EFFECT OF WORKING CAPITAL MANAGEMENT ON THE CAPITAL STRUCTURE OF NON-FINANCIAL FIRMS QUOTED IN THE NAIROBI SECURITIES EXCHANGE

BY

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D61/72765/2009

A RESEARCH PROJECTPRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

NOVEMBER, 2017

DECLARATION

I declare this Research Project is my original work and has not been presented for any other academic award in any university.

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This research paper has been submitted for examination with my approval as the University Supervisor.

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ACKNOWLEDGEMENT

Thank you, Almighty God, for the giving me the opportunity to undertake this study, and for giving me the strength and the resources required to compete this study.

I am very grateful to my supervisor Dr. Mirie Mwangi who tirelessly and patiently guided me throughout the course of this study. Special gratitude goes to my course mates, with whom I spent countless hours in discussions and group work, which has made possible the conclusion of this study.

To my wife and sons Jeremy and Jamin, thank you for the patience and encouragement, and for enduring my absence during this study.

DEDICATION

This project is dedicated to my loving wife Janet Wanjiru Ruminju, for her selfless and tireless encouragement, prayers, support and dedication to seeing me conclude this study

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ABBREVIATIONS

CMA	Capital Markets Authority
KSE	Karachi Stock Exchange
M/B Ratio	Market to book ratio
MM	Modigliani and Miller
NSE	Nairobi Securities Exchange
ROCE	Return on capital employed
SPSS	Statistical Package for Social Sciences

ABSTRACT

Finance managers spend considerable time in making capital structure and working capital decisions as they seek to maximize the value of the firm. The question on how managers make a choice between debt and equity to optimize the capital of a firm has remained unanswered. Many studies have been conducted, seeking to shed light on the various determinants of capital structures adopted by firms. This study seeks to explore whether working capital management, could be one of determinants of capital structure. This research aimed at exploring the effect of the variables that make up working capital management on the debt financing of 44non-financial public companies listed in the NSE between 2010 and 2015. The working capital components considered in the study are debtors average collection days, accounts payable average collection days, inventory conversion cycle and cash ratio, with fixed assets to total assets ratio as a control variable. The study used secondary data obtained from the published financial statements of the companies quoted in the NSE and analyzed through multivariate regression analysis to establish the nature and the magnitude by which working capital management components affects the leverage. The research revealed that there is a positive relationship between inventory conversion period, average payment period and fixed to total asset ratio and leverage. Relationship between debt ratio and Cash ratio was revealed a negative relationship. Additionally, the study established that there is a correlation between the independent variable, however the correlation was insignificant. The study concluded that the management practices related to working capital in the non-financial public companies listed in Nairobi Securities exchange influences capital structure, however, the influence is insignificant. These findings are similar to the findings of other studies on relationship between working capital and capital structure. The study recommends that finance managers should consider average payment period, inventory conversion period, and cash ratio components in working capital while making capital decisions. However, this consideration should be only an addition to the other factors that factors that significantly influences capital structure decisions, such as opportunities for growth, composition of fixed assets in the total assets of the firm, profitability, tax consideration and size of the firm.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Decisions that influence capital structure and working capital of a firm are critical to maximizing the value of the firm and in rewarding owners of the firm with optimum returns. Finance managers' decisions on sourcing of funds are closely linked to investment decisions, since a firm would require adequate funds for running the firms' operations occasioned by investment decisions. Baker and Powell (2009) stated that financial management is a structured process of making decision that deals with procuring, funding and managing assets to achieve the business entity objectives. Jensen (2001) noted that, firm's long-term value maximization guides performance evaluation and decision making by the financial economists. He also noted that the premise of maximizing the value of the firm is consistent with maximizing shareholders value.

The capital structure and its determinant has been studied by various researchers in corporate finance. Rajan and Zingales (1985) stated that since the Modigliani and Miller modern capital structure theory of 1958, a lot of progress has been made on capital structure theory, with regard to understanding of important departure from Modigliani and Miller assertions that urged in support of relevance of capital structure to the value of the firm. Harris and Raviv (1991) surveyed capital structure theories and stated the existing empirical works points out towards existence of numerous factors that determine capital structure. The survey did not however the factors that were important, and under which context these factors affected capital structure.

Very limited empirical research work to explore how the capital structure is affected by working capital management practices. Meyers and Majluf (1984) pecking order theory, pointed towards a possible relationship between working capital management and capital structure in the. This theory argued that firms' manager has a preference of using internal funds to meet financing needs to avoid asymmetric information problem associated with debt and external equity financing. The ultimate result of working capital management is conversion short term assets and liabilities, arising from firm's operations into cash. This cash is among other uses, ultimately used to fund additional capital needs.

The relationship between working capital and capital structure has in the recent past attracted interest of scholars. Koralun-Bereźnicka (2014) conducted a research on impact of capital structure towards working capital, whereby financial leverage is treated as a determinant of working capital. Also, Bundala (2014) conducted a study on behavior of growth opportunities, working capital intensity and capital structure, for firms listed in the Dar es Salaam stocks exchange. This study makes an effort to contribute to the existing body of knowledge on corporate finance by exploring the impact of the individual aspects of components of working capital management on capital structure of non-financial public companies listed in the Nairobi securities exchange (NSE).

1.1.1 Working Capital Management

Brigham (2007) stated that Working capital is a financial measure that shows operating liquid funds at disposal of a profit earning entity, non-profit organization or other public entities including government entity. The management of working capital entails maintaining efficient levels of working capital components, consisting of accounts

receivables, inventory, and accounts payable, in relation to each other. This ultimately ensures that a firm maintains sufficient liquid cash levels for meeting short term financial obligations, avail cash to fund capital requirements and for distribution of economic benefits to the firm's owners.

According to Brigham (2007) working capital consist of four main components, namely; cash, marketable securities, inventories and accounts receivables. For each of these components, firms face a trade- off; since working capital is essential to the running of the business, the greater the holding of the working capital, the lower the operating risk and liquidity problems. However, holding working capital is costly in terms of handling charges, risk of spoilage and obsolescence for inventory, opportunity cost of capital, among other costs.

Atrill (2006) noted the importance of working capital management due as it impacts profitability, liquidity, and growth of the firm directly. He further stated that, working capital management is vital to financial health of the firm due to the amount of financial resources invested in working capital, as a proportion of the total assets employed.

According to Mukhopadhyay (2004), working capital is a very critical aspect of corporate management due its impact on the survival and success a firm. Adequate working capital is a requirement for any organization survival, irrespective of the size, nature of business and profitability. Excellence in working capital management is critical to corporate strategy achievement and in creating wealth for shareholder. It is noted as the time lag between procurement and delivery of the raw material and cash collection from the debtors as a payment for sale of finished goods. Working capital management approach, greatly impacts the profitability and liquidity the of the company Shin (2008). Whereas

long term capital decision is made on a longer period timeframe of over one year, finance manager have to make decision influencing the components of working capital on day to day basis. These decisions influence the riskiness, ability to meet financial obligation, profitability and ultimately the value of the firm.

