optimal working capital policy
that leads to improved profits. To the academia, there is need to research on the appropriate
working capital policy that will be suitable for particular sector industries.
<table>
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<th>Abbreviation</th>
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<tr>
<td>AIMS</td>
<td>Alternative Investment Market Segment</td>
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<td>CDS</td>
<td>Central Depository System</td>
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<td>CMA</td>
<td>Capital Market Authority</td>
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<td>IFC</td>
<td>International Finance Corporation</td>
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<td>MIMS</td>
<td>Main Investment Segment Market</td>
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<td>NSE</td>
<td>Nairobi Securities Exchange</td>
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<td>SME</td>
<td>Small and Medium Enterprises</td>
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<td>ROA</td>
<td>Return on Asset</td>
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<td>ROI</td>
<td>Return on Investment</td>
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<tr>
<td>TCA</td>
<td>Total Current Assets</td>
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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Working capital management deals with the management of current assets and current liabilities. As a finance function, the management of working capital is considered an important component of the management function since it directly affects the liquidity and profitability of the company. The importance of a proper management of working capital stems from the fact that majority of firms, especially, manufacturing, have their current assets accounting to over half of the total assets and the proportion could even be higher for a distribution company (Horne and Wachowicz, 2000).

Excessive levels of current assets can easily result in a firm realizing a substandard return on investment and at the same time, too few current assets may incur shortages and difficulties in maintaining smooth operations of a firm. Thus, efficient management of working capital becomes an important function of a finance manager just like the financing, investment and dividend policy function. Further, Joshi (1994) observed that, the management of working capital has turned to be a very sensitive area in the field of financial management because it involves the decision of the amount and composition of current assets and the financing of these assets. The level of working capital in a firm in part affects its profitability and therefore it becomes imperative that an organization should endeavor to maintain an optimal level at any given time.
The efficient management of working capital is important from the point of view of a firm's profitability. Poor management of liquidity level means that funds are unnecessarily tied up in idle assets hence reducing liquidity and also reducing the ability to invest in productive assets of a firm and thus affecting the firm's profits. Deloof (2003) argues that whilst providing credit to customers is an inexpensive source of finance for customers, the flip side is that money is locked up in working capital. He further points out that whilst delaying payment to suppliers can be inexpensive and flexible source of financing for firms, late payment of invoices can be very costly. Therefore, the efficient management of these components is essential. A number of models have been advanced to determine the optimal cash level in a firm.

1.1.1 Working Capital Management Policy

A day-to-day management of a firm's short term assets and liabilities plays an important role in the success of the firm. Firms with glowing long term prospects and healthy bottom lines do not remain solvent without good liquidity management. For small market players the importance of liquidity as been described as being "a matter of life or death for the small business" since a small business can "survive for a long time without a profit, but fails the day it can't meet a critical payment" (Drever and Hartcher, 2003). Further, Deloof (2003) posits that the efficient management of working capital (inventory, debtors and creditors) is crucial in respect of the prosperity and survival of SMEs, and the soundness of liquidity management influences survival and financial well-being in enterprises.

Liquidity management takes the form of cash management and credit management. Whilst the most important aspect of cash flow management is avoiding extended cash shortages, credit
management involves not only the giving and receiving of credit to customers and suppliers, but also involves the assessment of individual customers, the credit periods allowed and the steps taken to ensure that payments are made in time (Poutziouris et al., 1999). Indeed, efficient management of working capital is a fundamental part of the overall corporate strategy in creating the shareholders' value.

A useful way of assessing the liquidity of firms is with the cash conversion cycle (CCC) (Moss and Stine, 1993). The cash conversion cycle measures the time lag between cash payments for purchase of inventories and collection of receivables from customers. The traditional measures of liquidity such as the current ratio and quick ratio are useful liquidity indicators of firms though they focus on static balance sheet values. On the other hand, the CCC is a dynamic measure of ongoing liquidity management, since it combines both balance sheet and income statement data to create a measure with a time dimension (Jose et al., 1996). While analysis of an individual firm's CCC is helpful, industry benchmarks are crucial as well for a company to evaluate its CCC performance and assess opportunities for improvement (Hutchison et al., 2007).

1.1.2 Firms Profitability

The maximization of the shareholder wealth still remains the ultimate objective of any firm. However, in order to achieve this objective, a firm should also maximize its profits. Preserving the liquidity of a firm is equally an important objective and as such a firm should balance among the different interest objectives (Hutchison et al., 2007). Increasing profits at the cost of liquidity can bring serious problems to the firm and a tradeoff between these two objectives of the firms needs to be struck. One objective should not be at the cost of the other because both have their importance. If a firm does not care about profit, it will not survive for longer period. On the other
hand, if it does not care about liquidity, it may face the problem of insolvency or bankruptcy. For these reasons liquidity management should be given proper consideration and will ultimately affect the profitability of the firm. On the other hand, focusing entirely on liquidity will tend to reduce the potential profitability of the firm. A firm can have a large sale level through adopting a generous credit policy and thus extending the cash cycle, though, the action may increase the level of profitability.

However, the traditional view of the relationship between a firms liquidity level is such that, all other factors remaining constant, the longer cash conversion cycle hurts the profitability of the firm (Deloof, 2003). This therefore requires that the level of working capital that a firm maintains need to be kept at an optimum point that will maximize the profits.

1.1.3 Relationship between Working Capital Management Policy and Profitability

The profitability of a firm is influenced by the level of working capital i.e current assets and current liabilities that a firm maintains. This is because a firm needs currents assets such as stock to make sales to clients and also from the same sales receivable arise which have to be kept an optimal level. The level of current assets and current liabilities influences the level of funds tied down in the working capital and it is from the maintenance of this level that a firm’s profits will be affected. A firm returns i.e. return on assets indicates that firms adopting an aggressive approach towards working capital financing policy give more value to the firms while inverse relationship between the aggressiveness of working capital investment policies on firms performance exist. According to Irene and Lee (2007) the prevailing working capital management practices show a correlation between profitability and the level of working capital
of the sample firms and show that profitability and working capital are linearly related positively to a certain extent.

