THE RELATIONSHIP BETWEEN WORKING CAPITAL MANAGEMENT PRACTICES AND FIRM PROFITABILITY OF COMMODITY TRADING COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE

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

NOVEMBER 2016

DECLARATION

This research project is my original work and has never been presented in any other university or College for an award of degree.

Signed…… Date……

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

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DEDICATION

To my parents, thank you for the unconditional support and inspiration. To my wife and daughters, thank you for your motivation and support.

ACKNOWLEDGEMENT

I first thank God the Almighty, for getting me this far and I thank all those who supported me through my entire studies.

Several people have contributed in various ways to the completion of this work. My supervisor Dr. Kennedy Okiro for his guidance and continuous support throughout the entire course and the project. I thank him for his guidance, corrections and encouragement.

To my dear family and friends for their moral and spiritual support throughout the project work – I am deeply indebted to you.

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LIST OF ABBREVIATIONS AND ACROYNMS

ACP	Accounts Collection Period
ANOVA	Analysis of variance
CMA	Capital Market Authority
CR	Current Ratio
DR	Debt Ratio
EBITDA	Earnings Before Interest Tax Depreciation and Amortization
EOQ	Economic Order Quantity
ITID	Inventory Turnover in Days
JIT	Just in Time
NSE	Nairobi Securities Exchange
NTC	Net Trading Cycle
OLS	Ordinary Least Squares
ROA	Return on Assets
ROE	Return on Equity
ROS	Return on Sales

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Working Capital Management (WCM) has turned out to be essential in monetary administration in light of its consequences for the company's gainfulness, hazard and subsequently its value. A very much composed and actualized WCM is required to contribute decidedly to the making of an association's esteem (Padachi, 2006). Current resources of numerous organizations, represents over a large portion of the aggregate resources and are much higher in the organizations in the dissemination sector. However, an organization is required to keep up a harmony amongst liquidity and gainfulness while leading its everyday operation in order to keep up both productively and beneficially. On the other hand, an excess of concentrate on liquidity will be to the detriment of productivity of the firm. In addition, if administration of a firm does not always screen and deal with a business' liquidity, the business can end up in a troublesome circumstance with its lenders (Padachi, 2006). Therefore, best organizations keep the working capital proportion as low as could be expected under the circumstances and keep money coursing to expand benefit.

WCM is an essential variable, which has an immediate beneficial outcome on benefit and in addition to liquidity of the organization. Liquidity and productivity are the same. Liquidity helps a business to meet all their financial requirements while engaging in a legal trade. A firm should advance its liquidity and benefit while directing its daily operations. WCM contains extent adjust of working capital parts of borrowers, stock and payables and the utilization of money adequately for day by day business operations. Legitimate advancement of working capital adjust implies

reducing working capital that is required while projecting high profits (Ganesan, 2007).

Appropriate WCM ensures that the organization expanded its benefit. Viable WCM is critical because of its noteworthy impact on productivity of organization and in this way the presence of organization in the market. When a company reduces its interest in current resources, the subsequent assets can be put resources into esteem making productive undertakings, so it can expand the association's development openings and shareholders return. The capacity of money related administrators to adequately and productively deal with their receivables, inventories, and payables significantly affects the achievement of the business and on benefit also. The crucial part in working capital financing is required in keeping up its liquidity in everyday operation to guarantee its smooth running and meet its commitment (Eljelly, 2004).

This is not a straightforward assignment since supervisors must guarantee that business operation is running in proficient and productive way. There are potential outcomes of confuse of current resource and current obligation amid this procedure. In the event that this happens and company's director can't oversee it appropriately then it will influence association's development and gainfulness. This will assist prompt money related misery lastly firms can go bankrupt. Management of working capital ensures a healthy relationship between the following elements; money, receivables, stock and payables is a key part of the general corporate procedure to make esteem and is an imperative wellspring of upper hand in organizations (Deloof, 2003).

1.1.1 Working Capital Management

WCM incorporates managing the affiliation's stock, receivables and payables in order to achieve a congruity among danger and returns and along these lines contribute unequivocally to the generation of a firm regard. Outrageous enthusiasm for stock and receivables decreases the advantage, however too little hypothesis extends the risk of not having the ability to meet obligations as and when they get the opportunity not out of the ordinary. The working capital fuses each something showed up on an association's bookkeeping report as temporary or current assets, while net working capital maintains a strategic distance from current liabilities. These measures are seen as accommodating mechanical assemblies in getting to the availability of advantages for meet current operations of associations. Consequently, the hugeness of keeping up a fitting level of working capital and its dedication to business survival is a thought that should be appreciated by every association.

The organization of working capital expect a basic part in keeping up the cash related quality of the association in the midst of the common course of business. Transient back is a crucial bit of working capital organization. Working capital is the principle theory an association makes without expecting a portrayed return. The theory is required with a particular ultimate objective to keep the business going rather than to make something from itself. Because of this, various associations have over-place assets into working capital inciting salary issues and to a decrease in shareholder regard. For a few associations the portions of working capital address the greatest things on the money related record. Regardless of this they tend not to be seen as issues asking for key thought or top organization thought (Deloof, 2003).

1.1.2 Firm Profitability

The capacity of the organization to procure benefit can be alluded to as the productivity of that organization. This influences profit through deducting costs from the income brought about in creating that income. Productivity is a measure of firm performance, so we can use gainfulness as a measure of the money related execution of an organization, and productivity is a going concern in the realm of business. Legitimate WCM ensures that firms increase their gainfulness. Successful WCM is imperative because of its noteworthy impact on gainfulness of organization and along these lines the presence of organization in the market. On the off chance that a firm minimizes its interest in current resources, the subsequent assets can be put resources into esteem making beneficial undertakings, so it can expand the company's development openings and shareholders return. In any case, administration can likewise confront liquidity issues because of underinvestment in working capital (Ganesan, 2007).

Performance is the ability of a firm to use its assets to improve competitiveness. (Iswatia, 2007). There are two sorts of execution, money related execution and non-monetary execution. Monetary execution underscores factors related straightforwardly to money related report. Organization execution is exceptionally vital to administration as it is a result which has been accomplished by an individual or a gathering of people in an association identified with its power and duty in accomplishing the objective legitimately, not illegal, and fitting in with the confidence and ethic. Organization's execution is assessed in three measurements. The primary measurement is organization's profitability, or preparing contributions to yields productively. The second is gainfulness measurement i.e. the degree to which organization's profit are greater than its expenses. The third measurement is market

premium, or the level of which organization's reasonable worth is surpassing its book esteem (Weintraub, 1998). ROA = (EBITDA) / (Total Assets)

1.1.3 Relationship between Working Capital and Firm Profitability

Working capital is a crucial component in any authoritative setting that requires pertinent consideration. Since assets at the disposal of a firm, the use to which they are put significantly affects whether a firm attains profitability. This suggests an association's liquidity does to a substantial degree decide its gainfulness. Be that as it may, liquidity and gainfulness are not the same but rather, are the center goals of a firm (Ganesan, 2007).