Once the long-term capital is invested in capital project, the working capital invested in the economic activities arising from the capital investments ultimately generates the cash that among other uses, is reinvested in the business. According to Watson (2010) paying attention to short term decisions with regards to working capital ensures the objectives of long term capital investments are met. He further stated that working capital management aims at increasing the company's profitability and ensuring it has adequate liquid funds to meet short term obligation as they fall due in order to remain operation. Accordingly working capital is critical to generation of profit and ensure availability of liquid funds, to be used in paying out dividends to the shareholders and for reinvestment.

1.1.2 Capital Structure

Baker (2011) stated that, capital structure refers to the combination of long term capital funding applied by a business entity. The combination of funding includes hybrid securities, owners' equity, and debt. These are used by a firm to acquire long term assets, finance business operations and financing future business growth, and is most of the times referred to as financial leverage. He further noted that overall risk of a firm and cost of capital are significantly influenced by the capital structure of the firm.

Barclay (2005) noted that capital structure remains a long-standing puzzle that continues to hold interest of researchers. Since Modigliani-Miller proposition of 1958 regarding

irrelevance of capital structure determining the value of the firm in a frictionless market, academic researchers have continuously examined how the value of the firm is influenced by capital structure.

The value of a firm and shareholders wealth are affected by the sources of capital. While debt is the cheapest source of financing, the risk of a firm is increased by the increase in use of debt. Debt not only increases the risk of generating sufficient cash flow to meet maturing debt obligations, but also increases variability of earnings available to shareholders and thus increasing risk on return on equity. Financing decision involves risk return trade-off, the risk being financial risk posed by various financing options, as compared to the cost benefit for using the financing option (Baker, 2011)

An optimum capital structure is the financing ratio of long term borrowings and owners' equity in the long-term capital, which optimizes the value of the firm. Modigliani and Miller (1958) during the early research on capital structure and its effect in determining the value of the firm, argued in the assumptions confined perfectly competitive market assumptions, the value of the firm is not in any way influenced by capital structure. This implies that capital structure decisions do not add any value to the objective of maximizing shareholders wealth, and therefore deemed irrelevant. Further studies have subsequently been conducted with relaxation of the stringent assumptions under Modigliani and Miller study and have introduced imperfect market conditions such as asymmetric information, taxes, and bankruptcy costs. These studies have shown that capital structure decisions are relevant to shareholder's wealth maximization (Baker, 2011).

Pecking order theory (Myers, 1984) stated that firms' managers have preference of using internal funds over use of debt and external equity to avoid asymmetric information problem. It is therefore expected that firms with lower CCC are able to convert current assets in to cash more efficiently, making it available for funding investment opportunities. Firms' managers are able to utilize these funds instead of using debt or issuing additional shares. CCC is expected to have a direct relationship with debt-equity ratio.

1.1.3 Relationship between Working Capital Management and Capital Structure

Managers of a firm prefer internal financing to external financing, and in case of external financing, debt is preferred to raising capital from new ordinary shares, as stated by pecking order theory by Meyers and Majluf (1984). Working capital management ensures that the financial resources of the firm are converted into cash, that can be put into many uses, among them, internal funding. Any aspect of working capital management that increases conversion of working capital into cash is expected to have a negative relationship with leverage. There have been very limited studies undertaken on relationship between working capital levels and capital structure. However, the few studies conducted, found a theoretical relationship between working capital and capital structure, which varied in nature and in magnitude.

Koralun-Bereźnicka (2014) noted a negative relationship between debt ratio and working capital ratios by which suggested the higher use of debt is associated with lower working capital levels. This as explained by Nwaeze (2006), is compatible with pecking order

theory whereby, firms having higher debt ratio have an aggressive working capital strategy to raise as much cash as possible from its operation, to meet cash requirement needed to meet maturing debt obligations.

Nazir (2008) and Afza (2009) also noted a negative relationship between working capital requirements and leverage. Bundala (2014) concluded that capital structure had no influence on the working capital levels and intensity for firms quoted on the Dar es Salaam stock exchange. Gill (2011) noted that leverage was positively related to working capital implying that, the higher the leverage, the higher levels of working capital requirements.

As noted from the existing studies, there has been no conclusive findings theoretical relationship between working capital and capital structure. There was a variance in nature of the relationship as this was affected by regions, size of the firms, nature of industry of firms, nature of economy firms is operating in, among other factors.

1.1.4 Non-Financial Firms Quoted in Nairobi Securities Exchange

Informal trading in shares in Kenya begun in early 1920's, and was formalized in 1953 when Nairobi stocks exchange was set up as an overseas stock exchange. The NSE has evolved over time developing marketable securities in stock market and money markets, and also adopting use of technology in the trading of securities (NSE, 2016).

As of 2016, there are 64 quoted in the NSE categorized in 11 sectors. This study will focus on 47 companies in agricultural sector (6), automobile and accessories sector (3), commercial and services sector (11), construction and allied sector (5), energy and petroleum sector (5), investments (6) manufacturing and allied sector (10) and

telecommunication and technology sector (1). These companies' nature of operations, require a substantial investment in the working capital and leverage. Oduol (2011) noted that firms quoted in the NSE exhibited different nature of working capital composition, depending on the industry under which the firms operate combined with the nature of the business, he further noted that the mean debt for the firms based on data from financial reports from 2006 to 2011 was 48%, which implies significant portion of the companies 'long term capital is funded through debt. The management of working capital for these companies have a big impact in converting the working capital into cash, which can be used to internally fund capital projects instead of borrowing or issuing more shares. The efficiency in management of working capital determines the extent to which the companies use the internally generated funds or raises additional capital through long term borrowing or issue of additional shares.

The study will leave out 11 companies under banking sector due to anomalies associated with regulation by Central bank relating to provision for non-performing loans, liquidity of assets and capital holding, among other factors (Santos, 2001). The study will also exclude 6 companies under insurance sector since this firm do not have inventory in their ordinary course of business.

1.2 Research Problem

Researchers have sought to answer the question of optimal capital for a firm, this answer has been elusive and remains a puzzle. There has therefore been no guiding principle as to how managers choose between debt, internal equity and external equity in making a financing decision to arrive at an optimal capital structure. Various factors have been

postulated by different researchers as the determinants of capital structures adopted by firms. Various capital structures theories which includes:- Myers and Majluf (1984) pecking order theory, which indicates managers' preference in raising funding, Kraus and Litzenberger (1973) trade-off theory that argues managers balances risk and benefits of using debt, market timing theory by Baker and Wurgler (2002), which argues that managers decision to raise additional capital is influenced by their firms valuation perception, and signaling theory by Ross (1977) that urged that managers weigh in on the market information that will be perceived by the investors when a firm raises additional funds by use of either debt or equity. These theories indicated the importance of bankruptcy cost, taxes, agency problem and asymmetric information in capital structure (Baker, 2011).