A firm’s optimal level of current assets is reached when the optimal level of cash, inventory, and accounts receivables is achieved. But lenders prefer a company having a large excess of current assets over current liabilities whereas the owners prefer a high return. Current assets have the advantage of being liquid but holding them is not very profitable, for example inventory earns no return until it’s sold. Noncurrent assets can be profitable but usually not very liquid. Managers can create profits for their companies by handling correctly the cash conversion and keeping each different component at an optimum level. There should be just enough cash to conduct day to day business while investing extra amounts in short term marketable securities. They should also seek an inventory level that reduces lost sales due to lack of inventory, while at the same time holding down bad debt and collection experienced through sound credit policies, Afza and Nazir (2007).

1.1.4 Nairobi Securities Exchange

The origin of Nairobi Security Exchange (NSE) can be traced back to 1954, when it was constituted as a voluntary association of stockbrokers registered under the Societies Act. The NSE was established to meet a number of objectives among them: to provide an alternative method of raising capital to small, medium sized and young companies that find it difficult to meet the more stringent listing requirements of the Main Investment Segment Market (MIMS), facilitate the liquidity of companies with a large shareholder base through ‘introduction’, that is, listing of existing shares for marketability and not for raising capital and also offer investment
opportunities to institutional investors and individuals who want to diversify their portfolios and to have access to sectors of the economy that are experiencing growth.

A number of major steps can be identified to have been undertaken by the institution to modernize its operations to measure to other developed stock exchanges in Africa and the Europe. In 1966, the Nairobi Security Exchange began measuring daily trading activity by computing the NSE Index. The index measured daily average price changes in 17 companies that were considered the most active stocks in the market. This was computed as a weighted average of price changes in the selected stocks and 1966 was used as the base year and set at 100 points (Kimura and Amoro, 2004). The 1970s saw about 20 more companies listed on the NSE. This was the largest number of companies listed in a span of about a decade. In 1984, the Government of Kenya through the Central Bank of Kenya in conjunction with the International Finance Corporation (IFC) conducted a study dubbed “Development of Money and Capital Markets in Kenya”. This study became a blueprint for structural reforms in Kenya’s financial markets and culminated in the establishment of the Capital Markets Authority (CMA) in 1989 as a regulatory body that would enable the development of Kenya’s capital markets and the creation of a conducive environment for economic growth.

In 1991 Nairobi Security Exchange was registered under the Companies Act and also adopted a 20-share index and changed the computational method of the index to a geometric mean. In 2000, Kenya, Uganda and Tanzania signed the Joint Stock Exchange Taskforce report on cross border listing. Subsequently, the East African Breweries Ltd. and the Kenya Airways proceeded to cross list at the Kampala and Dar-as-Salaam Stock Exchanges. In 2001, NSE was categorized into three market segments namely, the Main Investment Market Segment (MIMS), Alternative
Investment Market Segment (AIMS) and Fixed Income Securities Market Segment (FISMS). The first rights issue under the AIMS was implemented in February 2001. In 2002, an agreement was reached for the establishment of the Central Depository and Settlement Corporation (CDSC). The CDSC is the legal entity that owns the automated clearing, settlement, depository and registry system (CDS). All these changes in the management and operation of the NSE have been geared towards adapting the institution to meeting the changing demands of the financial market. In keeping with the trends all over the world and the changing demands of its services, the bourse changed its name to Nairobi Security Exchange in 2011.

1.2 Research Problem

Efficient management of working capital is a fundamental part of the overall corporate strategy in creating the shareholders’ value. Firms try to keep an optimal level of working capital that maximizes their value (Afza and Nazir, 2007). Indeed, in the present day operating business environment, working capital management has become one of the most important issues in the organizations where many managers are struggling to identify the basic working capital drivers and an appropriate level of working capital that will facilitate the firms’ ability to meet its short term obligations when they fall due. Therefore, companies can minimize risk and improve the overall performance by understanding the role and drivers of working capital management.

Effective management of working capital in a firm should aim at ensuring that the firm has the ability to continue operating with sufficient cash flow for payment of both maturing short-term debt and impending operational expenses. However, as much as a good level of current assets is necessary to pay off the current liabilities of a firm, too much of these assets will impact
negatively on the profitability of the firm. Hence it becomes imperative that a firm identifies the optimal level of working capital at any time that it will carry. This therefore highlights the importance of managing working capital requirements of a firm to ensure an improvement in firm's market value and profitability and this aspect must form part of the company's strategic and operational thinking in order to operate effectively and efficiently (Deloof, 2003).

Studies conducted both internationally and locally on how various working capital elements impact on the firm's profitability include the following. Filbeck and Krueger (2005) highlighted the importance of efficient working capital management by analyzing the working capital management policies of 32 non-financial industries in the US. According to their findings, significant differences exist among industries in working capital practices overtime. Moreover, these working capital practices, themselves, change significantly within industries overtime. However, Weinraub and Visscher (1998) discussed the issue of aggressive and conservative working capital management policies by using quarterly data for the period 1984-93 of the US firms. Their study considered 10 diverse industry groups to examine the relative relationship between their aggressive/conservative working capital policies. Their study concluded that the industries had distinctive and significantly different working capital management policies.

Nganga (2009) studied the relationship between working capital and profitability of listed companies at the NSE. The conclusion of the study was that differences do exist in mean profitability, activity, leverage and liquidity ratios among industry groups. Also it was found out that managers can create value if they adopt a conservative approach towards working capital investment and working capital financing policies. However, the study undertaken by Nganga
did not look at the way various working capital policies adopted by firm’s influences their profitability. Instead, the researcher studied on the overall effect that the working capital has on a firm’s performance and adopted a regression model in which the independent variables consisted of cash conversion cycle, accounts receivable period, inventory period and accounts payable period. Unlike Nganga’s study, the current study will use measure working capital policies using the ratio of current assets/ total assets and total current liabilities/total assets as well as incorporating control variables of size and growth which were not factored in his study.

On his part, Kimani (2009) undertook a research on the relationship between firm’s profitability and its size and the book to market value: Evidence from the NSE. She found out that the growth in sales of a firm is positively related to the firm profitability. She further concluded that a firm that manages to increase its sales output improves its revenue and as a result having more funds available for further expansion. Though the impact of working capital policies on profitability is highly important, only a few empirical studies have been carried out to examine this relationship. As a result of the existing gap, the study attempts to answer the question: what is the relationship between working capital management policy and a firm’s profitability among listed firms at the Nairobi Security Exchange?

1.3 Objective of the Study

To investigate the Effect of working capital policy on the profitability of firms listed at the NSE.

1.3.1 Specific Objectives

i) To establish the working capital policies used by firms listed at the NSE
ii) To determine the effect of the working capital policy on firm’s profitability.