The traditional conviction about working capital and productivity holds that decreasing working capital speculation would decidedly influence the gainfulness of firm (forceful approach) by lessening extent of current resources in all out resources. Deloof (2003) broke down a specimen of Belgian firms, and Wang (2002) investigated an example of Japanese and Taiwanese firms, accentuated that the way the working capital is overseen significantly affects the benefit of firms and increment in gainfulness by diminishing number of day's records receivable and lessening inventories. A shorter cycle of converting cash and net exchange cycle is identified with registering better results for the organizations.

Moreover, effective working capital administration is imperative to make esteem for the shareholders. (Blinder, 1991) broke down a specimen of US firms additionally reported comparable discoveries yet he utilized Net Trading Cycle (NTC) as far reaching measure of working capital administration and discovered noteworthy

negative relationship amongst NTC and benefit. However, divergent to conventional conviction, more interest in working capital (traditionalist approach) may likewise result in productivity. When stock level is up, it diminishes the cost of intrusions in the creation procedure, diminish in supply cost and assurance against value vacillation (Blinder, 1991). Increase in organization benefit by diminishing the liquidity can bring some difficult issues as objectives can't be overlooked at any cost; if objective of augmenting the benefit is disregarded survival is unrealistic for a more drawn out time and if liquidity target is overlooked, indebtedness or liquidation could be confronted (Eljelly, 2004). Implementing a compelling working capital administration framework is a sure criterion of enhancing firms' income (Gitman, 1974). The two areas of utmost importance in WCM include evaluating and planning the degree of individual parts of the working capital. These parts are listed the working capital, stock turnover and the social affair extent. Such an examination helps an entity to appreciate for example, stock planning, cash plans, records of offers and payables to the organization (Nimarathasan, 2010).

From a financial perspective, WCM studies have suggested effective WCM could be achieved by improving the cash conversion cycle to incorporate performance. As previously mentioned, the notion of shortening the cash conversion cycle (similar to 'squeezing' WCM components) leads to positive liquidity (Richards, 1980) and improved profitability (Shin, 1998). The first study was conducted by Shin and Soenan (1998), who found a significant relationship between shortened cash cycles and an improvement in profitability among American companies.

1.1.4 Commodity Trading Firms Listed in Nairobi Securities Exchange

A commodity is commonly known as any item that has a value. It is also a second degree product but with the same value compared to other items of the same class. For example, if you go to a gas station to purchase petrol, the petrol you will receive is similar to any other being sold in the different petrol stations elsewhere in the town or the whole country.

This therefore means that although the price may differ with a small margin, these products are basically the same thus retailing at relatively similar cost regardless of where they are acquired from. When a person purchases natural gas to heat their home, they are charged a rate for the gas. It is not posted on their bill as different amounts based on where the gas came from. There is a stated fee for the commodity, and the bill is based on how much of the commodity was used.

Soft commodities refer to produce from the farms such as wheat, coffee, cocoa and sugar. On the other hand, hard commodities are extracted from the ground such as copper, gold and oil. These commodities are interdependent with relation to pricing since they are affected by the global international prices. A good example is the recent decline in commodity prices at the end of 2015 affecting copper and petroleum products mainly attributed to the Middle Eastern political situation. The commodity trading companies in this study represent the firms that are involved in marketing and distribution of products that fall under the categories of commodity markets as introduced above in Kenya. They comprise of both the local and the multinational companies. These companies are listed on the Nairobi Securities Exchange (NSE)

The sector is exceptionally regulated by controls of price in some industries like petroleum, common non-differentiable items and strict tax assessment structure inside

a changed economy consequently requiring reception of different methodologies other than cost and its related subsidiaries as a focused procedure. The sector is a major contributor towards the country's economy for instance, petroleum fuel constitutes the main source of commercial energy in Kenya.

Kenya is a net shipper of petroleum items. Development in the benefits of the items exchanging firms will rely on distinguishing every one of the factors that can impact benefit of a firm including the administration of working capital. The powerlessness of a firm to meet its commitments will prompt the disturbance of its advertising and conveyance prepare by activities, for example, work strikes and boycotting by providers. Key difficulties confronting these product exchanging firms incorporate high cost of operations which is regularly expanding because of poor framework, control, unpredictability in return rates, assess organization and weight of government.

1.2 Research Problem

An organization is required to keep up a harmony amongst liquidity and gainfulness while directing its everyday operations. Businesses must be both proficient and productive. All the while, resources obligation miss-match may happen, which may build the company's productivity in the short-run yet risk its indebtedness. In addition, if administration of a firm does not always screen and deal with a business' liquidity-that is, its measure of working capital, the business can end up in a troublesome circumstance with its loan bosses. Accordingly, best organizations keep the working capital proportion as low as could be expected under the circumstances and keep money flowing, to expand benefit. Effectiveness in WCM is so crucial particularly for

creation firms whose advantages are for the most part made out of current resources as it specifically influences liquidity and gainfulness of any firm (Raheman and Nasr, 2007).

Globally, many analysts have concentrated on monetary proportions as a major aspect of working capital administration; be that as it may, few of them have talked about the working capital particular. Some prior work by (Peel and Wilson, 1996) examined the distinctions in money related proportions and midpoints between businesses. Deloof expanded his work by discovering cross-sectional solidness of proportion groupings for both retailers and essential manufacturers (Deloof, 2003). Most past studies concentrated on created market; thus researching this issue could give new approaches of evaluating information on working capital that may proof valuable to businesses in in this country and beyond.

In Kenya, many studies have been done to establish relationship between working capital

management and profitability or liquidity of firms. Agnes (2011) surveyed manufacturing firms on the effect of WCM on Profitability: A Survey of manufacturing Firms in Kenya. Her study concludes that there is need for prudent management of working capital to ensure positive effect on profitability.