According to pecking order theory (Meyers and Majluf, 1984) managers of a firm first preference in financing capital need is internal funds, then debt and finally equity. Working capital management determines the availability of internal funds to finance the capital needs, and therefore has an influence capital structure. It is therefore important to examine how the different aspects of working capital management affects the capital structure. Kahuria (2015), noted that average debt equity ratio for firms quoted in NSE from 2009 to 2013 was 232.2 %. It is important to examine whether, and by what magnitude, working capital management managements contributes to the high debt equity ratio for the companies quoted in the NSE.

A study by Kahuria (2015) established that, there was significant difference between capital structures of firms in different sector. The study established that leverage was negatively related to profitability, with highly geared firms reporting lower return on

capital employed (ROCE), than firms with low gearing. A further study on how working capital management is related to capital structure on non –financial public companies quoted in the NSE will further contribute to the findings this finding and provide investors with further insights in evaluating non-financial firms quoted in NSE.

Various researchers have conducted empirical study on how the working capital management affects firms' profitability and other aspect of financial performance of the firm. Additionally, various studies have been conducted in relation to relevance of capital structure to the value of the firm since MM seminal work on capital structure in 1958.There has been limited attempt to examine whether working capital management influences the long-term capital for the non-financial firms quoted in the NSE.

It is against this background that this study will be conducted with aim of establishing; the relationship between working capital management and the capital structure of the non-financial public companies listed in the NSE and the nature and magnitude of the relationship between working capital management and the capital structure of the non-financial public companies listed in the NSE.

1.3 Research Objective

The objective of the study is to determine the effect of working capital management on the capital structure of the non-financial public companies listed in the Nairobi Securities Exchange.

1.4 Value of the Study

Investors, finance managers, lenders and academic fraternity will benefit from the insights resulting from the study. This study will help investors in assessing the shares of the companies and making investment decisions based on correct information, by providing an understanding how working capital management practices affect the debt-equity ratios of the companies. Provider of debt capital will also benefit from the insights gained from the study which will help in assessing how the firms working capital practices affects the capital structure, and provide a new input in a reviewing the riskiness of a firm. The study will help the finance managers in understanding the impact of working capital decisions to the long-term finance and overall capital structure of the firm.

This study will provide new knowledge, insights to the academic world and provide motivation for new areas of research in the field of working capital management and capital structure. It will provide research gaps and provide reference for further studies in the fields of working capital management and capital structure. The finding of this study will also guide the policy makers in establishing best practices with regard to working capital management, when considering capital structures of a firm.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Key studies undertaken on working capital management and capital structure are examined in this chapter. It examines the importance of working capital management, and how it impacts capital structure. The chapter also reviews the key capital structure theories, key determinants of capital structure and summary of findings of various research studies undertaken on how capital structure is impacted by working capital management in different industries and across different regions.

2.2 Theoretical Review

In this section, the key theories on capital structure that seek to explain how the manager choose between debt and equity, will be reviewed. The theories reviewed are pecking order theory, trade-off capital theory and market timing theory.

2.2.1 Pecking Order Theory

This theory was developed by Myers and Majluf (1984) where according to the theory, optimum debt to equity ratio is not deliberately determined. It comes as a result of information asymmetry between the managers and the owners of the firm, the firms prefer internal funding to external funding, and in case of external funding, firms prefer debt to equity and will only use equity as the last resort.

Baker (2011) noted that, by virtue of possessing greater insight regarding firms 'value, the managers are not willing to float new shares, when they perceive that the firm is undervalued. An announcement regarding new equity issue signals the market that the

share is overvalued, which leads to decrease in the stock prices, eroding value of existing shareholders.

The theory argued that information asymmetry is solved if a firm does not issue any new securities, but uses the retained earnings to finance investment opportunities. The cost of issuing other forms of capital becomes more expensive as the information asymmetry increases, as a result of the need to publish financial information to reduce adverse selection between the firm and potential investors.

2.2.2 Trade-off Capital Theory

Kraus and Litzenberger (1973) developed static trade off theory which noted that managers of a firm works at balancing the tax benefits as a result of using of debt, with financial distress costs and bankruptcy which can be caused by utilizing debt. Since interest paid on debt is tax deductible, firm prefers debt over equity. The firm's values is increased by the present value of the gain arising from tax savings arising interest paid on debt.

In a scenario where there is no extra and balancing off cost of debt, the tax advantage, firms would be fully financed by debt. There is however an offsetting cost, which is bankruptcy, due to the increases risk of financial distress additional debt. High probability of bankruptcy can be directly attributed to high levels of debt. According to Haugen and Senbet (1978), there is direct and indirect cost of financial distress. Direct cost of bankruptcy comprises of credit costs, legal fees, and restructuring cost, among others. Loss in customer confidence, poor vendor relationship, and high turnover of key

employees. The firms' optimal debt will therefore be at the point where marginal tax advantage from use of debt is equal to offsetting cost of bankruptcy.

Baker (2011) noted that agency cost should also be weighed against tax advantage of debt. He argued that since the managers of a firm have an incentive of maximizing the value of equity holders at the expense of bondholders, the rational bond holders aware of this agency problem are likely to charge a premium on the debt, thus reducing the tax advantage accrued from use of debt.

2.2.3 Market Timing Theory

According to Baker and Wurgler (2002), managers of firms raise capital from the stock market when the firm's shares are assumed to have favorable and Market –to –book (M/B) ratio. The equity prices relative to M/B ratio therefore influences capital structure since the managers time equity issue to the market condition. The theory observed that, capital structure does not result from deliberate optimization strategy of capital mix by firms' managers, but is a reflection of repeated attempts by the firms to issue new equity based on assumption of favorable market.

The theory also observed that low leveraged firms most likely raised funds from the capital market when their valuation was high, high leveraged firms on the other hand tended to be the ones that raised funds from the capital market during the period when they are lowly valued.

In conclusion, the studies reviewed attempt to examine the "capital structure puzzle" and offer explanation on how firms arrive at a given capital structure. However, none of the studies conclusively answers the question" What is the optimal capital structure"? The

studies have not directly studied how the levels of working capital affects capital structure. The pecking order theory has however alluded to the possible relationship between working capital levels and capital structure. Nwaeze (2006), further explained this relationship by stating that, firms with higher debt ratio have an aggressive working capital strategy to raise as much cash as possible from its operation, to meet cash requirement needed to meet maturing debt obligations.

2.3 Determinants of Capital Structure for Non-Financial Firms

This study focuses on impact of working capital management on capital structure for non-financial firms quoted in the NSE. Apart from capital structure, there are other determinants capital structure for these firms. These includes the following: -

2.3.1 Tangibility of Assets

The tangibility of assets represents a measure of level of collateral a firm can put up to its debt financiers, (Baker, 2011). Firms whose fixed assets make up a higher proportion of the total assets, are able to provide higher level of security to debt financiers, since these assets can be sold in the open market in case of bankruptcy to recover the debt. This is not so for the firms with low proportion of fixed to total assets ratio, since they have lower value of assets that can be used as collateral to back debts.