1.4 Value of the Study

Organizational Managers: They are keen to know the outcomes of a particular decision they make as far as their ability to meet short term obligations when they fall due. In this context, since many firms, especially production firms, deal with a high proportion of raw materials in their inventories, it important that the managers have adequate current assets to facilitate the purchases and also be able to pay in time the credit purchases. Failure to pay in time to these obligations will affect credit rating of the firm. Thus it is important for the management to adopt an appropriate credit policy that will lead to an optimal liquidity position and at the same time lower opportunity cost of carrying cash and near cash assets which will eventually lead to maximization of the shareholder wealth.

The government will also benefit from the study in that by understanding the effect that various working capital policies has on the profitability of the firm, the government will be able to develop appropriate strategies that will foster adoption of these strategies in order to enhance the profitability of the firms. The government can at the same time replicate through appropriate adjustment the same working capital policies in other sectors of the economy which will finally improve the country’s economy. In addition, this study is expected to increase body of knowledge to the scholars of trading organizations especially on matters of maintaining optimal working capital and their influence on the performance of these oil firms.

This study will also create a monograph which could be replicated in other sectors of the economy. Most importantly, this research will contribute to the literature on the relationship between working capital management and profitability. It is hoped that the findings will be
valuable to the academicians, who may find useful research gaps that may stimulate interest in further research in future. Recommendations will be made on possible areas of future studies.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter will have several subsections covering theories and literature by various authors and researchers on the research subject matter. The chapter covers the theoretical framework which explains Conservative, Aggressive and Matching approach theories; Working capital Management, empirical evidence on a firm's Liquidity and studies on the firm size and Liquidity position.

2.2 Theoretical Review

Several theories have been advanced to explain the optimal working capital level. The theories do agree to the extent that the greater the investment in current assets, the lower the risk, but also the lower the profitability obtained. The theories advanced on the level of working capital that a firm should adopt are the conservative approach, aggressive and the matching approach.

2.2.1 Conservative Approach

Under the conservative approach, the firm finances its permanent assets and also a part of temporary current assets with long term financing (Bringham, 2008). When there are times in the course of the year when surplus cash is available, this will be invested in short-term instruments. Many managers feel much happier under the conservative approach because of the lower risk of
being unable to pay bills as they arise. The low-risk is to make sure that long term financing covers the total investment of the assets. However, such a policy may not be to the best interest of the owners of the firm, (Eljelly 2004) observed that the short term funds invested in the short term securities is unlikely to earn satisfactory return relative to the cost of the long term funds. In all likelihood, shareholders would be better off if the firm reduced its long term financing, by returning cash to shareholders or paying off some long term loans.

Van Horne and Wachowicz (2004) further observed that excessive levels of current assets as advocated by the conservative working capital may have a negative effect on the firm's profitability, whereas a low level of current assets may lead to a lower level of liquidity and stock outs, resulting in difficulties in maintaining smooth operations. More aggressive working capital policies are associated with higher return and risk, while conservative working capital policies are associated with lower risk and return.

2.2.2 Aggressive Approach

The aggressive approach of managing the working capital is considered more risky because of the frequent need to refinance to support permanent current assets as well as fluctuating current assets. Moyer et al., (2005) observed that if a firm relied on overdraft for this, it will be vulnerable to a rapid withdrawal of that facility and if stocks and cash are reduced to pay back the overdraft the firm may experience severe disruptions, loss of sales and output, and additional costs because of a failure to maintain the minimum required working capital to sustain optimum profitability. Thus, Bringham and Ehrhard (2004) posit that this working capital policy will be associated with higher return and risk.
A firm may adopt an aggressive working capital management policy with a low level of current assets as a percentage of total assets, or it may also be used for the financing decisions of the firm in the form of high level of current liabilities as a percentage of total liabilities (Smith, 1980). Working capital management is important because of its effects on the firms' profitability and risk, and consequently its value (Smith, 1980). The greater the investment in current assets, the lower the risk, but also the lower the profitability obtained.

### 2.2.3 Matching Approach

Some firms follow the matching principle, in which the maturity structure of finance matches the maturity period of the project or asset. Here, the fixed assets and current assets which are needed on permanent basis are financed through long term sources, while current assets who’s financing needs vary throughout the year are financed by short term borrowings (Gitman, 2005). A firm that is taking the maturity approach is considered to be adopting a moderate stance. Under such an approach, a rising level of total assets is financed principally through increases in long-term finance applied to fixed assets and permanent current assets. The fluctuating current assets such as those related to seasonal variations are financed with short-term funds.

Michna (2007) points, the efficient management of working capital is particularly important for small firms at a time of economic downturn such as the “credit crunch”. A “credit crunch “ as defined by Ding et al.,(2008) is a sudden reduction in the general availability of loans and credit or sudden increase in the cost of obtaining loans from banks. Consequently, owner-managers find it more difficult to raise finance for working capital due to the higher cost of borrowing, the effect of declining property value on the ability of owner-managers to provide the necessary
collateral, and the perception that the banks have become even more risk-averse than they were already.

2.3 Measurement of Financial Performance

Traditional methods of measuring a company's performance by financial indices alone have virtually disappeared from large organizations (Basu, 2001). Non-financial measures are at the heart of describing strategy and of developing a unique set of performance measures that clearly communicate strategy and help in its execution. Frigo (2002) reported the existence of a gap between strategy and performance measures, which failed to support the communication of strategy within an organization.

Financial measures as a form of business performance measurement still remains an important part of running a growing business, especially in the current economic climate. Most growing businesses ultimately target increased profits, so it's important to know how to measure profitability. The key standard measures are:-

**Liquidity** measures the ability of the firm business to meet financial obligations as they come due, without disrupting the normal, ongoing operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to the balance sheet (assets and liabilities) and operational liquidity refers to cash flow measures. Two recommended measures of liquidity are the current ratio and working capital. The current ratio measures the relationship between total current farm assets and total current farm liabilities and is a relative measure rather than an absolute dollar measure. The higher the ratio, the more liquid the farm is considered to be. Working capital is a measure of the amount of funds available to purchase
inputs and inventory items after the sale of current farm assets and payment of all current farm liabilities. Working capital is expressed in absolute dollars; therefore, determining adequate working capital is related to the size of the farm operation (Du Rietz and Henrekson, 2000).