Biwott (2011) studied the relationship between Working Capital Management Practices and Profitability of Companies quoted at the Nairobi Stock Exchange. His study concludes that there is a strong negative relationship between working capital management i.e. ACP, inventory turnover in days, APP and the CCC with corporate

profitability. Another study conducted by Runyora (2012) on The Impact of Working Capital Management on the Profitability of the Oil Industry in Kenya. She concludes that WCM affects the profitability of retail oil companies in Kenya.

This study differs from all above studies as earlier researchers only focused on specific industries/sectors in the Kenyan market and the focus is not on the publicly listed companies where we expect information to be more accurate and up to date due to high regulatory environment. As to Biwott's study, the difference is that it looks at all the firms listed at the NSE while the focus of this study is specific companies that trade in commodities.

1.3 Research Objectives

This study tries to establish a possible relationship between working capital management and the profitability of commodity trading firms listed at NSE.

1.4 Value of the Study

The study discoveries will profit administration and staff of commodity trading companies by providing ideas of how to engage working capital maximally to improve performance. The management will employ the best policies for managing working capital. The research will provide valuable information regarding the commodity trading firms.

Researchers and academicians will be outfitted with important data in regards to working capital administration. The research will contribute to the general body of knowledge and form a basis for further research. Regulatory bodies like PIEA, CMA, ERC and the Ministry of Energy can use the findings to improve on the framework

for regulating the commodity trading companies in Kenya. Policy creators will likewise have the capacity to detail and execute new arrangement of approaches with respect to the working capital administration in the sector.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter examines literature used in this study including theoretical framework where theories/hypothesis and model relating to the study are discussed. Also in the chapter a review of Empirical literature where past studies by various scholars locally and globally on working capital management/performance are discussed. Lastly a summary of literature review wraps up the chapter by highlighting the gap in the literature that the present study seeks to bridge.

2.2 Theoretical Literature Review

The WCM theory is based on the 18traditional models of Cash Conversion Cycle (CCC). Money transformation cycle demonstrates how best an organization is arranging its working capital (Nobanee, 2011). CCC is the most vital perspective in WCM. Working capital administration systems used by business administrators helps them in successfully overseeing working capital. Strategies, for example, crossing point of conveying expenses and deficiency cost, working capital financing approach, money planning, EOQ and JIT are connected to oversee distinctive parts of working capital like money, inventories, indebted individuals and record payables.

2.2.1 Baumol Model of Cash Management

This model helps in determining a firm optimum money adjust under conviction. It is broadly utilized and exceptionally helpful with the end goal of money administration. The Baumol model is based on the Economic Order Quantity (EOQ). The objective is to determine the optimal target cash balance. Baumol made the following assumptions in his model; the firm can estimate its money prerequisite with assurance and get a particular measure of customary interims; the company's money installments happen

consistently over a timeframe that is; an unfaltering rate of money outpourings; the open door cost of holding money is known and does not change after some time; money property acquire an open door cost as happenstance predestined; the firm will bring about similar exchange cost at whatever point it changes over securities to money;

The limitations of the Baumol model are as follows; it presupposes a continuous interval of disbursing funds, but in real life cash transactions happen in varied occasions, the payments occur in different dates; no safety stock is allowed since it will take a limited time to dispose stocks (Baumol, 1952).

Baumol model expect the money chief puts abundance finances in enthusiasm bearing securities and sells them to take care of the association's demand for money. As venture returns increment, the open door cost of holding money increments and the money supervisor diminishes money equalizations (Baumol, 1952). As exchange costs (cost of selling fleeting speculations) increment, the money chief reductions the quantity of times he sells securities, prompting higher money parities. Dealing with the money - fleeting speculations blend includes deciding the ideal recurrence for renewing money and the measure of securities to exchange.

2.2.2 Transaction Cost Economics Theory

The ideal level of stock ought to be resolved on the premise of an exchange off amongst expenses and advantages connected with the levels of stock. Expenses of holding stock incorporate requesting and conveying costs. Requesting expenses is connected with securing of stock which incorporates expenses of setting up a buy request or demand shape, accepting, examining, and recording the merchandise got. In any case, conveying expenses are included in keeping up or conveying stock and will emerge because of the putting away of stock and opportunity costs. There are a

few intentions in lower or more elevated amounts of inventories and very relies on upon what business an organization is in. The most broadly and straightforward thought process of overseeing inventories is the cost intention, which is regularly in view of the Transaction Cost Economics (TCE) hypothesis (Marques, 2011). To be aggressive, organizations need to diminish their expenses and this can be expert by keeping the expenses of stocking stock to a sensible least. This practice is likewise exceptionally esteemed by securities exchange examiners.

2.2.3 Miller and Orr's Cash Management Model

Miller and Orr (1966) came up with model of money administration. According to the Miller and Orr model of money administration the organizations let their money equalizations move inside two points of confinement, upper and lower constrain. The organizations purchase and offer attractive securities just if the money adjust is. The companies buy and sell marketable securities only if the cash balance is on the lower or upper limit. The model came about to deal with some of the shortcomings of the Baumol model since it recognized that cash flow is not constant.

The Model comes in handy to give a method for establishing the most convenient cash balance (Z), the time to offload securities to raise cash (lower limit L) and the time put back the money in the business in order to lower the cash held (upper limit H).

2.2.4 The Pecking Order Theory

Pecking Order Theory in corporate finance proposes that the cost of financing increments with asymmetric data. Capital can be sourced from three areas, inside assets, obligation and new value. Organizations come up with these forms of raising

capital, first, inside financing, obligation and raising value "if all else fails" in that order. Therefore, inside financing comes first; if it's not enough, obligation is issued; again if it's not enough, value is issued as the last option. This theory implies that financing follows a laid down process where and that these levels are successive i.e. inward financing, then obligation and finally value.

In this manner, the type of obligation a firm picks becomes its flagship and a necessary item for raising capital. The pecking order hypothesis was propounded by Myers and Majluf (1984) when they contended that value is less favored when a firm intends to raise capital since when chiefs (who know better about the firm's actual state than hired technocrats) issue new value, speculators always feel that administrators feel the firm is overpriced and the people running the firm are taking advantage of overvalued entity. Therefore, financial specialists will put a lower esteem to the new value issuance.

2.3 Determinants of Profitability.

There are two sorts of execution, budgetary execution and non-money related execution (Deloof, 2003). There have been different measures of monetary execution. For instance, return on deals uncovers how much an organization procures in connection to its business, return on resources decides an association's capacity to make utilization of its benefits and profit for value uncovers what return speculators take for their ventures (Demirgunes, 2008).