According to Baker (2011) although tangibility makes debt less risky, there is ambiguity as to how it affects capital structure. According to Jensen and Meckling (1976), stockholders of with high debts have a higher tendency to over invest, which causes a conflict between shareholder and bondholder. Securing the debt with existing assets however gives a higher assurance to the creditors regarding repayment, leading to higher

rate of debt recovery. This notion in according to trade off theory results in fewer debt related agency problems and lowers the expected cost of distress which will lead to direct positive relationship between long-term debt and the proportion of tangible asset.

Grossman and Hart (1982) argued that managers of firms with limited assets that can be utilized as collateral are more likely be inefficient by consuming wasteful level of perquisites resulting in higher agency cost in this firms. Highly levered firms are more closely monitored by the bondholders which reduces the ability of this managers to consume excessive perquisites. Also, firms with high levels of tangible assets have low information asymmetry which makes less costly to issue equity (Harris and Raviv, 1991). Monitoring the firms with less collateralizable assets is very costly, this causes them to deliberately choose higher levels of debt, which limit consumption of perquisites. This notion points toward an inverse relationship between leverage and tangibility of assets as per pecking order theory as the firm will have preference of equity over debt.

2.3.2 Firm Size

The firm size has both positive and negative relationship on leverage. Titman and Wessels (1988) argued diversification of operations that is characteristics of large firms tend lowers probability of failing. Trade-off theory notes a negative relationship between size and probability of bankruptcy resulting to a positive relationship between leverage and size. Extent of the information asymmetry between managers of a firm and capital markets can be measured using size of the firm. Large firms are closely monitored by analysts and the capital market regulators, reducing the possibility of providing informationally sensitive equity. This according to pecking order theory leads to an

inverse relationship between long term debt and size, with large firms preferring equity over debt.

Titman and Wessels (1988) noted that small firms have a higher likelihood of resorting to use of more short-term financing than larger firms, due to the high transaction costs of long term debt or equity. This mode of financing may cause a "small firm risk effect" as the firms are more exposed to financial distress in temporary economic down turn than larger, longer-geared firms.

2.3.3 Profitability

Trade off theory opines that agency costs and taxes cause profitable firms to prefer higher leverage. Increase in profits results to decrease in bankruptcy costs, also interest payments are deductible from taxable income for tax computation purpose. This acts as an incentive for profitable firms to be more levered. Agency models by Jensen and Meckling (1976) noted that higher debts aids in controlling agency problem, as the managers use the excess cash to pay the debts instead of using the cash to finance perquisite consumption. Baker (2011) noted that the strong commitment to utilize some significant earnings before interest repay debts points out towards a positive relationship between leverage and profitability. This according to Ross (1977) is consistent with signaling model of capital structure. In this model, managers make use of higher debt to give the market a sense of optimism in their view regarding the future of a firm.

Pecking order theory note that, higher earnings leads to lower debt due to firms' preference to first utilize internally generated funds, followed by use of debt, with issuing new equity as the last option. Information asymmetry in the issue of new equity causes an

adverse selection costs thus causing for the order of preference by the firms' managers (Baker, 2011). This means that, debt increases when investments are greater than retained earnings and on the other hand declines once investment is less than the retained earnings.

2.3.4 Growth Opportunities

Levered firms are more likely to be involved in substituting asset and under investment (Jensen and Meckling, 1976). Firms with substantial growth are associated with higher debt related agency cost, as the debt holder put in more effort in monitoring asset substitution and under investment. According to trade-off theory, lower debt is found in firms with more opportunities for growth, since the growth opportunities enables them to continue investing and thus avoiding suboptimal investment and asset substitution which can cause bondholder - stockholder agency conflict, (Baker, 2001). Jensen (2006) free cash flow also supported this notion, he stated that firms with more investment opportunities do not require moderating effect of the debt payment to prevent managers from spending funds on perquisites as the excess funds will be channeled to fund the growth opportunities.

Drobetz and Fix (2003) noted that a firm with high growth is more probable to fund this growth using debt, since the internal funds may be insufficient to finance the growth. Pecking order theory predictions is in line with the notion of positive relationship between growth opportunities and leverage, whereby, leverage grows when retained earnings are less than investments and declines when retained earnings exceeds investment opportunities. Amore complex view of pecking order theory however suggest

that managers take into consideration the totality of financing cost, whether in present or in future. To balance future and current costs, firms that expects a future growth maintains as low debt as possible in order to avoid issuance of new equity in future to finance future growth. (Baker, 2011). This implies that firms with higher growth opportunities will have less current debt financing.

2.3.5 Tax Considerations

Trade off theory opines that firms prefer debt financing when tax rates on corporate profits are higher, as firms takes advantage of tax allowable interest payments to reduce tax liability. Baker (2011) argued that, firms with other opportunities to reduce tax such as tax credit from previous year's losses, tax allowable capital deductions and capital investment tax incentives, are less inclined to take advantage of debt driven tax shield. According to Deangelo and Masulis (1980) non-tax debt shield replaces the tax benefits of debt financing, which means that the firms with high on-tax debt shield is likely to have lower debt. Leverage and non-debt tax shield are negatively related.

Scott (1977) argued that firms with a high level of tax shields from other sources apart from debt, will most likely have a higher proportion of collateralizable assets to utilize in securing debts. This increases the firm's ability to raise debt financing using less risky secured debt, which points out to a positive relationship between non-debt tax shields and leverage.

2.4 Empirical Review

This section examines the various empirical studies conducted both globally and locally to examine the relationship between working capital management and capital structure.

2.4.1 Empirical Review: Global Studies

The review of literature review in on empirical studies in finance shows that extensive studies have been conducted and extensive theoretical framework developed around capital structure. In contrast, theories on working capital are much less developed. This was pointed out by Koralun-Bereźnicka (2014) who carried out a study of capital structure as a determinant of working capital management for firms of different size groups across EU covering eleven years period 2000 – 2010. The study aimed at determining the direction and the significance of capital structure impact on working capital. The study examined correlation between capital structure ratios and working capital ratios in two crosses –section to determine whether and how the country related factors and firm size related factors influenced relationship between capital structure and working capital. The study concluded that, main debt ratios had a mostly insignificant negative relationship with working capital which intimates that the high levels of leverage is associated with low levels of working capital, the lower the working capital. The study also noted that, debt ratio has significant and a positive relationship with most working capital ratios for small firms, but negative and insignificant for medium and large companies.