**Solvency** measures the amount of borrowed capital used by the business relative the amount of owner’s equity capital invested in the business. In other words, solvency measures provide an indication of the business’ ability to repay all indebtedness if all of the assets were sold. Solvency measures also provide an indication of the business’ ability to withstand risks by providing information about the farm’s ability to continue operating after a major financial adversity, Hammes (2003).

Unlike liquidity, solvency is concerned with long-term as well as short-term assets and liabilities. Solvency measures evaluate what would happen if all assets were sold and converted into cash and all liabilities were paid. The most straightforward measure of solvency is owner equity, using the market value of assets and including deferred taxes in the liabilities. As with working capital, adequacy of equity depends on business size, making comparisons difficult without using ratios, Hammes (2003). Three widely used financial ratios to measure solvency are the debt-to-asset ratio, the equity-to-asset ratio and the debt-to-equity ratio. These three solvency ratios provide equivalent information, so the best choice is strictly a matter of personal preference. The debt-to-asset ratio expresses total farm liabilities as a proportion of total farm assets.

**Profitability** measures the extent to which a business generates a profit from the factors of production: labor, management and capital. Profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in
the business, Mesquita and Lara (2003). Four useful measures of farm profitability are the rate of return on farm assets (ROA), the rate of return on farm equity (ROE), operating profit margin and net farm income. The ROA measures the return to all farm assets and is often used as an overall index of profitability, and the higher the value, the more profitable the farm business. The ROE measures the rate of return on the owner’s equity employed in the farm business. It is useful to consider the ROE in relation to ROA to determine if the farm is making a profitable return on their borrowed money, Hadlock and James (2002).

**Net firm income** comes directly off of the income statement and is calculated by matching farm revenues with the expenses incurred to create those revenues, plus the gain or loss on the sale of farm capital assets. Net farm income represents the return to the farmer for unpaid operator and family labor, management and owner’s equity. Like working capital, net farm income is an absolute dollar amount and not a ratio, thus comparisons to other farms is difficult because of farm size differences, Mesquita and Lara (2003).

**Repayment capacity** measures the ability to repay debt from both farm and non-farm income. It evaluates the capacity of the business to service additional debt or to invest in additional capital after meeting all other cash commitments. Measures of repayment capacity are developed around an accrual net income figure, Mesquita and Lara (2003).

The short-term ability to generate a positive cash flow margin does not guarantee long-term survivability. Long-term survivability requires the farm to be profitable. The only way for an unprofitable farm to survive long-term is for income infusions from non-farm sources to offset farm losses. These cash infusions usually come from off-farm employment, inheritances and
gifts or from a lender if the farm assets appreciate faster than the farm is losing money and the farmer can successfully refinance the farm’s debts, Andersson and Reeb (2003).

2.4 Effect of Working Capital on a Firms Profitability

Working capital always comes first, and without it a firm does not open its doors and, with it a firm may not have time to solve its basic problem (Hubbard, 2000). Liquidity is an important determinant of financial distress, because without liquidity a firm cannot meet its financial obligations (Beaver, 1996). Murphy (2005) pointed out that Enron's bankruptcy was nearly inevitable because of the combination of the company's low cash resources and its reliance on manipulative trading profits that could not be expected to continue indefinitely. However, even if Enron had somehow been able to survive its liquidity squeeze and avoid its 2002 bankruptcy, the stock was clearly overpriced up until the final weeks before the end.

The management of working capital is a very sensitive area in the field of financial management since it determines the existence of a firm or not as well as affecting firm's profitability and risk and consequently its value (Smith, 2000). Management of working capital involves the decision on the amount and composition of current assets and the financing of these assets. According to Raheman and Nasr (2007), current assets include all those assets that in the normal course of business return to the form of cash within a short period of time, ordinarily within a year and such temporary investment as may be readily converted into cash upon need.

Eljelly (2004) found out that firms try to keep an optimal level of working capital that maximizes their value and the efficient management of working capital is likely to yield significant results.
and its neglect can be highly dangerous to any firm. This point has further been stressed by Christopher and Kamalavalli (2009) who observed that the efficient WCM process is engaged with planning and controlling current assets and liabilities in such a way that eliminates the risk of inability to meet short-term obligations in hands with the avoidance of excessive investments in these assets. Inefficient management of WC not only reduces profitability but ultimately may also lead a concern to financial crisis thus every organization, irrespective of its profit orientation, size and nature of business, needs requisite amount of WC. Consequently, the efficient WCM is the most crucial factor in maintaining survival, liquidity, solvency and profitability of the concerned business organization.

2.5 Factors Affecting Firm’s profitability

A firm’s profitability is affected by many factors whose level of influence will vary from industry to industry. As a result each organization should be able to determine the most critical factor that affects its profitability and attempt to enhance the same. A firm’s profit will be affected by several factors among them the working capital policy adopted by the firm, the size of the organization, the growth stage of the organization as well as the financial leverage level adopted by the organization.

Shareholders of a firm will wish their wealth to increase over their initial investment. This wealth can be increased through payment of dividends or through the generation of capital gains which result from the firm registering positive profits. Thus the profitability of the firm and factors that lead to the changes in the profits will need to be addressed by the organizations management. Among the factors to be effectively managed is the firm’s working capital. Efficient management
of working capital is a fundamental part of the overall corporate strategy in creating the shareholders’ value (Smith, 1980).

**Working capital policy;** In order to measure the degree of aggressiveness of working capital investment policy, the following ratio will be used:

\[ \text{AIP} = \frac{\text{Total Current Assets (TCA)}}{\text{Total Assets (TA)}} \]

Where a lower ratio means a relatively aggressive policy.

**Size of the Firm;** The size of the firm (SIZE) will be measured by the logarithm of its total assets, as the original large value of total assets may disturb the analysis.

**Growth of the Firm;** The growth of firm (GROWTH) is measured by variation in its annual sales value with respect to previous year’s sales.

\[ \text{Growth of the Firm} = \frac{\text{Sales}_t - \text{Sales}_{t-1}}{\text{Sales}_{t-1}} \]

**Financial Leverage;** The financial leverage (LVRG) will be taken as the debt to equity ratio of each firm for the whole sample period.

\[ \text{Financial Leverage} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \]
2.6 Empirical Review

Many researchers have studied working capital from different views and in different environments. Eljelly, (2004) elucidated that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of inability to meet due short-term obligations and avoids excessive investment in these assets. The relation between profitability and liquidity was examined, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia using correlation and regression analysis. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio that affects profitability. The size variable was found to have significant effect on profitability at the industry level. The results were stable and had important implications for liquidity management in various Saudi companies. First, it was clear that there was a negative relationship between profitability and liquidity indicators such as current ratio and cash gap in the Saudi sample examined.