A beneficial firm is better ready to withstand negative stuns and add to the dependability of the money related framework. The benefit of a firm is influenced by

various components. These components incorporate components inner to every firm and a few essential outer strengths molding profit execution. In Kenya, numerous organizations are taking a few measures to upgrade productivity over the areas. We have seen firms boosting income development to upgrade productivity while different firms receive a cost administration system as income development is not possible in their enterprises because of a few elements like rivalry, value controls and so forth. It is along these lines critical to comprehend the determinants of association's benefit in Kenya. This is basically critical in the light of the above prominent changes that dependably happen in the working environment of the Kenyan firms.

Over all ventures, the determinants of benefit are very much watched and investigated as it is progressively critical to fortify the establishments of local money related framework as an approach to development adaptability for capital stream instability. Previously, specialists explored the determinants of gainfulness of a firm. A decent number of scientists considered just the organizations' attributes, while others incorporated the money related structure and macroeconomic elements also. In every one of these studies, commitments had been made in deciding the elements that shape the productivity of firms. Later studies recognize administrative (inside) and ecological (outer) components that influence an association's productivity. Writing has contended that the general market structure and section hindrances constitute the principle outside compel driving benefits. Advertise structure (spoke to by administrative conditions or fixation) is one of the outer impacts that influence bank productivity; others incorporate exchange reliance, financial development, swelling, showcase loan fees and proprietorship structure. The interior components as per past

studies incorporate capital proportion, credit chance, profitability development and size of the firm

Various different studies have inspected firms' gainfulness with an end goal to segregate the variables that record for contrasts in benefit. Examines have connected firms' income and different parts of their working execution to productivity. A second arrangement of studies concentrated on the relationship between a company's income execution and monetary record structure and benefit. A third assemblage of writing analyzed the effect of administrative and macroeconomic elements on general firms' gainfulness. The fundamental conclusion rising up out of past studies is that inward components clarify a huge extent of firms' productivity; all things considered, outer elements have additionally affected their gainfulness. Generally speaking, operational productivity is the main consideration in deciding execution crosswise over ventures. Among the inside elements are the administration controllable variables which are the company's particular money related proportions speaking to cost effectiveness, liquidity, resource quality, and capital sufficiency.

2.3.1 Liquidity

Liquidity; alludes to how rapidly and economically a benefit can be changed over into money. Cash (as money) is the most fluid resource. Liquidity most usually alludes to the simplicity with which a speculation resource (stock, security, shared store, and so on.) can be changed over into money, in a brief timeframe, without a critical decline in its cost or esteem. Inside any one class of advantages, for example, singular stocks, a few speculations might be exceptionally fluid while others might be difficult to purchase and offer.

A standout amongst the most well-known measure of working capital is the present proportion. Current proportion is a measure of relative liquidity that considers contrasts in total size. It is utilized to contrast organizations and diverse aggregate current resources and liabilities. Eljelly (2004) experimentally inspected the relationship of liquidity and benefit as measured by current proportion and money in Saudi Arabia and discovered noteworthy negative connection between the company's gainfulness and its liquidity level.

2.3.2 Asset utilization

As indicated by Ellis (1998), resource usage measures which resources are equipped for delivering and what they really create. Then again, resource underutilization speaks to misfortunes in income in connection to the speculation that might be inferable from the wasteful utilization of advantages. Fleming, Heaney and McCosker (2005) brought up that advantage underutilization may expand organization costs since directors don't act to the greatest advantage of the proprietors. Okwo (2012) an investigation of Investment in altered resources and firm benefit. It was found that the relationship is sure yet the outcome is not factually noteworthy. Xu and Xu (2013), an examination of the ideal distribution of advantages structure and business execution, and the finding indicated factually huge relationship between resources Structure and business execution. Facilitate, Jose et al. (2010), Wu et al. (2010) and Seema et al. (2011) called attention to resource usage significantly affects company's budgetary execution.

2.3.3 Leverage

Leverage refers to using cash or cash oriented instruments or acquired capital e.g. edge, to improve the profitability of a business venture. A firm with a higher

obligation than value is said to be highly leveraged. Most organizations utilize obligation to fund operations. Thusly, an organization expands its influence since it can put resources into business operations without expanding its value. Influence helps both the financial specialist and the firm to contribute or work. In any case, it accompanies more serious hazard. On the off chance that a financial specialist utilizes influence to make a venture and the speculation moves against the speculator, his or her misfortune is much more prominent than it would've been if the venture had not been leveraged.

A firm with great undertakings develops regardless of how its accounting report looks, since it can simply discover subsidizing. Mill operator (1991, p. 481) contends that we ought not 'squander our restricted stressing limit on second-arrange and generally self - amending issues like monetary utilizing. For those on the other side however, high influence decreases a company's capacity to back development through a liquidity impact.' Myers (1977) demonstrates that, in outrageous case, an association's obligation shade can be sufficiently huge to keep it from raising assets to fund positive net present esteem (NPV) ventures. Domowitz and Steil (1999) find that under the shared possession structure, individuals may oppose advancements that upgrade the estimation of the trade on the off chance that this development debilitates the request on their intermediation administrations. Revenue driven stock trades keep running by revenue driven speculators will probably look for creative thoughts and procedures with a specific end goal to extend their business exercises and give better financing to the trade. It is these creative items, structures and techniques that will upgrade and build up their position in the market and add to their relative focal points.

2.3.4 Firm Size

Papadognas (2007) directed examination on a specimen of 3035 Greek assembling firms and uncovered that for every single size class, firms' productivity is decidedly affected by firm size. Lee (2009) inspected the part that firm size plays in productivity. Comes about demonstrated that outright firm size assumes a critical part in clarifying productivity. Amato and Burson (2007) tried size-benefit relationship for firms working in the money related administrations division. With the direct particular in firm size, the creators uncovered negative impact of firm size on its benefit. Amarjit et.al (2010) found no critical relationship between firm size and gross working benefit proportion. The investigation of Falope and Ajilore (2009) additionally found no noteworthy varieties in the impacts of working capital administration amongst huge and little firms in Nigeria utilizing a specimen of 50 cited organizations. The money related and non-budgetary elements, for example, influence, liquidity, size, age, and administration capability record have an impact on the organizations' monetary execution and development. Obligation influence is measured by the proportion of aggregate obligation to value (obligation/value proportion). It demonstrates how much a business is using obtained cash.