Bundala (2014) undertook a study to investigate whether capital structure influences then the working capital intensity and growth opportunities for firms quoted in the Dar es Salaam stock exchange in Tanzania for ten companies list as per October 2012. The objectives of the study were to examine on the trends of opportunities for growth, capital

structure, working capital intensity and for listed companies in Tanzania, the study also focused on the influence of capital structure on opportunities for growth and working capital levels for these companies and also examined the how working capital helps in exploiting growth opportunities for firms in listed in the Dar es Salaam stock exchange. Multivariate multiple regression model to for data analysis was applied in the study. The study found that, listed companies in Tanzania have a low leverage, have a high growth rate and also have low liquidity. Capital structure was found to have an insignificant and negative relationship with working capital, opportunities for growth for listed companies in Tanzania.

Nazir and Afza (2009) studied firms' requirements of working capital and the variables that influenced the amount of working capital used by firms in Pakistan. The study focused on fourteen industrial groups and sampled one hundred and thirty-two firms in this groups, listed in the Karachi Stock Exchange (KSE) between the periods 2004 to 2007. The study aimed at examining the factors influencing the working capital requirements of these firms. The study used ordinary lease square regression model to determine the variables that influenced working capital requirements. The study found that leverage of a firm and working capital management of a firm are strongly and negatively related. According to the findings of the study, size of the firm and the working capital requirements did not have any significant relationship.

The factors influencing working capital management practices and working capital trends in Mauritian small manufacturing firm were examined by Padachi (2006). The study examined 58 small manufacturing Companies in Mauritius for a period from 1998 to 2003. Regression analysis was used to examine if there existed of relationship between

the study variables. A significant relationship between profitability and working capital management was noted and that sizable investment in receivables and in inventories resulted to low profits. Raheman and Nasr (2007) also noted similar findings in their study of working capital and profitability for ninety for Pakistani firms listed in the Karachi stock exchange for six years from 1999 to 2004 whereby a negative relationship between liquidity and profitability was noted.

2.4.2 Empirical Review: Local Studies

Kuria (2010) examined the determinants of capital structure for firms quoted in the NSE. The study used the secondary data for non-financial firms quoted in the NSE between 2003 and 2009.Regression model was used to analyze the data. Profitability and asset tangibility were found to have be significantly and negatively related with capital structure, on the other hand liquidity, growth and taxation had an insignificant negative relationship with leverage. Also, firm's risk had a significant positive relationship with capital structure, while non-debt tax shield and divided policy had an insignificant positive relationship with capital structure.

Matheri (2013) studied determinants of capital structure for internet service providers in Kenya. The study focused on eleven internet service providers that controlled 99.5% market share of internet service market for a period between 2009 and 2013. The study using regression model to analyze the data established that asset tangibility, profitability, and growth were positively related to with the capital structure. On the other hand, liquidity and firm size were negatively related to capital structure.

Owino (2010) undertook a study to determine relationship between liquidity and leverage of companies quoted at the NSE. The study focused on thirty companies for a period between 2006 and 2010, and analyzed the data using regression model. The concluded that liquidity had a negative but insignificant with leverage.

Kasuku (2014) conducted a study that sought to establish how the financial performance is influenced by capital structure and the working capital management for manufacturing firms listed in the NSE. The study focused on seven manufacturing companies that were quoted in the NSE for a period of five years from 2010 to 2014. According to the study findings working capital is significantly and negatively related to the profitability of manufacturing firms listed in the NSE.

Muema (2013) examined the factors that determine the capital structure of firms listed in different market segments of NSE. The study used a total of 60 firms quoted in the NSE and examined financial data for five years between 2008 and 2012. The study used regression analysis to establish that liquidity is a key determinant of capital structure for firms listed under the agricultural sector.

2.5 Conceptual Framework

The study will evaluate the individual components of working capital management, and how these components affects leverage. The working capital components includes accounts payable average payment period, inventory average conversion period, debtors' average collection period, and cash ratio.

Debtors average collection period is the average number of days it taken by a firm to convert receivables to cash after selling a product or services, (Sagner, 2010). The lower the DSO, the more efficient a firm is able to convert receivables in to cash.

Sagner (2010) noted accounts payable average payment period as a measure of the duration it takes to pay the suppliers of good or services. The longer the number of days the better it is for a firm in having cost free financing from the suppliers. However, this could also be associated with loss of early payment discounts with the suppliers, add poor working relationship with suppliers which has a negative impact on the supply chain efficiency.

According to Sagner (2010) inventory average conversion cycle is a measure of number of days taken in converting inventory to sales. The lower the average conversion cycle, the more efficient a firm is in converting inventory into sales.

Bragg (2012) noted that cash ratio indicates the amount of current liabilities that can be paid off right away using the available liquid cash and short term marketable securities. High cash ratio indicates high ability of the firm to pay -off its short-term liabilities.

The study will use fixed assets to total asset ratio as the control variable.

The conceptual framework of the study can be summarized in the ;

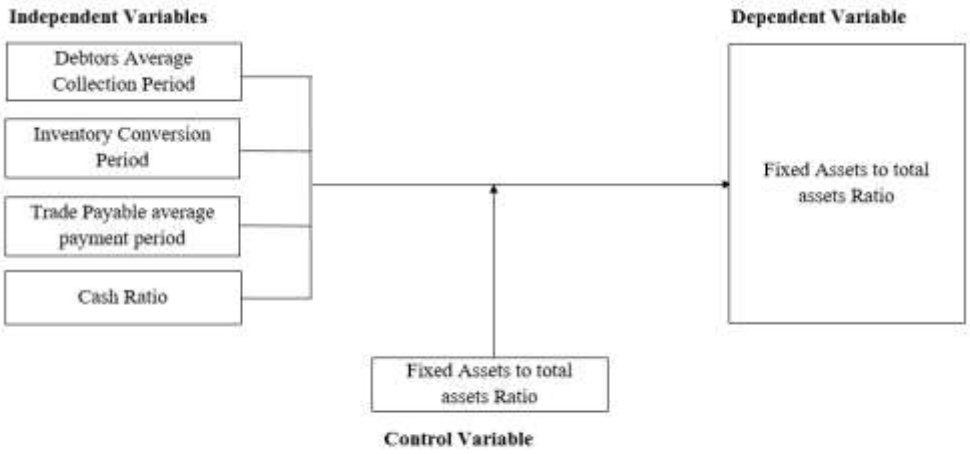

Figure 1.1: Conceptual Framework Model

2.6 Summary of the Literature review

The review of empirical and theoretical studies reveal that various researchers have studied working capital as a determinant of firm's financial performance, and have also examined the determinants of capital structure.

The existing studies has focused on extensively determinants of capital structure, with some studies establishing that liquidity is negatively related to leverage. Liquidity is closely related to working capital management, hence there is a need to further examine the individual component of working capital in their relation to the capital structure. Further, most of the studies have found an insignificant relationship between working capital and capital structure. There is a need to further examine whether indeed the individual working capital management components, namely payables management, inventory management and, receivable management, have any relationship with capital structure, the nature of the relationship and the magnitude of the relationship.