Deloof (2003) discussed that most firms had a large amount of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on profitability of those firms. Using correlation and regression tests he found a significant negative relationship between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. On basis of these results he suggested that managers could create value for their shareholders by reducing the number of days' accounts receivable and inventories to a reasonable minimum. The negative relationship
between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Smith and Begemann (1997) emphasized that those who promoted working capital theory shared that profitability and liquidity comprised the salient goals of working capital management. The problem arose because the maximization of the firm's returns could seriously threaten its liquidity, and the pursuit of liquidity had a tendency to dilute returns. This article evaluated the association between traditional and alternative working capital measures and return on investment (ROI), specifically in industrial firms listed on the Johannesburg Stock Exchange (JSE). Results indicated that there were no significant differences amongst the years with respect to the independent variables. The results of their stepwise regression corroborated that total current liabilities divided by funds flow accounted for most of the variability in Return on Investment (ROI). The statistical test results showed that a traditional working capital leverage ratio, current liabilities divided by funds flow, displayed the greatest associations with return on investment.

Narware (2004) in his empirical study on Indian National Fertilizer Limited, for 1990-91 to 1999-2000 signify that working capital management and profitability of the company disclosed both negative and positive association. He also found evidence that increase in the profitability of a company was less than the proportion to decrease in working capital. However, the study done by Raheman and Nasr, (2007) on a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of 6 years from 1999 – 2004, demonstrate a strong negative relationship
exists between variables of the working capital management represented by liquidity and debt with profitability of the firm.

Whilst, Afza and Nazir (2007) through cross-sectional regression models on working capital policies, profitability and risk of the firms, found a negative relationship between the profitability measures of firms and degree of aggressiveness on working capital investment and financing policies, their result indicates that the firms yield negative returns if they follow an aggressive working capital policy by investigating the relative relationship between the aggressive or conservative working capital policies for 208 public limited companies listed at Karachi Stock Exchange for a period of 1998-2005. Carpenter and Johnson (1983) provided empirical evidence that there is no linear relationship between the level of current assets and revenue systematic risk of the US firms; however, some indications of a possible nonlinear relationship were found, which were not highly statistically significant.

On his part, Nazir (2009) analyzed the impact of aggressiveness of working capital investment and financing policies in Pakistan for a sample of 204 non-financial firms listed at Karachi Stock Exchange for the period of 1998-2005. They evaluated on firm returns i.e. return on assets and Tobin’s Q to represent market performance and indicates that firms adopting an aggressive approach towards working capital financing policy give more value to the firms while inverse relationship between the aggressiveness of working capital investment policies on firms performance exist. These results are consistent with Afza and Nazir (2007) that using Tobin’s Q to represent stock market performance of Karachi Stock Exchange. According to Irene and Lee (2007) who researched on the prevailing working capital management practices of some well-
performed Malaysian public firms listed on Bursa Malaysia, they examined the correlation between profitability and the level of working capital of the sample firms and found out that profitability and working capital are linearly related positively to a certain extent.

Kimani (2009) undertook a research on the relationship between firm’s profitability and its size and the book to market value. She found out that the growth in sales of a firm is positively related to the firm profitability. She further concluded that a firm that manages to increase its sales output improves its revenue and as a result having more funds available for further expansion. Nganga (2009) studied the relationship between working capital and profitability of listed companies at the NSE. A firm’s optimal level of current assets is reached when the optimal level of cash, inventory, and accounts receivables is achieved. But lenders prefer a company having a large excess of current assets over current liabilities whereas the owners prefer a high return. Current assets have the advantage of being liquid but holding them is not very profitable, for example inventory earns no return until it’s sold. Noncurrent assets can be profitable but usually not very liquid. Managers can create value if they adopt a conservative approach towards working capital investment and working capital financing policies.

2.7 Summary

The importance of the management of working capital and adoption of optimal working capital policy in a firm has been expounded in detail both in the literature as well as from the empirical studies done on the subject area. A firm’s working capital was found to affect a firm’s liquidity and profitability and thus the objective of managing optimal working capital is to ascertain that a
firm has the ability to continue operating with sufficient cash flow for payment of both maturing short-term debt and impending operational expenses. Adoption of effective working capital management policy involves planning and controlling the current assets and current liabilities in a manner that eliminates the risk of inability of a firm to meet due short term obligations and at the same time to avoid excessive investment in these assets on the other hand.

A review of prior literature reveals that there exists a significant relation between performance and working capital management by using different variable selection for analysis. In addition, it has been found out that different sector companies have different levels of working capital and they will always strive to maintain the level of working capital in the short term. The risk behaviour preference of the firms’ management was also found to have an effect in the level of current assets and current liabilities that is held by a firm. For risk averse managers, it was found out that such firms will hold a high proportion of current assets compared to the current liabilities and vice versa for risk seeking managers. In effect therefore, the level of risk preference characteristics of firm’s managers will affect the level of performance and profitability of the organization.

However, it is evident from the literature that none of the studies has been able enough to develop a model that will assist managers to establish an optimum working capital policy under different operating environments or even industries. Instead the literature and studies suggest the existence of an optimum level without necessarily suggesting the same level or how to be establishing it.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets to explain the research design, the population of interest, the type of secondary data used, the sources of data, the procedures and techniques of analysis used and the data analysis. The subsections will give details of the procedures used in conducting the study. It gives a detailed description of the population which in this case is the firms listed at NSE. The research design, selection and preparation of the instruments used to collect the data; the procedures used in data analysis and if the hypothesis to be tested should be described in detail to enable others replicate the study.

3.2 Research Design

The research design adopted was cross-sectional study in which data was gathered just once over the period 2007 to 2011. This research design was also employed by Deloof (2003) while researching on the effect of working capital policies on performance of firms quoted at the Karachi Stock Exchange. As such, the causal study was undertaken in a non-contrived setting with no researcher interference. The unit of analysis was the individual firms listed at the NSE and the purpose of the study was to establish a relationship between Working Capital Management policy and profitability of these firms.

This study was carried out through the use of secondary data as detailed in the listed companies' annual reports. Through the use of the listed firms in the NSE, the researcher obtained the data
for various variables included in the study from the financial statements in the annual report of the listed companies. This data was then analyzed through the use of regression and correlation analysis to determine the effect and direction of the various factors identified on the level of working capital held by the firms on the performance.