Organizations that are exceedingly utilized might be at danger of chapter 11 on the off chance that they can't make installments on their obligation; they may likewise be not able find new moneylenders later on. Influence is not generally awful, be that as it may; it can build the shareholders' arrival on their speculation and make great utilization of the duty focal points connected with getting (Rafuse, 1996). The span of the firm influences its monetary execution from numerous points of view. Expansive firms can misuse economies of scale and degree and along these lines being more effective contrasted with little firms. What's more, little firms may have less power

than vast firms; subsequently they may think that it’s hard to contend with the expansive firms especially in much focused markets. Then again, as firms get to be bigger, they may experience the ill effects of wasteful aspects, prompting second rate money related execution (Khamrui, 2012).

2.4 Empirical Studies

Maina (2013) investigated the relationship between working capital management and financial performance for manufacturing firms listed in Nairobi Securities Exchange from 2007-2011. He used descriptive statistics. He found that stock turnover in days has negative relationship with Return on Equity which implies that organizations monetary execution can be expanded by lessening stock in days. Application is observed to be critical positive affiliation with Return on Equities, showing that if day and age of provider installment is expanded then general firm money related execution likewise progresses. Money Conversion period and Net installment period demonstrates huge negative connection with Return on Equities demonstrating that organizations' budgetary execution can be expanded with short size of them two. Finally liquidity (Current Ratio) is emphatically connected with ROE.

Almazari (2013) examined the relationship between the working capital organization (WCM) and the associations' profitability for the Saudi bond manufacturing associations. The illustration included Saudi solid gathering associations recorded in the Saudi Stock Exchange for the season of 5 years from 2008-2012. Pearson Bivariate relationship and backslide examination were used. The study comes to fruition showed that Saudi bond industry's available extent was the most vital liquidity measure which influenced advantage, thusly, the solid firms must set a tradeoff between these two goals so that, neither the liquidity nor benefit perseveres.

It was similarly found, as the traverse of a firm forms, profit extended. Also, when the commitment financing extended, profit declined. Straight backslide tests confirmed an abnormal state of relationship between the working capital organization and profitability.

Waithaka (2012) investigated the effect of working capital administration and performance of agricultural firms listed in NSE. The population comprised of 7 listed agricultural companies in Kenya as at December 2011 and all of them formed the sample size. Secondary data was used in conducting the study. The study discovered that the management of agricultural companies in Kenya can improve value for shareholders through lessening days of accounts receivables. He further discovered that organizations can increase competitiveness through viable and productive use of assets of the association through a cautious diminishment of the money transformation cycle.

Novazz (2011) led a study to discover the relationship between working capital administration and productivity in Brazilian-recorded organizations. The destinations of their study were to examine if there was any distinction between corporate gainfulness and working capital administration in two separate gatherings of organizations: working capital serious and settled capital concentrated; and to distinguish the factors that most influence benefit. They have measured benefit in three distinctive routes: Return on Sales (ROS), Return on Assets (ROA) and ROE. The free factors utilized are money transformation proficiency, obligation proportion, days of working capital, days' receivable and days of stock. Numerous straight relapse utilized as a part of their study distinguished that, there exists negative relationship

between CCC (equivalent to days of working capital), obligation proportion and benefit.

Deloof (2003) discovered that firms had a considerable measure of exchange contributed to working capital. It can in this way be ordinary that the course of managing working capital is managed will altogether influence profitability of those entities. He expanded his work by discovering a cross-sectional solidness of proportion groupings for both retailers and essential manufacturers. He recommended that lessening the period required to process payments can be reduced drastically to improve efficiency.

Ghosh (2003) analyzed the productivity of working capital administration of Indian concrete organizations amid 1992 - 1993 to 2001 - 2002. He ascertained three file values - execution record, usage file, and general effectiveness file to quantify the proficiency of working capital administration, rather than utilizing some regular working capital proportions. By utilizing relapse investigation and industry standards as an objective effectiveness level of individual firms. He examined the speed of accomplishing the objective level of effectiveness by individual firms and found that a portion of the example firms effectively enhanced productivity amid these years.

Shin (1998) investigated on the relationship between working capital administration and esteem creation for shareholders. The standard measure for working capital administration is the money transformation cycle (CCC). Money transformation period mirrors the time traversed amongst payment and raising cash. Shin and Soenen utilized net-exchange cycle (NTC) as a measure of working capital administration.

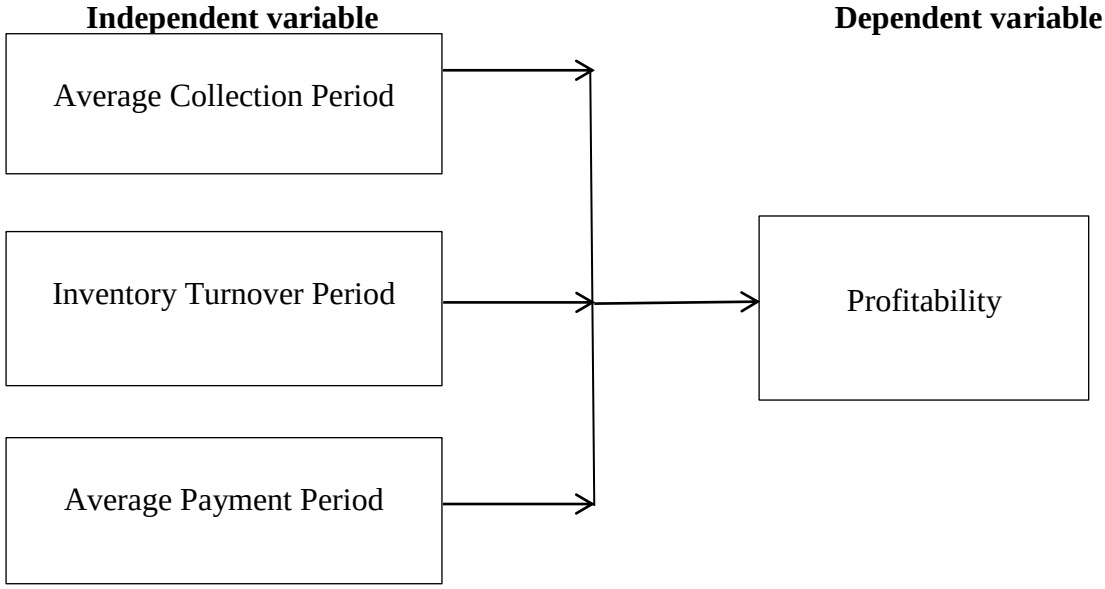
NTC is fundamentally equivalent to the money transformation cycle (CCC) where every one of the three parts are communicated as a rate of offers. NTC might be an intermediary for extra working capital needs as an element of the anticipated deals development.