Bereźnicka (2014) and Bundala (2014) attempted to establish a link between capital structure and working capital, using capital structure as the independent variable, and working capital as the dependent variable. No study was found during the review that has examined the impact of working capital management on the capital structure. The study will therefore fill the gap by establishing how working capital management as an independent variable is related to capital structure as the dependent variable.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The focused of this chapter was on examining the impact of working capital management on the capital structure of non-financial firms quoted in the NSE. This chapter focuses on research design, population size, and data collection procedures and data analysis.

3.2 Research Design

A descriptive research design was applied on the study. Cooper &Schindler (2006) stated that descriptive analysis is applied when a researcher seeks to gain more knowledge on the topic under study. This is achieved through collection of data and tabulation of frequencies on research variable. The descriptive research design was preferred because it describes how capital structure relate to individual elements of working capital management. This will help determine how the individual elements of working capital management relates to capital structure and the magnitude of the relationship.

3.3 Population

The population of the study focused on all the 47non-financial companies listed in the NSE in 2016. (Appendix II). According to Thompson (2013) a sample represents some elements drawn from the population under study, to represent the whole population. A sample is usually selected when a researcher cannot study the whole population. The use of population eliminated sampling errors, which increased the reliability of the study findings.

3.4 Data Collection

This study collected data from published annual financial statements obtained from NSE and CMA, for six years from 2010 to 2015.This data was used to measure the following variables; Debt/Equity ratio, inventory conversion period, accounts receivable collection period, cash ratio and accounts payable period.

3.5 Data Analysis

Cooper (2006) stated that data analysis involved summarizing the data obtained from a study, identifying patterns or trends and presenting the data using bar charts, percentages, frequency tables and pie charts. The information is presented quantitatively in table and figures. The mean and standard deviation will be used to describe the data. This analysis was done using Microsoft Excel.

Correlation and regression analysis was conducted using SPSS and results presented in tables from which the interpretation was drawn. A regression analysis was conducted to measure the impact of independent variables on debt/equity ratio. The following model was used to measure the effect of working capital management on the capital structure;

$$D= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where;

D is the debt ratio, calculated as long-term debt/ (Long term debt + Equity)

$X_1$is the average collection period calculated as Trade Receivables/Sales * 365

X_2 is the inventory conversion period calculated as Inventory/Cost of Sales * 365

X_3 is the average payment period calculated as Trade Payables/Cost of Sales * 365

X_4 is the cash ratio calculated as Cash + Short term marketable securities/Current liabilities.

$X_5$is the fixed to total asset ratio calculated as Fixed Assets/Total assets. This will be the control variable for the model.

$\varepsilon$is the error term

$\beta_{0,}$is the constant term

$\beta_{1,}\beta_{2,}\beta_{3,}\beta_4$ are the coefficients of independent variables

Correlation coefficient (r) was computed and used to determine the degree and nature of the relationship between dependent variable and each of the independent variables. Coefficient of determination (R^2) was used to determine the amount of variance in the dependent variable that can be explained by the independent variables. The significance of relationship between the independent variable and the dependent variables was measured using T-test. This was used to test the hypothesis below;

H_0: There is no linear relationship between dependent variable and each independent variable.

H_1: There is linear relationship between dependent variable and each independent variable.

The null hypothesis was tested at 5% significance level.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter outlines the findings from data analysis and research findings. The finding of this research derives from the research objective which is to determine the effect of working capital management to the capital structure of the non-financial firms quoted in the NSE. The data was collected from published financial statements from 2010 to 2016, and used to compute various ratios used as variables in the study. The chapter gives details of descriptive statistics of the variables used in the research model, the model summary results, ANOVA (analysis of variance), correlation between each independent variable (predictors) and the dependent variable (response), the significance of each independent variable and finally stating the research model.

4.2 Response Rate

The study was not able to obtain data from 3 of non-financial firms quoted in the NSE, the data pertaining to this firms was not published in the NSE website and other publicly available sources. However, the data from the 44 firms was representative of the population since they consist of 94% of the population.

4.3 Descriptive Statistics

Table 1: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Debt ratio	0	1.689	0.185	0.278	2.550	8.353
Average collection period (X1)	8.704	563.775	93.196	84.819	2.732	9.389
Inventory conversion period (X2)	0.190	62,980.955	733.027	5455.086	10.402	112.426
Average payment period (X3)	0.589	2,412.846	164.413	239.887	5.159	41.071
Cash ratio (X4)	-4.869	71.886	0.872	5.679	6.406	105.780
Fixed to total asset ratio (X5)	0.021	3.629	0.602	0.359	2.908	24.973

Source: Research Findings

Table 1 above shows the mean, standard deviation, variance, skewness and kurtosis for all the variables included in the model. That is the dependent variable: debt ratio, the control variable: fixed to total asset ratio and the independent variables: inventory conversion period, the cash ratio and average payment period. From the results, average collection period, all the variables have a skewness that is greater than zero, implying that the data was skewed to the right. Additionally, the data set is not normally distributed since the kurtosis of all the variables is not equal to 3. Since the kurtosis of all the variables is greater than zero, the distribution has heavy tails and is therefore a leptokurtic distribution.

The average debt ratio is 0.185, implying that most of the firms under the study used low levels of debt, the capital is largely financed through owners' equity. The average collection period for the firms under study is 3 months, however there is high variance in the average collection period, which suggests that some firms have a short collection

period and other firms have a very long collection period. The data from the study shows that the average inventory conversion period is 2 years, however there is a very high variance, which suggest that there is a big difference between some firms with low average inventory conversion period and some firms with very high inventory conversion period. Average payment period for the firms under the study is 5.29 months, there is however a high variance in the average payment period which suggests that some firms have a very short average payment period while others have a very long average payment period. The cash ratio for the firms under the study averaged at 0.87, implying that the firms under the study have 87% cash cover on the current liabilities. This ratio also has a high variance, which suggests that some firms under the study have a very low cash ratio, while other firms have a very high cash ratio. The average fixed asset to total asset ratio for the firms under the study is 0.602. This implies that 60% of the total assets for the firms are fixed asset, and 40% of the total assets are current assets.

4.4 Correlation

Table 2: Correlations

Pearson Correlation	Debt ratio	Fixed to total asset ratio (X5)	Average collection period (X1)	Inventory conversion period (X2)	Average payment period (X3)	Cash ratio (X4)
Debt ratio	1.000	0.154	0.118	0.070	0.067	-0.093
Fixed to total asset ratio (X5)	0.154	1.000	-0.052	0.311	-0.043	0.251
Average collection period (X1)	0.118	-0.052	1.000	-0.060	0.144	0.035
Inventory conversion period (X2)	0.070	0.311	-0.060	1.000	0.075	0.410
Average payment period (X3)	0.067	-0.043	0.144	0.075	1.000	-0.006
Cash ratio (X4)	-0.093	0.251	0.035	0.410	-0.006	1.000

Source: Research findings

Table two above shows correlations between each of the independent variable and the dependent variable, it also shows correlations between each independent variable. All the independent variables are correlated to the dependent variable, with the all correlations being less than 50% (0.5). This implies that the correlations between the independent variables and the dependent variable are insignificant. Additionally, all the predictor variables except cash ratio have a positive correlation with debt ratio.