3.3 Population of the Study

The population of interest in this study was composed of all publicly quoted firms at the Nairobi Security Exchange between 2007 and 2011. There were sixty firms listed in NSE as at 2011 (Appendix I). The reason as to why these firms were chosen is primarily due to the availability and the reliability of the financial statements in that they are subject to the mandatory audit by internationally recognized audit firms. Furthermore, firms listed on the stock exchange market have an incentive to present profits if those exist, in order to make their shares more attractive (Lazaridis and Tryfonidis, 2006) and also from the fact that the number of firms in this exchange has marginally changed over the study period.

3.4 Data Collection

This study was carried out through the use of secondary data as detailed in the listed companies' annual reports. Through the use of the listed firms in the NSE, the researcher obtained the data for various variables included in the study from the financial statements in the annual report of the listed companies. This data was then analyzed through the use of regression and correlation analysis to determine the effect and direction of the various factors identified on the effect of working capital policy adopted by the firms on their profitability.
Data was collected from annual reports submitted to the NSE and Capital Markets Authority. The company’s annual accounts were obtained from the NSE library and the Capital Markets Authority. All companies in the sector that were continually listed between 2006 and 2012 were included to ensure that they are current and complete.

3.5 Data Analysis

This study used a multiple linear regression model as used by Weinraub and Visscher (1998), who analyzed working capital policies of 126 industrial firms in the US market. Aggressive Investment Policy (AIP) results in minimal level of investment in current assets versus fixed assets. In contrast, a conservative investment policy places a greater proportion of capital in liquid assets with the opportunity cost of less profitability. If the level of current assets increases in proportion to the total assets of the firm, the management is said to be more conservative in managing the current assets of the firm.

3.5.1 Analytical Model

The model examined in this study is significant with an adjusted $R^2$ of 57.8% and also that all the independent variables had a significant relationship individually with the ROA. According to the study working capital management policy affects profitability of the company and if the firm can effectively manage its working capital, it can lead to increasing profitability. Narware (2004) in his empirical study found that working capital management and profitability of the company disclosed both negative and positive association. He also found evidence that increase in the profitability of a company was less than the proportion to decrease in working capital.
The regression equation that was adopted to establish the relationship between the profitability of the firm and the working capital policy was as follows:

$$\text{ROA} = \alpha + \beta_1 \left( \frac{TCA}{TA} \right) + \beta_2 \frac{TCL}{TA} + \beta_3 \text{SIZE} + \beta_4 \text{LVRG} + \varepsilon$$

Where;

- $\text{ROA}$ = Return on assets = Profit after Tax to Book Value of Assets
- $\frac{TCA}{TA}$ = Total current assets to total assets ratio
- $\frac{TCL}{TA}$ = Total current liabilities to total assets ratio
- $\text{SIZE}$ = Logarithm of Total Assets
- $\text{LVRG}$ = Financial Leverage = Debt to Equity Ratio
- $\varepsilon$ = Residual error

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ are constants representing the direction and the extent to which each variable influences performance of a firm. $\varepsilon$ is the error term that is a surrogate for all other variables influencing performance.

To complement the regression analysis, the strength of the relationship between WCM and performance, will be measured by the coefficient of determination, $R^2$. The Statistical Package for Social Sciences (SPSS) will be used to analyse the data.
CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results and findings of the study based on the research objectives. The results are presented in the form of summary tables. Regression and Correlation analysis are used to analyse the data to answer the research objective.

4.2 Results

The regression analysis was conducted with the control variables. Test of significance was carried out for all variables studied using t-test at the 1% level of significance.

From the observation;

Any p-value that is greater than 0.05 will be deemed to have a significant relationship with the dependent variable else the relationship is considered insignificant. The standardized coefficient and the t-statistic indicate the strength of the relationship between the dependent and the independent variables. The adjusted R-square measures the degree of variability of the independent variable due to the change in the independent variable. The results are as indicated below while the source data is presented in a tabular format in the appendix.

4.2.1 Pearson and Spearman's Correlations Coefficient Analysis

Table 4.1 below shows the Pearson and Spearman’s correlation coefficient generated from the data. Consistent with Shin and Soenen (1998), the spearman's rank correlation coefficients are
on the upper right triangle while the Pearson product moment correlation coefficients are on the lower left triangle. Pearson's Correlation analysis is used for data to see the relationship between variables such as those between working capital policy adopted by a firm and profitability as measured by the Return on Assets. If the working capital policy adopted by a firm increases profitability, one should expect a negative relationship between the measures of working capital policy and profitability variable. There is a negative and positive relationship between the profitability of the firm on one hand and the measures of working capital management policy on the other hand. This is consistent with the view that with a high level of current assets that a firm holds, the firm will be adopting a conservative working capital policy and with the higher level of current assets, the firm will be having more stock and cash that will meet the firms' sales and purchases needs. On the other hand, the current liabilities to total assets ration shows a negative relations meaning that when this ratio is increased, then the profitability of the firm will decline.

The negative relationship between the current liabilities level and profitability is consistent with the view that the most profitable firms will tend to use more of current liabilities to finance their operations than internal sources and will wait for longer periods to pay creditors so long as the same will not affect their credit rating. The TCL/TA coefficient is $-0.068$ with $p$-value of $.554$ though the result is not significant at $\alpha = 1\%$. The negative value of coefficient for $TCL/TA$ also points out the negative relationship between the aggressiveness of working capital financing policy and return on assets. The higher the $TCL/TA$ ratio, the more aggressive the financing policy, that yields negative return on assets.
Table 4.1 Spearman’s Correlation

<table>
<thead>
<tr>
<th></th>
<th>Correlation Coefficient</th>
<th>ROA</th>
<th>TCA/TA</th>
<th>TCL/TA</th>
<th>SIZE</th>
<th>LVRG</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>0.36</td>
<td>0.16</td>
<td>0.00</td>
<td>0.53</td>
<td>0.00</td>
<td>0.30</td>
</tr>
<tr>
<td>TCA/TA</td>
<td>0.106</td>
<td>0.00</td>
<td>0.55</td>
<td>0.40</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TCL/TA</td>
<td>-0.068</td>
<td>0.40</td>
<td>0.53</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.072</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td>LVRG</td>
<td>-0.547</td>
<td>0.00</td>
<td>0.124</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Spearman’s rho

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

Source: 2007 -2011 Survey data, researchers' computation

The positive coefficient of \( TCA/TA \) indicates a negative relationship between the degree of aggressiveness of investment policy and return on assets. As the \( TCA/TA \) increases, the degree of aggressiveness decreases, and return on assets increases. Therefore, there is a negative relationship between the relative degree of aggressiveness of working capital investment policies of firms and both performance measures, i.e., ROA. It indicates that the objectives financing more assets through short term borrowing is inversely proportional to the profitability of the firm. So, the Kenyan firms need to maintain a balance or tradeoff between these two measures. This similarity in market and accounting returns confirms the notion that investors do not believe...
in the adoption of aggressive approach in the working capital management, hence, they do not give any additional weight to the firms on NSE.