Peel, (1996) analyzed the relationship between working capital administration and productivity of organizations by utilizing connection and relapse investigation, and working capital power. With a sample of 58,985 firms, between 1975 and 1994, they established that the longer the net-exchange cycle, the lower the firms' profit. In light of the discoveries, they propose that one conceivable approach to make shareholder esteem is to decrease company's NTC.

2.5 Conceptual Framework

Young (2009) states that conceptual framework is a diagram that represents the relationship between study variables.

Figure 2.1: Conceptual framework



2.6 Summary of Literature Review

Four models have been considered in this study i.e. Baumol model, Miller & Orr's model, Transaction cost economies and Pecking order theory. The goal of the hypotheses is to decide the ideal target money adjust for a decent working capital Management. The four speculations depend on the exchange off between the liquidity gave by holding cash and the premium done without by holding one's benefits as non-enthusiasm bearing cash.

Going through the above studies, productivity was measured in various courses by the creators. It was measured as far as ROS, ROA, ROE, networking pay, networking benefit. In any case, all the above creators discovered negative relationship amongst CCC and benefit. Additionally, the creators built up negative relationship between obligation utilized by the firm and gainfulness.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methods that the researcher will use to facilitate execution of the study to satisfy study objectives. The steps include; research design, population of interest, sample and sampling techniques, data collection instruments, procedures and data analysis.

3.2 Research Design

The study employed descriptive research design. The main aim of descriptive research design was to express the situation as it is. This kind of study tries to explain things such as characteristics, values, possible behavior, and attitudes.

3.3 Population

A population is an entire group of individuals, Mugenda and Mugenda (2003) it includes objects, or events having a common characteristic. The study evaluated secondary data available that is financial statements of listed firms as at July 2016. There were 20 commodity trading firms listed on the NSE. These statistics were received from NSE and the Capital Markets Authority (CMA) website.

3.4. Sample Selection

The sample size was at least two companies from each of the sectors that has a commodity trading firm listed on the NSE (Appendix 1). Convenient sampling technique was used to establish the relationship between working capital management and financial performance of commodity trading firms listed at the NSE.

3.5 Data Collection

The study used secondary data collection methods which was obtained from financial statements (2011-2015) which included annual reports, profit after tax, accounts receivables, accounts payables, inventory, sales, purchases, total assets, financing costs, amortization and depreciation and share of profit & loss of associate companies where applicable of the companies surveyed. Company's financial statements were obtained from NSE library, CMA library and relevant company's website.

3.6 Data Analysis

The research employed quantitive approach. Correlation analysis both full and partial correlation, ANOVA, regression analysis was used in the study to identify the nature and extent of relationship between working capital management variables and financial performance.

3.7 Analytical Model

The company's benefit is demonstrated as a component of the four center working capital administration measures notwithstanding other firm qualities. The impacts of working capital administration on the association's benefit are displayed utilizing the accompanying OLS relapse conditions to acquire the appraisals:

Profit = (EBITDA) / (Total Assets)

PR = f (ACP, ITID, APP)

Where:

PR to measure corporate profitability

Return on Assets (ROA) ratio indicates the profitability of the company. ROA measures how profitable a company is in relation to its total assets.

The regression model to be used in this study will be as follows

PR = β0 + β1*ACP + β2*ITID + β3*APP + β4*SIZE+ Ɛ

ROA= Dependent Variable; Return on Assets (EBITDA/Total Assets)

β0 = Constant term

β1, β2 and β3 = Regression constants

ACP = Average Collection Period

ITI = Inventory Turnover Period

APP = Average Payment Period

SIZE= Firm Size

Ɛ = Error term (95% confidence level).

β0, β1, β2, β3 are Constants representing the direction and extent to which each variable influences performance of a firm

ACP The average collection period

ACP = time taken by a business to recover cash owed, receivables, from its customers. *Accounts Receivable / Net Sales*365*

ITI Inventory turnover period, it is an asset utilization ratio that indicates how long goods remain in inventory. The average inventory period ratio is measured by; *Inventory / Cost of Goods Sold*365*

APP The average payment period

APP quantifies the frequency of a company in settling payments for those who supply it.

A*ccounts Payable / Purchases*365*

Firm Size as measured by natural logarithm of sales as a control variable

3.8 Diagnostic Tests

A correlation analysis was carried out to analyze the relationship between working capital management and firm financial performance. To test for statistical significance in our analysis of the relationship between working capital management and firm financial performance of the sampled companies, the student 't' statistic was used. The research study used 95% significance level. This study also used panel data regression analysis of cross sectional and time series data. The pooled regression type of panel data analysis was used. The pooled regression is one where both intercepts and slopes are constant, where the cross section firm data and time series data are pooled together in a single column assuming that there are no significant cross section temporal effects. The general form of the model was; $ROA\alpha = \beta o + \sum \beta \iota \; X \; \ddot{\imath} + \varepsilon$, where ROA is Return on Assets at time t, βo, the intercept of equation, βι coefficient of X and X ï, the different independent variables highlighted above, t= time and ε is the error term.

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1. Introduction

This chapter shows the analysis, results and discussion of findings of the study as set out in chapter three. SPSS version 20 was used and the findings were presented as descriptive statistics, correlation analysis and regression analysis. Data was collected from audited financial reports for the selected companies as set out in the appendices.

4.2. Data presentation

4.2.1. Descriptive Analysis

Table 1: Descriptive

	N	Min	Max	Mean	Std. Dev.
Return on Assets	40	-.19	.45	.16	.14
Avg. Payment Period	40	6.63	149.22	53.01	42.96
Inventory Turnover Period	40	14.00	214.68	79.94	50.07
Avg. Collection Period	40	.13	194.52	37.96	47.67
Firm Size	40	14.14	19.22	16.61	1.60

Table 1 above shows that the average return on assets for the 40 observation sampled from 8 companies from the year 2011 to 2015 is 16% with a high standard deviation of 14% varying from a range of -19% to a maximum ROA of 45%. The average payment period is almost 53 days (Std Dev. Almost 43 days) with maximum supplier payment of 149 days and minimum of almost a week. The average age of inventory is almost 80 days (Std Dev. Almost 50 days) with maximum stock holding of 215 days and minimum of almost 14 days. The average collection period is about 38 days (Std

Dev. Almost 48 days) with maximum collection of credit sales by 195 days and minimum of less than 1 day. The average firm size as measured by the natural logarithm of sales is 16.61 with a standard deviation of 1.6 varying from a range of 19.22 to a maximum of 14.14 in terms on natural log.