4.5 Regression Analysis and Hypothesis Testing

4.5.1 Model Summary

Table 3: Model Summary

Model	R	R Square	Adjusted R Square
1	0.154[a]	0.024	0.02

Source: Research findings

Table 3 shows the model summaries, R value is 0.154 which implies a positive but a weak correlation between working capital management and capital structure, R squared value of 0.024 and adjusted R square is 0.02. This implies that 2.4% of the change in debt ratio can be explained by the independent variables. The other factors not studied contribute the remaining 97.6% of variance in the dependent variable.

R value for the model without the control variable of fixed assets to total assets ratio is 0.264, with R square value of 0.069.

4.5.2 ANOVA

Table 4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	p-value
1	Regression	0.481	1	0.481	6.348	.012[a]
	Residual	19.856	262	0.076		
	Total	20.337	263			

Source: Research findings

The results from analysis of variance indicates the F statistics is 6.348, this is significant at 5% confidence level since the P-value (0.012<0.05). This indicates that the model is significant in explaining the movement in the dependent variable.

4.5.3 Model Coefficients

Table 5: Significance of independent variables

Model	Unstandardized Coefficients		t- calculated	P-value
	B	Std. Error		
(Constant)	0.056	0.04	1.4	0.163
Fixed to total asset ratio (X5)	0.139	0.05	2.796	0.006
Average collection period (X1)	0.000	0	2.163	0.031
Inventory conversion period (X2)	0.012	0	1.357	0.176
Average payment period (X3)	0.037	0	0.783	0.435
Cash ratio (X4)	-0.009	0.003	-2.694	0.008

Source: Research Findings

Based on the table in the previous page, the model below is derived;

$D = 0.056 + 0.012X_2 + 0.037X_3 – 0.009X_4 + 0.139X_5$

Where: D is debt ratio

X_2 is inventory conversion period

X_3 is average payment period

X_4 is the cash ratio

X_5 is the fixed to total asset ratio (control variable)

X_1 is not in the model since it has a coefficient value of 0.000.

The table above shows the coefficient values, t-statistic values and p-values for the independent variables. From the results, the average collection period, cash ratio and fixed to total asset ratio are significant predictors of the model. Average collection period, cash ratio, and fixed assets to total asset ratio has a p- value of 0.031,0.008 and 0.006 respectively which is less than statistical significance of 0.05. Additionally, the results show that inventory conversion period and average payment period are not significant predictors in the model. Inventory conversion period and average payment has a p-value of 0.176 and 0.435 respectively which is more than statistical significance of 0.05.

4.6 Discussion of the Research Findings

The study findings indicate that, inventory conversion period is positively related to the debt ratio. An increase in the inventory conversion period increases the debt ratio of the firm. This is in agreement with the pecking order theory in that, as the inventory conversion period increases, the longer the funds are tied up in inventories, thus unavailable for internal funding. This will result in firms' borrowing, which is the next best option as per pecking order theory, thus a positive relation between the inventory conversion period and the debt ratio.

According to the study findings, there is a positive relationship between average payment period and the debt ratio. This finding is inconsistent with the packing order theory. It is

expected that, average payment period has a negative relationship with debt ratio, the longer the payment period, the more the funds retained to fund internal capital requirements. However, it can be argued that, firms with longer average payment period are already facing financial pressure and would have exhausted internal funds, which would imply that this firms would resort to borrowing, which according to the pecking order theory is the next best alternative. In this case, the positive relationship between average payment period and debt ratio would support the pecking order theory.

The study findings indicate that, cash ratio has a negative relationship with the debt ratio which implies that, firms with high cash balances would have lower debts. This finding is consistent with pecking order theory, since cash is the most liquid asset and easily accessible form of internal funding.

According to the findings of the study average collection period do not have any impact on the debt ratio. This finding is inconsistent with the pecking order theory. It would be expected that, average collection period to have a positive relationship with the debt ratio, in that, the longer the average collection period, the higher the funds tied up in the receivable, and therefore not available for internal funding. Firms with high average collection period, would result to borrowing to meet capital requirement, and thus would have a higher debt ratio. A further study would be required to further examine the relationship between average collection period and debt ratio.

The study findings also indicates a positive but insignificant relationship between working capital management and capital structure. This is similar to the findings of Owino (2010), who examined the relationship between liquidity and leverage of the companies quoted in the NSE between 2006 and 2010, and concluded there was a

negative and insignificant relationship between liquidity and leverage. These findings were similar to Matheri (2013), who established that liquidity and firm size had a negative relationship in eleven internet service providers that controlled 99.5% of the internet service market share between 2009 and 2013.Muema (2013) however established that, liquidity is a key determinant of capital structure for the firms listed under agricultural sector in the NSE studied between 2008 and 2012. The study also found that the control variable has an effect on the results of the model, the R squared value declines from 6.9% to 2.4%, which implies that fixed assets to total assets ratio has a significant impact on the overall model.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section gives a summary of the research findings, the conclusion and recommendations from the outcomes of the findings. It also outlines the limitations of the study and gives a suggestion on the areas of further research

5.2 Summary of Findings

This study focused on determining the effect of working capital management on the capital structure of non-financial firms quoted in the NSE. The study used the published financial statements for the target population from 2010 to 2016 to obtain the secondary data, which was analyzed using descriptive statistics and regression analysis. There were four independent variables, and one control variable, namely; average collection period, inventory conversion period, average payment period, cash ratio, with fixed assets to total assets ratio as a control variable. Debt ratio was used as the dependent variable.

The study revealed that inventory conversion period, average payment period, and fixed assets to total assets ratio is positively related with to the debt ratio. Cash ratio on the other hand has a negative relationship with the debt ratio. Average collection period had a coefficient value of zero and therefore has no impact on the debt ratio.

The negative relationship between cash ratio and debt ratio supports pecking order theory which states that firms prioritize use of internal funding before making use of other sources of fund. The positive relationship between inventory conversion period and debt

ratio also supports the pecking order theory. Delays in converting inventories into sales ultimately delays cash collection, and the availability of liquid funds as a source of capital (Brigham 2007).

The positive relationship between average payment period and the debt ratio departs from the pecking order theory. Longer payment periods to the creditors implies more cash is conserved internally, that can be used for internal funding. It is therefore expected that average payment period would have a negative relationship with the debt ratio. These study findings could suggest that firms with high debt ratio delays paying their creditors a further research is needed in this are to further explain this relationship.

The findings revealed that the model selected explains 2.4% of the total variance for the dependent variable. Moreover, the control variable fixed to total asset ratio has an effect on the debt ratio. This is consistent with finding of Koralun-Bereźnicka (2014) and Nazir& Afza (2009), that working capital has insignificant relationship with capital structure. The model does not explain the 97.6% of the changes in debt ratio. Additionally, apart from the cash ratio which is negatively correlated, all the independent variables are positively correlated to the dependent variable. However, the correlations are low since they are less than 0.5. Lastly, the average collection period, cash ratio and fixed to total asset ratio are the significant predictors in the model.

5.3 Conclusions

Based on the findings on the study of the effect of working capital managements on the capital structure of non-financial firms quoted in the NSE, the average collection period, cash ratio has a significant effect the capital structure of non- financial firms quoted at the

Nairobi Securities Exchange. Cash ratio has negative relationship with debt ratio, firms can reduce the leverage by improving the cash ratio, which means that the cash will be available to fund internal capital requirements instead of resorting to borrowing. Cash ratio was also found to have a significant impact on the debt ratio and is therefore an important variable to consider in the capital structure decisions. The findings average collection has however yielded mixed findings. The study found that, average collection period is significantly and positively correlated with Debt ratio, which implies that, the longer the collection period, the higher the debt ratio. The firms can therefore reduce debt ratio, by improving cash collection for the receivables. The regression model indicated that, average collection co-efficient is zero, which means that the variable has no effect on the debt ratio. This finding is inconclusive, a study needs to be undertaken to further examine this outcome.

On the other hand, inventory conversion period and average payment period have an insignificant effect on the capital structure for the firms under the study. Inventory conversion period was found to have a positive effect on the capital structure, implying that the longer the inventory conversion period, the higher the debt ratio. Firms can reduce the debt ratio by improving the efficiency and reduce the time it takes to convert inventory to sales, which frees up the funds tied in inventory to fund internal capital requirements. The study however found this relationship to be insignificant, and therefore this variable does not have a considerable influence on the debt ratio for the firms under the study. Average payment period was found to have a positive relationship with the debt ratio. The longer the average payment period, the higher the debt ratio, this could be caused by the fact that, firms with lower ability to raise internal funding are likely to take

longer in paying the suppliers, and would naturally resort to borrowing, which according to the pecking order theory, is the next best alternative. This variable has an insignificant relationship with the debt ratio, and will therefore have a low influence on the capital structure.

In line with the findings of the study, null hypothesis is rejected and the alternative hypothesis accepted, that there is a linear relationship between debt ratio (dependent variable) and average collection period, inventory conversion, period, average payment period and cash ratio, which are the independent variables. In addition, the fixed to total asset ratio which is the control variable affects the capital structure of the listed non-financial firms and can therefore not be downplayed.

5.4 Recommendations

Based on the findings and conclusions, working capital management has limited impact in the capital structure. Moreover, only average collection period and cash ratio have a significant impact on the capital structure. The study recommends that the managers of non- financial firms listed at the NSE should put more weight in considering other determinants of capital structure such as tangibility of assets, firm size, profitability, growth opportunities, tax considerations, among others, in making capital structure decisions, and only consider to a limited extent, average collection period, cash ratio and fixed to total asset ratio in evaluating capital structure decisions.

5.5 Limitation of the Study

This study was limited to non-financial firms quoted in the NSE, thus not all the firms in NSE were considered, hence, some characteristics in the other firms has not been

considered in the results of the study. Also, firms not quoted in the NSE have not been considered in the study. The results from this firms could have a significant outcome on the findings of the study regarding effect of working capital management of the capital structure of firms.

Due to the limited time and resources, this study was limited to firms quoted in NSE between 2010 and 2016, which has limited the scope to few firms within Kenya for a limited period. More data obtained from a wider source and for a longer period could yield a variation in the findings. The study also relied on data prepared in accordance to international financial reporting standards, however application of varying policies in some variables under study such as provisions for bad debts and provision for obsolescence for inventory could result in different outcomes for the firms under study.

5.6 Suggestion for Further Study

This study relied on data between 2010 and 2015 and therefore could be improved by increasing the period over which the effect of working capital management on capital structure is examined. The study should also be extended to other firms not quoted in the NSE, since this study only focused on non-financial firms quoted in the NSE.

A further study need to be conducted in other parts of the world, since this study was limited to firms operating in Kenya and to some extent the East African region. It would also be beneficial to examine whether the size of a firm has an impact on the relationship between working capital management and the capital structure. The positive relationship between average payable days and the debt ratio needs to be examined further. This relationship departs from the expected negative relationship between debt ratio and

average payable days. Also, the relationship between average collection period and capital structure need a further study to establish the size of the coefficient of the relationship, which was inconclusive in this study.

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APPENDICIES

Appendix I: Data Collection Form

Company Name:										
Year	Capital + Long term debt	Long term Debt	Sales	Cost of Sales	Trade Receivables	Trade Payables	Fixed Assets	Total Assets	Cash&Cash equivalent	Current Liabilities
2011										
2012										
2013										
2014										
2015										

Appendix II: Non- financial Companies Listed at the NSE

1. Eaagads Ltd
2. Kakuzi Ltd
3. Kapchorua Tea Co. Ltd
4. The Limuru Tea Co. Ltd
5. Sasini Ltd
6. Williamson Tea Kenya Ltd
7. Car & General (K) Ltd
8. Marshalls (E.A.) Ltd
9. Sameer Africa Ltd
10. Atlas African Industries Ltd
11. Express Kenya Ltd
12. Hutchings Biemer Ltd
13. Kenya Airways Ltd
14. Longhorn Publishers Ltd
15. Nairobi Business Ventures Ltd
16. Nation Media Group Ltd
17. Standard Group Ltd
18. TPS Eastern Africa Ltd
19. Uchumi Supermarket Ltd
20. WPP Scan group Ltd
21. ARM Cement Ltd
22. Bamburi Cement Ltd
23. Crown Paints Kenya Ltd
24. E.A.Cables Ltd
25. E.A.Portland Cement Co. Ltd
26. KenGen Co. Ltd
27. KenolKobil Ltd
28. Kenya Power &Lighting Co Ltd
29. Total Kenya Ltd
30. Umeme Ltd
31. Centum Investment Co Ltd
32. Home Afrika Ltd
33. Kurwitu Ventures Ltd
34. Olympia Capital Holdings Ltd
35. Trans-Century Ltd
36. Nairobi Securities Exchange Ltd
37. A.Baumann& Co Ltd
38. B.O.C Kenya Ltd
39. British American Tobacco Kenya Ltd
40. Carbacid Investments Ltd
41. East African Breweries Ltd
42. Eveready East Africa Ltd
43. Flame Tree Group Holdings Ltd
44. Kenya Orchards Ltd
45. Mumias Sugar Co. Ltd
46. Unga Group Ltd
47. Safaricom Ltd