One should not overlook the positive significant association that exists between ROA and SIZE of the firm as measured by the Log of Total assets. This in turn indicates a positive relationship between size and profitability. The coefficient is positive 0.072; with p-value of (.554). The result is highly significant at \( \alpha = 1\% \). It shows that as size of the firm increases, it will increase its profitability and therefore implying that the Kenyan firms should build their asset base and ceteris paribus, will influence positively the profits of the firm.

The Pearson’s correlation also displays a significant negative relationship between the firms leverage position and profitability; the correlation coefficient is -0.547 and the p-value is (.000). That ratio is highly significant at \( \alpha = 1\% \), which means that if a firm less borrowings to finance its assets, then it will increase its profitability.

The results of correlation analysis indicate that as far as Kenyan firms are concerned, the working capital policy very significantly and strongly affects their profitability.

4.2.2 Regression Analysis

For the purpose of identifying the important variables influencing the dependent variable the study used the regression analysis. In panel data (pooled) regression, time –series and cross-sectional observations are combined and estimated. In other words, several cross-sectional units are observed over a period of time in a panel data setting and also panel data is more useful in
studying the dynamics of adjustment, and is better able to identify and measure effects that are simply not detectable in pure cross-sections or pure time-series data.

The determinants of Return on Assets profitability are investigated for the 160 firm-year observations.

Table 4.2: Results of General Least Square

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.151</td>
<td>.062</td>
<td>.188</td>
<td>2.430</td>
<td>.018</td>
</tr>
<tr>
<td>TCA/TA</td>
<td>.059</td>
<td>.047</td>
<td>.188</td>
<td>1.262</td>
<td>.211</td>
</tr>
<tr>
<td>TCL/TA</td>
<td>-.107</td>
<td>.059</td>
<td>-.302</td>
<td>-1.811</td>
<td>.074</td>
</tr>
<tr>
<td>SIZE</td>
<td>-.010</td>
<td>.008</td>
<td>-.145</td>
<td>-1.175</td>
<td>.244</td>
</tr>
<tr>
<td>LVRG</td>
<td>-.001</td>
<td>.002</td>
<td>-.102</td>
<td>-.810</td>
<td>.420</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA
From Table 4.2 above, the established multiple linear regression equation becomes:

$$\text{ROA} = 0.151 + 0.059\frac{TCA}{TA} - 0.107\frac{TCL}{TA} - 0.010\text{SIZE} - 0.001\text{LVRG}$$

There is a significant negative relationship between return on assets and the working capital policy of firm in the listed firms at the NSE. These results suggest that managers can create value for their shareholders by adopting an aggressive working capital policy through holding less current assets and more current liabilities without the risk of affecting the firm’s credit rating from the view of suppliers reducing the number of day’s accounts receivable and inventories to a reasonable minimum. The negative relationship between conservative policy and profitability is consistent with the view that less profitable firms hold more current assets in fear of running short of cash and at the same time adopting relaxed credit policy on their sales.

The coefficient of intercept C has a value (0.151) and is significant and is significant at the 5% level. The coefficient of the TCA/TA is positive negative and significant at $\alpha = 5\%$, and implies that the increase or decrease in the ratio, significantly affects profitability of the firm.

The interpretation of the positive coefficient of $\frac{TCA}{TA}$ indicates that a negative relationship between the degree of aggressiveness of a firm’s investment policy and return on assets. This means that as the $\frac{TCA}{TA}$ increases, the degree of aggressiveness decreases, and return on assets increases. Therefore, there is a negative relationship between the relative degree of aggressiveness of working capital investment policies of firms and their performance measures, i.e., ROA.
The coefficient of the TCL/TA is negative and is significant at $\alpha = 5\%$. The negativity of the beta coefficient for $TCL/TA$ points out the negative relationship between the aggressiveness of working capital financing policy and return on assets. The higher the $TCL/TA$ ratio, the more aggressive the financing policy, that results in the negative return on assets. This means that investors give more weight to firms which adopt an aggressive approach towards working capital financing policy and having higher levels of short-term and spontaneous financing on their balance sheets.

The control variables used in the regression models are natural log of firm size and the average leverage. All the control variables have their impact on the performance of the firms. Firms’ size causes the returns of the firms to be increased and it is found to be statistically significant. Moreover, $LVRG$ are found to be significantly associated with the book-based returns on assets which confirm the notion that leverage and Size are strongly correlated with the book value-based performance measures (Eljelly, 2004).

Table 4.3 Model Summary for NOP with Control Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.679a</td>
<td>.578</td>
<td>.527</td>
<td>.2666964</td>
</tr>
</tbody>
</table>
Predictors: (Constant), LVRG, TCA/TA, SIZE, TCL/TA

Source: 2007-2011 Survey data, researchers' computation

The adjusted $R^2$, also called the coefficient of multiple determinations, is the percentage of the variance in the dependent variable explained uniquely or jointly by the independent variables and is 57.8%. This means that 57.8% of the changes in the ROA will be explained by the changes in the independent variables and control variables in the model. The remaining 42.2% of the changes in the ROA is explained by other factors not in the model. The $C$ is the constant, where the regression line intercepts the y axis, representing the amount the dependent y will be when all the independent variables are 0. Here $C$ is 0.151; $p$-value of the coefficient is significant.

4.3 Interpretation

The working capital management policy that a firm adopts came out as an important parameter to be considered by a firm in projecting its profitability level as well as influencing its liquidity. There should be a tradeoff between maximizing a firm's profitability and the need to have adequate liquidity level. This is because decisions that tend to maximize profitability tend to minimize the chances of adequate liquidity while at the same time, focusing almost entirely on liquidity will tend to reduce the potential profitability of the firm and therefore making managers to strike a balance between the two objectives. The findings also found out that managers of the manufacturing firms considered spend most of their time in managing the current assets and current liabilities. This finding is similar to that found by Raheman and Nasr (2007) in a study of
Pakistan firms which found out that managers of the firms spend up to 60% of their time managing these elements.

The study found a significant negative relationship between return on assets and the working capital policy of firm in the listed firms at the NSE. These results suggest that managers can create value for their shareholders by adopting an aggressive working capital policy through holding less current assets and more current liabilities without the risk of affecting the firm’s credit rating from the view of suppliers reducing the number of day’s accounts receivable and inventories to a reasonable minimum. The negative relationship between conservative policy and profitability is consistent with the view that less profitable firms hold more current assets in fear of running short of cash and at the same time adopting relaxed credit policy on their sales.

From the findings, it can also be observed that managers cannot create value if they adopt an aggressive approach towards working capital investment and working capital financing policy. However, if firms adopt aggressive approach in managing their short-term liabilities, investors give more value to those firms. The degree of aggressiveness of working capital policies adopted helps only in creating shareholders’ wealth through increased market performance, whereas accounting performance cannot be increased by being aggressive in managing the working capital requirements. This means that investors give more weight to firms which adopt an aggressive approach towards working capital financing policy and having higher levels of short-term and spontaneous financing on their balance sheets.
CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

5.2 Summary

The secondary data in this analysis covered a period of 5 years from 2007 to 2011. The population of study comprised of all firms quoted at the NSE and operated in the period. After the screening process, firms whose accounts were not available in all the years of study or were not listed in full were eliminated and from this screening process firms were eliminated leaving 30 firms to be studied in the research.

The impact of aggressive/conservative working capital investment and the financing policies has been examined using panel data regression models between working capital policies and profitability. The research involved the use of regression analysis with return on assets (ROA) as the dependent variable while the TCA/TA and TCL/TA were the independent variables with LEVERAGE and SIZE of the firm acting as the control variables. The t-statistic values and $R^2$ were used to determine the magnitude of the relationship between the dependent variable (NOP) and the independent variables. In general, the results of general least squares method with cross section weights indicate the same interpretation that the working capital policy of a firm affects
profitability of the company and that if the firm can effectively manage its working capital, it can lead to increasing profitability.

The study concluded that the TCL/TA, Size and Leverage of the firm have a negative correlation with the ROA. On the other hand TCA/TA had a significant positive relationship with the dependent variable. Therefore it will be important for a firm’s management to understand the relationship that exists between various working capital policies adopted and its effect on profitability and the direction that they affect the profit for effective management of the working capital policy.

5.3 Conclusions

Most of the Kenyan firms have large amounts of funds invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on profitability of those firms. The study finds a negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies. The firms report negative returns if they follow an aggressive working capital policy. These results were further validated by examining the impact of aggressive working capital policies on market measures of profitability, which was not tested before.

On the basis of the above analysis it can further be concluded that these results can be strengthened if the firms manage their working capital and leverage in more efficient ways. Management of working capital means management of current assets and current liabilities, and financing these current assets using cheap sources of finance. If these firms properly manage
their cash, accounts receivables, accounts payable and inventories in a proper way, this will ultimately increase profitability of these companies.

5.4 Recommendations

The study suggests some policy implications for the managers and prospective investors in the emerging market such as Kenya. Firms with more aggressive policy towards working capital may not be able to generate more profit. So, as far as the book value performance is concerned, managers cannot generate more returns on assets by following aggressive approach towards short-term assets and liabilities. On the other hand, investors are found giving more value to the firms that adopt an aggressive approach towards working capital financing policies. The market value of firms using high level of current liabilities in their financing is more than the book value. The investors believe that firms with less equity and less long-term loans would be able to perform better than the others. However, there are various other factors like agency problem which may play a pivotal role in such cases, and so these factors may further be explored in future.

It would also be recommended that firms should carry out aggressive working capital policies by holding minimal stock. Maintaining low inventory levels and thus having low inventory holding period decreases both the holding and ordering cost of the stock and therefore leads to the increase of firm profits. Firms should also lengthen their accounts payment period since large firms wait longer to pay their bills. Firms should strive to decrease the cash conversion cycle in order to generate and have adequate cash flows for financing both operations and financing
strategy in order to increase profitability. However, in implementing each of these recommendations, care should be taken not to exceed the limits beyond which the policies become counterproductive.

5.5 Limitations of the Study
The study examined the relationship between working capital management policy and profitability of listed firms in Kenya and so the findings may not necessarily apply to other firms especially the unlisted firms or the small firms in the country, hence other manufacturing firms in the country may not be adequately represented.

The study places more emphasis on financial measures of performance despite the fact that non-financial measures represent some of the major goals of world class companies.

5.6 Suggestions for Further Research
It is suggested that further research be conducted on the same topic with unlisted firms or small firms that will tend to have a lower level of working capital and extending the years of the sample.

The scope of further research may also be extended to other components of working capital including cash, marketable securities, receivables and inventory management as well as incorporation of more control variables.

It is also suggested that non-financial measures of performance which are increasingly becoming important in decision making and performance evaluation be considered in future studies.
REFERENCES


Kimani F.N (2009), The Relationship between Firms Profitability and Its Size and Book Value: Evidence From the NSE, Unpublished MBA Project: University of Nairobi.


APPENDIX I; FIRMS LISTED AT THE NSE

AGRICULTURAL

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini
7. Williamson Tea Kenya Ltd

AUTOMOBILES AND ACCESSORIES

1. Car and General (K) Ltd
2. CMC Holdings Ltd
3. Sameer Africa Ltd
4. Marshalls (E.A) Ltd
5. Sameer Africa Ltd
MANUFACTURING AND ALLIED

1. B.O.C Kenya Ltd
2. British American Tobacco Kenya Ltd
3. Carbacid Investments Ltd
4. East African Breweries Ltd
5. Mumias Sugar Co.
6. Unga Group
7. Eveready East Africa Ltd
8. Kenya Orchads Ltd
9. A.Baumann Co Ltd

CONSTRUCTION AND ALLIED

1. Athi River Mining.
2. Bamburi Cement
3. Crown Paints
4. E.A Cables
5. E.A Portland Cement co. Ltd

ENERGY AND PETROLEUM

1. KenGen Co. Ltd
2. KenolKobil Ltd
3. Kenya Power and Lighting Co. Ltd
4. Total (K) Ltd

Source: www.nse.co.ke