Table A: Full Correlation

		ROA	ACP	ITID	APP	Firm Size
ROA	Pearson Correlation	1	-.266	.528**	.111	.216
	Sig. (2-tailed)		.098	.000	.494	.180
	N	40	40	40	40	40
ACP	Pearson Correlation	-.266	1	.133	.694**	-.247
	Sig. (2-tailed)	.098		.412	.000	.125
	N	40	40	40	40	40
ITID	Pearson Correlation	.528**	.133	1	.478**	-.082
	Sig. (2-tailed)	.000	.412		.002	.616
	N	40	40	40	40	40
APP	Pearson Correlation	.111	.694**	.478**	1	-.101
	Sig. (2-tailed)	.494	.000	.002		.534
	N	40	40	40	40	40
Firm Size	Pearson Correlation	.216	-.247	-.082	-.101	1
	Sig. (2-tailed)	.180	.125	.616	.534	
	N	40	40	40	40	40

The table A above shows that there is a fairly moderate negative relationship between ACP and profitability with an R (Pearson correlation coefficient) = 26.6%, P: significance value of (two-tailed) < 0.098. Days in inventory held are statistically significant with a positive relationship on profitability having a coefficient of 52.8%. The average payment period to supplier has also positive relationship towards the overall profitability on the company's performance however small effect of 11.1%. Firm size as the control variable is positively related to overall profitability of the firm.

Table B: Partial Correlation

Control Variables			Return on Assets	Avg. Collection Period
Inventory Turnover Period & Avg. Payment Period & Firm Size	Return on Assets	Correlation	1.000	-.333
		Significance (2-tailed)		.044
		df	0	35
	Avg. Collection Period	Correlation	-.333	1.000
		Significance (2-tailed)	.044	
		df	35	0

Control Variables			Return on Assets	Inventory Turnover Period
Avg. Payment Period & Firm Size & Avg. Collection Period	Return on Assets	Correlation	1.000	.497
		Significance (2-tailed)		.002
		df	0	35
	Inventory Turnover Period	Correlation	.497	1.000
		Significance (2-tailed)	.002	
		df	35	0

Control Variables			Return on Assets	Avg. Payment Period
Firm Size & Avg. Collection Period & Inventory Turnover Period	Return on Assets	Correlation	1.000	.127
		Significance (2-tailed)		.452
		df	0	35
	Avg. Payment Period	Correlation	.127	1.000
		Significance (2-tailed)	.452	
		df	35	0

Control Variables			Return on Assets	Firm Size
Avg. Collection Period & Inventory Turnover Period & Avg. Payment Period	Return on Assets	Correlation	1.000	.218
		Significance (2-tailed)		.195
		df	0	35
	Firm Size	Correlation	.218	1.000
		Significance (2-tailed)	.195	
		df	35	0

The table B above sought to analyze the single effect of each independent variable to ROA while keeping the others on hold as control variable so as to see the non-combined unique effect. We clearly see that is only the ACP that is negatively correlated to profitability while keeping ITID, APP and firm size as control variables. The other predictors are all positively related to ROA.

4.2.2. Regression Analysis

The study analyzed the data from 8 listed companies having the dependent variable as ROA and the other independent variable as ACP, APP, and ITID with firm size as the control variable from the year 2011 to 2015. The results of the regression were tabulated below:

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.661[a]	.437	.372	.11142933	1.135

a. Predictors: (Constant), Firm Size, Inventory Turnover Period, Avg. Collection Period, Avg. Payment Period

b. Dependent Variable: Return on Assets

Table 3: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.337	4	.084	6.780	.000[b]
	Residual	.435	35	.012		
	Total	.771	39			

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), Firm Size, Inventory Turnover Period, Avg. Collection Period, Avg. Payment Period

Table 4: Coefficients for the model

Coefficients[a]

Model		Unstd'dized Coefficients		Std'dized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-.201	.202		-.996	.326	-.610	.209		
	ACP	-.001	.001	-.403	-2.091	.044	-.002	.000	.433	2.310
	ITID	.001	.000	.519	3.384	.002	.001	.002	.685	1.460
	APP	.001	.001	.161	.760	.452	-.001	.002	.359	2.786
	Firm Size	.015	.012	.175	1.322	.195	-.008	.039	.915	1.093

a. Dependent Variable: Return on Assets

It can be seen from table 3 that co-efficient of determination is 43.70% represented by R square meaning that the independent variables in the model can only explain the variation of ROA by only 43.70%. The model cannot explain a variation of 46.30% in ROA because there are other variables which are responsible for explain that 46.30% variation is not currently in the model.

From table 4 above, the ANOVA there is a statistically significance fit of the overall model (F test) since the P values is less than 5% at 95% confidence level hence the model is overally fit to be used as forecasting tool.

From table 5 above, the beta coefficients are all statistically significance (t test) to the predictors (i.e. ACP, APP, ITID, and Firm Size) {null hypothesis: they are not zero hence they can be used to predict} with 95% confidence level given their P values are less than 5. There was no evidence of multi collinearity in the analyzed data as the entire variables had VIF of less than 3. ACP had negative coefficient (-0.01) in its

predictor as relates to ROA, meaning an increase in 1 day of collection erodes the profitability by 0.1% of the firm. ITID and ACP had 0.01 coefficient meaning that each day stock is held in its inventory and a supplier is delayed by 1 day respectively the firm's profitability goes up by1%. In addition, the firm size also positively influences the profitability even though we are putting the effects of sales on hold in the different 8 firms analyzed.

The resulting multivariate linear regression model is as follows:

ROA = -0.201 - 0.001(ACP) + 0.001(ITID) + 0.001(APP) + 0.015(Firm Size)

4.3. Summary and Interpretation of Findings

In the analysis conducted above it was established that only ACP had a negative relationship on ROA whereas APP, ITID and Firm Size were positively related in both full and partial correlation analysis depicted in table A & B. The overall model had been tested to be overally fit for prediction based on the P values of the F statistics which was found to be less than 0.05 at 95% confidence level. Like wisely the implicit null hypothesis of rendering the predictor coefficient zero was rejected since the t-stats p values were less than 0.05 at 95% confidence level.

The predictors used ACP, APP, ITID, and Firm Size could only explain 43.7% of the variations in ROA hence presenting a gap of additional predictor variables that could be added in the model to explain the remaining 46.30%. ACP had negative coefficient (-0.01) in its predictor as relates to ROA, meaning an increase in 1 day of collection erodes the profitability by 0.1% of the firm. ITID and ACP had 0.01 coefficient meaning that each day stock is held in its inventory and a supplier is delayed by 1 day respectively the firm's profitability goes up by1%. In addition, the firm size also

positively influences the profitability even though we are putting the effects of sales on hold in the different 8 firms analyzed.

CHAPTER FIVE
DISCUSSION, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter introduces the discussion drawn from data analysis in chapter four where it is presented as discussions, conclusions, limitations and suggestions for further research.

5.2 Discussion of Findings

Liquidity and profitability are two things which are almost pulling against one another, managers in the financial arena should maintain the delicate balance not damage the trade relations as well as staying profitable in the long term. From the 8 analyzed companies it can be seen that the average profitability as captured in the earlier descriptive statistics is 16% with only few cases of losses seen of maximum loss of 19% from the year 2011 to 2015. Clearly this shows the companies selected in the data analysis are somehow profitable and this study was seeking to know whether that was attributable to the liquidity management by such companies.

All the 8 companies had payment terms with their supplier averagely above 53 days with a noted delay of a maximum payment of 149 days. On the other hand, the firms were on average extending 38 days of credit to its debtors with one incident in the 40 recorded observations going up to 194 days. The stock holding period on average was 80 days before it was sold and one incident in the 40 recorded observations going up

to 215 days before being sold. In terms of sizes as per the sales, they were almost similar in exponential terms with very small deviations in the group.

The regression results point out that the overall model could only explain 43.7% of the variations in profitability meaning there are other variables which could still be used to attain full explanation in profitability variability in the study. Both full and partial correlation corroborates one another in their findings showing the only negative relationship of ROA is with ACP and the rest are positive. Both t-test and F-tests show that the predictor coefficients and overall model are fit for functionality of the model.

Even though the variations are smaller but they affect the profitability of the firms. For instance, if the credit controller should push one extra day for payments of credit sales this would lead to decline in profitability by 0.1%. Like wisely if the stocks are not turnover more frequently, say by 1 day expect a 0.1 % increase in ROA. If the financial controller delays a supplier payment by 1 day expect an increase of 1% in ROA, the size of the firms also affects profitability in a way if an increase of unit natural logarithmic sales, expect 1.5% increase in ROA.

The finding in the study matches partly what Biwott (2011) where he was studying impact of working capital management practices and the profitability of companies quoted at the Nairobi stock exchange and Runyora (2012) studying on the effect of working capital management on the profitability of the oil industry in Kenya found where the ACP was negatively related to profitability, however it differed in terms of APP, ITID where he got negative relationship but this study got positive relationship. The same finding was partly in agreement with the study conducted by Deloof (2003)

studying Belgian firms found that in addition of strong negative relationship between ACP and profitability, there was also negative relationship in stock holding periods.

The findings in the study however partly matched with Maina (2013) studying investigated the relationship between working capital management and financial performance for manufacturing firms listed in Nairobi Securities Exchange where he collected data running from 2007 to 2011, he found positive relationship between APP and ROE but differed with this study showing negative relationship of days in inventory with profitability. Almazari's study done in 2013 investigating the relationship between the working capital management (WCM) and the firms' profitability for the Saudi cement manufacturing companies, found positive relationship between firm size and profitability consistent with this study where we found firm size being positively related with profitability.

5.3 Conclusions

The delicate balance has to be strived by all decision makers at all level so that they can understand how one decision can have roll over effect to the overall long-term profitability. Since the decision of inventories is naturally vested in warehouse manager, they play a big role in indirectly affecting the ROA by decision to stock or not. People in finance department also play a pivot role in their daily management of debtors and creditors; they may affect ROA in both direct and indirect ways such as pushing the customers to pay even when the terms are due.

From the study, in summary we observe that ACP is the only variable that negatively affects ROA whereas APP, ITID and Firm Size are positively related.

5.4 Limitations of the Study

The study confined itself to only 8 firm listed at the NSE which are dispersed from different sectors in the economy for only limited 5-year data period from 2011 to 2015. Due to this wide inter sectorial analysis and limited data period, the findings and conclusions may not hold the same consistency if bigger data period and inter sector analysis were to be focused on.

The study only concentrated on publicly quoted companies at the NSE hence limiting general conclusions that will be drawn if other private firms were analyzed in conjunction with their counter parts at the NSE. Hence caution should be used when using the model for forecasting and in generalizing the conclusion of the study in generalizing the outcomes in private firms.

Lack of clear data relating to the proportions of credit sales and credit purchases makes the researcher to assume all the sales and purchases are 100% on credit hence the computation of ACPs and APP will have been biased. Hence conclusions should be analyzed with cautions.

5.5 Suggestions for Further Research

Form the results of regression analysis, it is clear that the above model only explains 43.7% of variations in ROA and hence the need for further predictors variables to be included in explaining the variations in ROA e.g. leverage, financial flexibility, firm age, cash flow ratios etc. The future study might hopefully explain 100% or near 100% variations if all potential variables are analyzed.

The study restricted itself to only publicly listed firms at the Nairobi Securities Exchange. A future study can be conducted to also see whether or not private companies in Kenya and the global arena have the same findings.

The study analyzed firm performance as ROA, a proposed study can be structured to also see whether different measures of firm profitability such as return on capital employed, return on equity gives the same findings.

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APPENDIX 1: COMMODITY TRADING COMPANIES LISTED AT NSE

AGRICULTURAL
Eaagads Ltd
Kapchorua Tea Co. Ltd
Kakuzi
Limuru Tea Co. Ltd
Rea Vipingo Plantations Ltd
Sasini Ltd
Williamson Tea Kenya Ltd
CONSTRUCTION AND ALLIED
Athi River Mining
Bamburi Cement Ltd
E.A. Cables Ltd
E.A. Portland Cement Ltd
ENERGY AND PETROLEUM
KenolKobil Ltd
Total Kenya Ltd
KenGen Ltd
Kenya Power & Lighting Co Ltd
Umeme Ltd
MANUFACTURING AND ALLIED
British American Tobacco Kenya Ltd
East African Breweries Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd