THE EFFECTS OF WORKING CAPITAL MANAGEMENT ON RETURNS TO SHAREHOLDERS OF MANUFACTURING COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I hereby declare that this is my original work and has never been presented to any other university or institution for any academic purpose

Signature:…… **Date: …….**

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This research proposal has been presented for examination with my approval as the student's supervisor

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DEDICATION

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LIST OF ABBREVIATIONS

ACP – Average Collection Period

AP - Account Payables

APP - Average Payables Period

AR - Accounts Receivables

BAT - British American Tobacco

BOD - Board of Directors

CA - Current Assets

CAPEX - Capital Expenditure

CCC - Cash Conversion Cycle

CEO - Chief Executive Office

EABL - East African Breweries Ltd

EBITDA- Earnings before Tax Depreciation and Amortization

EOQ - Economic Order Quantity

EPS - Earnings per Share

FCF - Free Cash Flows

FMCG - Fast Moving Consumer Goods

GDP - Gross Domestic Product

ICP - Inventory Conversion Period

JIT - Just in Time

KPLC - Kenya Power and Lighting Company

NSE - Nairobi Securities Exchange

NWC - Net Working Capital

OC - Operating Cycle

PBIT - Profit before Interest and Tax

ROA - Return on Assets

ROE - Return on Equity

RTS - Return to shareholders

WC - Working Capital

WCM - Working Capital Management

ABSTRACT

Working Capital Management remains one of the most challenging tasks in day-to-day running of manufacturing enterprises. This is partly due to the complexity of attaining optimal Working Capital levels for manufacturing entities in competitive business environments with several intervening factors that may influence internal WCM initiatives. The complexity also stems from the fact that most WCM decisions involve a trade-off between risk and rewards of holding working capital assets. Most of the time, getting the best balance involves obtaining concurrence with external parties not privy to your short term or longer interest and those pursuing their own interests that may be in conflict with your own. This study looked at the effect of WCM on returns to shareholders of manufacturing companies listed at the Nairobi Securities Exchange. The WCM measures taken for this study were ICP, ACP and APP. The research relied on exploratory research design and used secondary data obtained from various sources including published hard copies of audited financial statements available in libraries and soft copies from respective company websites. Pierson Correlation was used to determine degree of association between the variables, while multiple regression analysis was used to ascertain the relationship between the dependent variable and the independent variables. The analysis was conducted using SPSS and the findings reveal significant association between the independent variables ICP, ACP and APP and an equally significant relationship between the independent variable and the dependent variables. The research revealed a significant degree of influence of WCM in determining the level of returns to shareholders (RTS). It underscored the importance of setting optimal levels of net WC that would result in to higher RTS. These levels may differ from one company to the next.

CHAPTER ONE: INTRODUCTION

1.1 Background of Study

Working Capital Management (WCM) forms an important part of organization's short term financial management objectives. Past studies have found that WCM has a direct bearing on a firm's profitability, risk and value (Ebenezer & Asiedu, 2013). At the core of WCM is the need to generate, allocate and control cash inflows and outflows within a period of one year or less (Ebenezer & Asiedu, 2013). While current assets (CA) are needed to meet maturing short term obligations and smooth business operations, care should be taken to avoid over-investment in CA, which lowers return on investment or under-investment that may be disruptive to operations (Garcia-Teruel & Martinez-Solano, 2007). Cash is considered a very important component of current assets and is more often in short supply necessitating the need for alternative sources of financing for additional working capital requirements.

WCM is consistent with the risk return trade-off theory that seeks to find a balance between risks associated with limited working capital holdings and returns or opportunity costs associated with holding a given level of working capital (Nzioki, Kimeli, & Abudho, 2013). One key component of WCM is working capital financing. The pecking order theory puts a strong case for reliance on internal sources of funds and trade credit for working capital financing that is a very important component of working capital management.

There were twelve manufacturing companies listed at the Nairobi Securities Exchange (NSE) by the close of year 2013. These are East African Cables, East African Breweries, British American Tobacco, Carbacid Investments, Kenya Orchards, Sameer Africa, Crown Berger, Mumias Sugar, Unga Group, BOC Kenya, A. Baumann and Company and Kakuzi (NSE, 2015). All of them grabble with various WCM challenges that have a direct bearing on their profitability and performance of their shares at the NSE (Nzioki, Kimeli, & Abudho, 2013).

These include need to attain optimal net working capital balances through effective inventory management, receivables management, payables management and management of cash balances (Nzioki, et al, 2013). There is need to address these challenges in order to increase the returns for shareholders and ensure sustained positive performance of their shares at the NSE.

1.1.1 Working Capital Management

WCM refers to the administration of all components of working capital, namely cash, marketable securities, debtors, inventories and accounts payables (Pandey, 2014). It involves determining the levels and mix of current assets and current liabilities needed to effectively and optimally run the operations of the firm (Ebenezer & Asiedu, 2013). The need for getting an optimal mix of the various components of working capital is informed by the fact that there are costs associated with either holding too much or too little of WC (Pitt, 2014). Organizations would be keen to minimize these costs in order to increase their level of profitability and possibly performance of their shares at the stock market.

WCM is essential for the success of any business. It attempts to address two very important aspects of business: profitability and solvency (Ebenezer & Asiedu, 2013). Effective WCM determines a company's level of profitability of a business and at the same time ensures a business is in sound financial position capable of honoring short term financial obligations such as paying suppliers, salaries, and utility bills (Mwangi, Makau, & Kosimbei, 2014). More often, failure of any business to honor its maturing short term obligations results in to decisions and activities both within and without the organization that may compromise its continued existence as a going concern – its solvency (Ebenezer & Asiedu, 2013).

There are three main components of current assets in nearly all manufacturing organizations; inventory, receivables and cash. It is conventionally agreed that short term buildup of current assets should be financed by short term sources of capital such as accounts payables and bank overdrafts, normally reported as current liabilities. The difference between current assets and current liabilities is referred to as net working capital (NWC). The main measures used in the management of current assets are the firm's operating cycle (OC), which is the time elapsed between receiving of raw materials from suppliers and receiving cash from finished goods and the Cash Conversion Cycle (CCC), which is the time, elapsed from the point of paying for raw materials or supplies and receiving payment for sale of finished goods (Pandey, 2014). Mathematically represented as: CCC = OC – Average Payment Period (APP)

The OC is made up of different timelines representing different stages in the supply chain. These include the Inventory Conversion Period (ICP), Average Collection Period (ACP) and Average Payments Period (APP). The main objective of WCM is to reduce CCC as much as possible without compromising the operations of the firm, to reduce the duration of the external financing needed to bridge the gap (Pandey, 2014). To achieve this, the management must reduce as much as possible the various components of CCC: ICP and ACP and increase APP (Megginson, 2007). The research will attempt to look at the various WCM efforts employed by manufacturing firms listed at the NSE, if any and how these influence performance of their shares in the market and by extension the overall value of the firm.

1.1.2 Stock Return

Stock return of companies refers to change in value or growth in value of shares over a period of time (Dobbs & Koller, 2005). For listed companies, the growth in value will take in to consideration the present value of net cash flows received or receivable from the shares over

the period of ownership (Hillman & Keim, 2001). These would primarily be from dividends declared and paid and capital gains.

Stock return information is very important for shareholders and managers alike (Dobbs & Koller, 2005). For shareholders and potential investors, there is need to compare performance of shares of different companies in order to decide which companies to invest in. Similarly, managers may want to gauge their performance based on returns on assets (ROA), returns on equity (ROE) and returns to shareholders (RTS) by benchmarking with returns of similar firms in the industry. This will help them investigate and correct any shortcomings in the system and initiate measures needed increase returns to industry standards and to levels acceptable to investors.

The performance of shares of listed the companies is generally determined by the total returns to shareholders (TRS) (Pandey, 2014). The returns come either as dividends declared and paid by the company every year or capital gains accrued over time due to the appreciation of the share prices (Dobbs & Koller, 2005). Dividends paid out by companies largely depend to a great extent, on their profitability. In many jurisdictions, existing regulations bar companies from paying dividends from any sources other than profits. This implies that to the extent that dividends paid contribute to the overall returns on shares, the profitability of the company remains an important pre-requisite for realization of good returns on investment in shares.

1.1.3 Working Capital Management and Stock return

Even though there is a lot of literature on the effect of WCM on financial performance or profitability of organizations, research on the effect of WCM on Stock return is scanty in the local context. From a theoretical perspective, the positive consequence of effective WCM is to free up cash flows, which is normally considered in the determination of value of firms.

The dividend capitalization model of share valuation determines the value of shares by determining the present value of all future cash flows expected to be received from holding such shares. These would be primarily from dividends and capital gains. Again we see an indirect contribution of WCM to dividend payments by influencing the profitability of firms and their free cash flows normally represented by Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA).

There is sufficient empirical evidence on the relationship between WCM and Stock return from research conducted in other regions. In a study conducted on listed companies at the Tehran Stock Exchange in Iran, it was found that there was a significant relationship between corporate performance in terms of ROE and net liquidity balance that is a component of WCM (Mousavi & Jari, 2012). Other studies have determined a relationship between the risk-return trade off and Stock return of firms (Bratland & Hornbrinck, 2013). Further, manufacturing firms have been found to exhibit a stronger relationship between WCM and profitability and by extension Stock return (Bratland & Hornbrinck, 2013).

In a study conducted by Hillman and Keim (2001) in the United States (US) on twelve large corporate entities, it was found that in their various initiatives designed to grow shareholder value, corporations are not always governed by the maximum profits criterion. It was also found that financial plans and priorities change depending on the economic and competitive environment. The study also found that competitive activity sets constraints on organizations activities and goals. From this research finding, there is a connection between WCM and Stock return (Hillman & Keim, 2001). Competitor activity sets constraints on WCM initiatives that seek to reduce ACP and increase APP and these would influence performance of organizations (Hillman & Keim, 2001).

1.1.4 Manufacturing Firms Listed at the Nairobi Securities Exchange

According to the Nairobi Securities Exchange (NSE), there are 9 companies listed at the bourse under the category of manufacturing and allied entities. These are: BOC Kenya Ltd, BAT Kenya Limited, Carbacid Investments, East African Breweries, Mumias Sugar, Unga Group, Eveready East Africa, Kenya Orchards and A. Baumann and Company Ltd (NSE, 2015). However, there are other manufacturing entities grouped under different categories that may be considered for this study. These include Sameer Africa that is categorized under Automobiles and Accessories and East African Cables and Crown Berger bother categorized under construction sector (NSE, 2015).

The manufacturing sectors play a very important role in the economy. According to the Kenya National Industrialization policy, growth in the manufacturing sector would reduce reliance on imports of manufactured goods, create jobs and boost the country's Gross Domestic Product (GDP). Insufficient and relatively more expensive supply of electricity from the state-owned Kenya Power and Lighting Company (KPLC) has also been cited as a major impediment to the growth and modernization of the manufacturing sector in the Country. The other reason, among many others, that has been given for the slow growth in the sector is lack of management capacity to ensure efficient use of available input resources to make them more competitive in the global market. WCM is an attempt to deploy current assets in the most efficient manner without incurring too much risks and its relevance to the manufacturing sector cannot be gainsaid

Manufacturing companies listed at the NSE, like everywhere else, face myriad challenges that affect their profitability and by extension performance of their shares the bourse. Some of the challenges faced are industrywide challenges beyond the control of the management such as the cost of power, lack of sufficient skilled workforce, weak regulatory environment,

industrial action and the ever expanding wage bill. These challenges render make it difficult for them to compete effectively in the global market thereby hampering their growth efforts. Despite the challenges, there is need to improve internal processes to eliminate wastages and generally make the organizations more efficient and profitable. WCM is one such initiative that that deserve thorough investigation on its likely effect on Stock return of listed manufacturing firms in the local context.

WCM cuts across all organizations irrespective of their sizes and nature of operations and manufacturing companies are no exception (Block, Hirt, & Danielson, 2009). It is of utmost importance to manufacturing firms particularly those in FMCG subsector due to the large amount of raw materials, work in progress and finished goods inventory that they handle. Studies in manufacturing firms have indicated that current assets form more than 40% of their total assets. The percentage could be higher in the FMCG subsector due to the nature of their operations.

The general practice for most manufacturing companies is to keep some buffer stock of raw materials and finished goods and also grant some credit to their distributors (Makori & Jagongo, 2013). This puts a lot of pressure on their current assets holding and more often results in to excessive amounts of inventory and accounts receivables held at any one time (Nzioki, Kimeli, & Abudho, 2013). It would have been expected that such large amounts of inventory and AR holding are financed by cheap sources of short term credit such as AP. However, to the contrary, studies in the local market and in the region have indicated that most manufacturing companies are net providers of credit (Nzioki, Kimeli, & Abudho, 2013). This implies that they carry more accounts receivables that payables at any one time and the impact of these business practices on performance of their shares at the stock exchange need to be investigated in details.

1.2 Research Problem

The role played by WCM in business has strong backing from both empirical and theoretical perspective. Theoretically, it has been shown that changes in working capital components-inventory, accounts receivables and accounts payables have a direct bearing on free cash flows that by extension influences performance of firms. This is because changes in NWC affect free cash flows that are a key determining factor in stock return in terms of dividends paid or payable for companies. This assertion is true because from conventional practices, only profitable companies with sufficient free cash flows can declare and pay dividends. In order to achieve free cash flows, there have to be changes in inventory, AR and AP balances from one period to the next. The changes may lead to either reduction or increase in cash flow depending on the working capital and the direction of the change.

Thus a reduction in receivables and inventory from one period to the next implies an increase in free cash flows and the reverse is true with respect to payables. For this reason, manufacturing organizations put in place initiatives meant to achieve desired levels of inventory, AR and AP through their existing policy framework. There is also sufficient empirical evidence supporting this relationship.

Most of the past studies related to WCM have focused more on profitability as the dependent variable (Garcia-Teruel & Martinez-Solano, 2007, Ebenezer & Asiedu, 2013, Makori & Jagongo, 2013). Research on effect on Stock return is scanty and far between and may not be useful in the rapidly changing business environment. A study conducted in Sri Lanka found a negative relationship between Cash Conversion Cycle (CCC) and profitability (Nimalasathan, 2010). Locally, Nzioki et al (2013) in their study found a positive correlation between Average Collection Period (ACP) and Average Payables Period (APP) on one hand with net operating profit (NOI) on the other hand. CCC was found to have a negative relationship with

NOI signifying the overall significance of WCM whose overall objective is reduction in CCC. A research gap thus exist on the effect of WCM on Stock return of listed manufacturing companies at NSE.

The purpose of this research was to bridge this gap by providing insights on to the effect of WCM on returns to shareholder of listed manufacturing companies at the NSE under the present business circumstances. In order to achieve this, the research will attempt to exhaustively address the main research question: What are the main WCM practices deployed by NSE listed manufacturing firms and how have they affected their Stock returns?

1.3 Research Objective

The main objective of the research was to ascertain the effect of WCM on stock return of manufacturing companies listed at the NSE. Specific objectives include:

i. Ascertain the effect of Accounts Payables Period (APP) adopted by the NSE listed manufacturing companies on their Stock return
ii. Ascertain the effect of Inventory Conversion Period (ICP) adopted by NSE listed manufacturing companies on their Stock return
iii. Ascertain the effect of Average Collection Period (ACP) adopted by the NSE listed manufacturing companies on their Stock return

1.4 Value of the Study

The study sought to provide detailed understanding on the effect of WCM on the Stock return of manufacturing companies listed at the NSE. Since there are no conclusive studies on this topic, the findings will certainly be useful to investors and will provide further insights on predicting the Stock return of manufacturing firms based on their various WCM initiatives. A part from the traditional measures of performance such as ROA, EPS, and ROE, investors

will also consider or evaluate the WCM policy adopted by the company as an additional measure of performance of its shares in the future.

The study is also beneficial to the academia by providing new insights in to the effect of WCM on Stock return that were hitherto inconclusively addressed by past studies. Local studies on the impact of WCM on Stock return of manufactured companies are limited and even fewer are available for the recent times. In the ever changing business environment characterized by the ever evolving technologies that influence the way people do business, it is imperative to conduct regular research on topical issues in order to reassess previously determined relationships and provide new findings or make new recommendations as would be appropriate. It is imperative that the empirical relationship established between WCM and Stock return and conclusions reached thereon in this research would enrich existing academic discourse on WCM and Stock return.

Further, the research is of great benefit to industry stakeholders including the government, financial institutions and entrepreneurs who benefit directly or indirectly from performance of manufacturing firms. Policy makers in government would find it necessary to develop policies towards empowering manufacturing firms, particularly small or medium-sized indigenous manufacturing startups to build their capacity on management in general and WCM in particular, with the view of making more efficient and competitive and profitable just like their listed counterparts. Their optimal performance improves the overall competitiveness of the economy in the global market and spurs economic growth through job creation and improved trade balance through exports.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses the theoretical framework of the study, where a brief discussion on the theories upon which the study is grounded is discussed. The chapter also provides a summary of various empirical studies that have been conducted by other researchers in related topics both locally and internationally. At the end of the chapter, we have a summary with brief comments on both the theoretical framework and empirical studies and a brief discussion on the research gaps noted and how the study intends to bridge them

2.2 Theoretical Review

There are theories that underpin working capital management. These theories relate to the management of the various components of working capital, namely: accounts payables, cash, inventories and accounts receivables. The theories inform the practices often adopted by firms in their quest to effectively manage their resources for optimal returns in terms of value and profitability of firms.

2.2.1 Risk Return Trade-off Theory

The risk return trade off theory traces its origin back to the debates that emerged in academia after the publication of Modigliani and Miller (MM) theorem (Frank & Goyal, 2005). When the original dividend irrelevance theory was adjusted for taxes, it became apparent that having more debt would result in to cash flow savings thereby increasing the value of the firm. However, critics quickly pointed out the immediate repercussions of excessive debt; bankruptcy and investors would add a risk premium to compensate them for possible bankruptcy costs depending on the degree of leverage of the firm. The idea of risk-return

tradeoff between the tax benefits of debt and bankruptcy costs emerged as the possible solution to the dilemma (Megginson, 2007).

Trade-off theory asserts that a firm's optimal debt ratio is influenced by balance or tradeoff between bankruptcy costs associated with large debt accumulation and benefits associated with debt (Mwarari, 2013). A trade-off is then sought between the risks and returns associated with debt with the aim of selecting the optimal ratio with the highest returns and minimal risks (Pandey, 2014).

There are two risk-types inherent in WCM, namely: liquidity risk and risk of opportunity loss (Makori & Jagongo, 2013). Liquidity risk refers to inability of the company to meet short term obligations when they fall due (Pandey, 2014). While organizations may be keen at enjoying the benefits of debts including short term trade credits, a large accumulation of these must be countered by significant accumulation liquid or of easily liquidated current assets. Failure to do this would lead to inability of the organization to meet short term maturing obligations and this may result in to bankruptcy and its associated costs, which many companies would be keen to avoid. The costs associated with this risk includes loss of reputation leading to unfavorable trading terms from suppliers and short term lenders, high costs of emergency sources of funds such as overdrafts needed to meet the obligations, disruption of operations due to unpaid vendors, delayed salaries etc.

The main objective of WCM is optimization of benefits from current assets and current liabilities to the organization. WCM seeks to minimize CCC by seeking an optimal tradeoff between current assets holding and trade creditors. The trade-off theory thus provides a theoretical background against which WCM policies may be evaluated with regards to their risk-return implications.

2.2.2 Pecking Order Theory

The Pecking Order Theory is traceable to research works by Donaldson in 1961 and further research on the same subject by Myers (1984) (Frank & Goyal, 2005). The theory states that a firm is said to follow a pecking order if it prefers internal to external financing and debt to equity when internal financing is exhausted and there is need for external financing (Frank & Goyal, 2005). This implies that, holding other factors constant, firms would prefer to deploy internal sources of funds before looking outwards for external sources. Internal sources are commonly represented by retained earnings that may be held in different forms including short term cash deposits.

One of the main concerns of WCM is financing of current assets requirements. According to this theory, firms would prefer to use their internal savings to finance their requirements for current assets, and once exhausted, consider short term credits such as bank overdrafts and trade credits. In conventional business practice, it is generally agreed that short term assets should be financed by short term credit facilities. Trade credit is considered a cheap source of finance and management may consider using more credit without while still maintaining good relationship with credit providers and without accumulating so much with the attendant risk of default (Bratland & Hornbrinck, 2013).

This theory is consistent with WCM initiatives that often seek to minimize CCC by, among other initiatives, getting the most benefit from trade credit. Usage of trade credit is commonly measured using Average Payment Period (APP) and the longer the period, the better is the company's use of trade credit. The theory thus provides a useful background in assessing organization's policy on trade credit and its implications on stock return for the case of listed companies (Megginson, 2007).

2.2.3 Liquidity Preference Theory

Liquidity Preference Theory was first stated and explained by renowned economist, John Keynes in 1936 when he attempted to explain the fluctuations in interest rates in an economy. According to his original writings, interest was primarily influenced by the supply and demand of money (Block, Hirt, & Danielson, 2009). The theory states that the rate of interest at any point in time, which represents the reward for parting with liquid assets, is the measure of the unwillingness of owners of liquid assets or cash to part with it and is determined by market forces of demand and supply of money in the economy (Block, Hirt, & Danielson, 2009).

The theory explains the three primary reasons for holding cash, which make it a valuable possession for different stakeholders in the market: transaction motive, precautionary motive and speculation (Pandey, 2014). When an organization is cash-rich and has sufficient cash to meet its requirements, it may consider loaning the excess cash to cash-starved outfits at fairly low rates through the purchase of bonds or other acceptable means. However, according to this theory, the company would place a premium on the degree of liquidity of the bond and adjust their interest rate to set lower rates for highly liquid bonds and higher rates for those that are less liquid. This theory certainly informs cash management that is one of the key pillars of WCM.

2.3 Determinants of financial performance in Manufacturing Firms

Performance of manufacturing firms is influenced by many factors. These factors may be external to the firms and outside their control or internal and within their control. Some of the general external factors not within organizations' control include state of the economy, government policies on a number of issues including manufacturing, imports, exports, human

resource development, fiscal and monetary policies adopted, regional trade, international trade agreements etc. These factors may have profound effects on performance of manufacturing companies. In the local context, Mumias Sugar and Eveready Kenya Limited are recent examples of firms that have been adversely affected by ineffective government policies and weak regulatory environment incapable of enforcing the same (Juma, 2014, Editorial, 2015).

Internal factors, mostly within the company's control include quality of management, WCM policies adopted, location of the firm, size of the firm, etc. Some of these factors may not be within the firm's immediate control, such as size of the firm, but are achievable, with deliberate efforts, over a period of time.

2.3.1 Working Capital Management

WCM is considered critical for the performance an organization (Owolabi & Alu, 2012). For a listed firm, it not only influence its profitability by reducing the losses likely to emanate from ineffective WCM, but also help it portray a positive image of financial stability-that is crucial for investors (Mwangi, Makau, & Kosimbei, 2014). The conventional accounting concept of net working capital defines it as the excess of current assets over current liabilities and represents the net investment in current assets by long term sources of funds such as equity and long term debt (Block, Hirt, & Danielson, 2009). There are various measures used to determine a company's level of investment in net working capital and some of these have been conventionally used to judge its level of liquidity and solvency. The current ratio is one such ratio:

Current ratio = total current assets/total current liabilities (Pandey, 2014)

Generally a ratio of 2:1 is considered ideal for many business operations although this may vary across industries and markets due to factors unique to their circumstances (Pandey, 2014).

Various models have been developed to determine optimum levels of investment in inventory and cash, which form a significant component of WC. These include Economic Order Quantity (EOQ) model inventory management and Baumol and Miller –Orr Model for cash optimal cash balances.

$$EOQ = \sqrt{(2SO \div C)}$$

Where S is Total Sales in Units over a period; O is the ordering costs for each order and C is the carrying costs per unit. EOQ Model attempts to optimize inventory ordering process by keeping both costs at minimum levels. It is very similar to the Baumol's Model that attempts to minimize costs associated with holding 'inventory of cash'. The optimal cash balance, C, as per the model is given by:

$$C = \sqrt{(2cT \div k)}$$

Where c is the transaction costs of converting marketable securities to cash, T is the total cash needed during the period and k is the opportunity cost of holding cash balance. This model makes certain unrealistic assumptions such as uniform periodic cash payments that have been corrected under the Miller- Orr Model. The Miller-Orr Model takes in to consideration the unpredictable nature of cash inflows and outflows experienced by firms (Pandey, 2014). The model sets the upper limit and lower limit for cash holdings. The gap between the upper limit and lower limit, Z is given by the formula:

$$Z = (0.75 \times \text{Transaction costs} \times \text{Cash flow variance/interest per day})^{1/3}$$ (Pandey, 2014)

2.3.2 Size of Firm

The size of firm also determines its working capital policy (Mwarari, 2013). This is because size gives an organization power to influence terms while seeking financing for its operations. Generally, large firms are considered low risk due to their large capital base and ability to withstand and most lenders and suppliers would be willing to offer credit and financing and relatively cheaper rates as compared to when dealing with smaller firms, which are mostly start-ups yet to establish themselves in the market.

The size of the firm more often determines the level of development or advancement of its value chain and distribution channel in terms of efficiency and reliability. These factors also determine the WC policy adopted by a firm (Padachi, Howorth, & Narasimhan, 2012). Highly efficient firms that have developed advanced processes for their supply chain such as direct linkages with suppliers and vendors may have more aggressive WC policies as the need to hold large amounts of current assets is significantly reduced (Burns & Walker, 2001). Similarly, practices and factors unique to different industries inform WC policies adopted by individual companies.

Most companies benchmark with industry leaders while setting their WC standards. These are mostly large firms that have managed to overcome financing challenges are able to negotiate the best financing options for financing their working capital. Their mix of working capital would more often represent optimal levels that guarantee maximum returns to shareholders.

2.3.3 Location of the Firm

Locational advantage has been attributed to the success of different firms in the past. Some of the considerations include nearness to raw materials or sources of key in puts, nearness to

qualified and experienced human capital, nearness to the market, regulatory framework, tax and such other factors that may be unique to different locations (Pitt, 2014).

The benefits accrued by a firm on account of its location may also arise out of WC related savings. For example, nearness to source of key inputs may enable organizations to pursue aggressive inventory policies such as just in time (JIT) with its attendant savings on space and increase in efficiency of the firm (Burns & Walker, 2001). Similarly, nearness to a rich market would also entice a company to make direct sales to end users and possibly eliminate credit sales altogether thereby reducing its CCC.

2.3.4 Management Team

Recent studies have shown that management practices have an effect on performance of firms (Switzer & Bourdon, 2011). Management practices have been found to be dependent on the quality of the management team in place. Key variables considered to determine quality of management team include level of dominance of the founder or chairman over board of directors, heterogeneity of the management team, and tenure of the team in the organization.

Tenure of the management team has been hypothesized in some studies to have a positive relationship with performance (Switzer & Bourdon, 2011). On the other hand, team heterogeneity, which requires management team with diverse social-economic, academic and professional background, has been found to be a deterrent to entrenchment that results in to management complacency and slow response to change in fast-changing business environment that demand innovation (Switzer & Bourdon, 2011). The third aspect is the dominance of the Chairman or founder over the board of directors. This aspect has been found to have a negative correlation with performance. The quality of management may also have an influence on the policies adopted by firm including WCM policies. The research will

assess the extent to which the existing WCM policies adopted by the listed manufacturing entities may have been influenced by the quality of its management in place at the time.

2.4 Empirical Review

Several studies have been done on WCM with a lot of research attempting to determine various implications of WCM on the performance of firms. In one study done by Sabri (2012) in Jordan, the researcher sought to determine the effect of WC policies on the profitability of firms. The study took a sample of 45 firms and was conducted over period of 7 years from the year 2000. The selected firms were then grouped as having either aggressive or conservative policy and tested on their profitability. It was found that firms that adopted aggressive policies were more profitable and recommended adoption of this policy by finance managers.

Burns & Walker (2001) looked at WC policies adopted by small manufacturing firms in the United States (US). The study used a questionaire survey on selected manufacturing firms, which were then analyzed using available statistical tools. The study found that a typical manufacturing firm is a net supplier of credit. It was also found that most of the net users of trade credit were those companies with written WC policies or those pursuing aggressive WC policies. This implies that manufacturing outfits with established sound financial management policies are able to determine the cost-benefit of trade credit and use the outcome of their analysis to take trade credit of cash discounts.

Weinraub and Visscher (1998) investigated if there are any significant differences between working capital policies adopted across different industries and the reasons thereon. Current ratio was used by the researchers to determine the working capital policy adopted by different companies where a high ratio represented an aggressive policy and vice versa. A total of 216 companies were investigated divided in to ten groups representing different industries. Their

findings revealed that companies following aggressive policy towards WC assets tended to follow conservative WC financing policy. Further, they also found some degree of semblance in WC policies adopted by companies in similar industries.

In Spain, a study by Garcia-Teruel and Martinez-Solano (2007) also sought to determine the impact of WCM on the profitability of SMEs in that country. The study relied on a database containing financial data of European companies and selected a sample of SMES based on European Union defination.Return on Assets (ROA) was used as the dependent variable while WCM metrics such as number of days of AR, AP and inventory as the independnt variable. The study found that WCM is very important to SMES and effective management has a direct impact on their profitability.

Owolabi and Alu (2012) in their study investigated the influence of WCM on profitability of listed manufacturing firms in Nigeria. The researchers used ex-post factor research approach that involved examining financial statements of five listed manufacturing companies over a period of five years. Their findings revealed that different WC components affected or influenced profitability differently and ehen these were put together, their overall impact on profitability was insignificant. These findings go against logical expectations on the impact of WCM on profitability and demostrate a need to investigate the impact of WCM on profitability and share prices in the local context.

There have been studies on WCM conducted in Kenya and the East African region as well. In a study conducted by Mwangi, Makau, & Kosimbei (2014), the reseachers investigated the effect of WCM on performance of non-financial companies listed at the Nairobi Stock Exchange (NSE). The researchers used explanatory non-experimental research design and relied on secondary data available on the selected companies annual reports and NSE handbooks. A total of 42 companies were investigated and it was revealed that an aggressive

WC policy had significant effect on returns. Similalarly, a conservative investing policy was also found to have a positive impact on performance of firms.

In another study conducted by Makori and Jagongo (2013), the researchers examined the impact of WCM on the profitability of manufacturing and construction firms listed at the NSE. The research relied on data from Capital Markets Authority (CMA) sources and NSE handbooks and used Pearsons correlation and ordinary Least Squires regression models to determine the relationship between profitability and WCM. Their findings revealed a negative relationship between profitability and number of days of AR and CCC and a positive relationship between profitability and number of days of inventory and number of days of accounts payables. These findings reveal a case of a more conservative policy that reduces AR days while at the same time keeping inventories at a reasonable level.

Pitt (2014) sought to establish the relationship between efficiency in WCM , WC investment decisions, WC finance decisions and profitability of firms in Nigeria and Kenya. The research relied on secondary data retrieved from online database of financial statements of listed firms in selected African countries and used measures of correlation to ascertain the relationship between the variables. The findings revealed a negative correlation between profitability and CCC as well as WCI for Kenyan firms. The results also showed a negative correlation between WCF and profitability among Kenyan firm. However, the relationship between profitability and CCC and WCI was found to be postive among Nigerian firms. This research demostrated a remarkable difference between the two countries from WCM perspective and its impact on profitability.

Nderu(2013) in a study conducted on Kenya Airways (KQ) by sought to among other issues, determine the impact of working capital management strategies adopted by Kenya Airways on their performance. The study employed descriptive research design involving use of semi-

structured interviews for data collection purposes as well as secondary sources that included magazines, published financial statements from KQ. Asample of over 130 employees was selected from top level, middle level and supervisiory staff for purposes of completing the questionaires. The research used descriptive statistics for data analysis using SPSS as the tool for conducting the analysis. The findings revealed a negative relationship between inventory days and performance. The findings was consistent with the management sentiments expressed through the questionnaires where most of them concurred that WCM had a great impact on performance of the firm.

2.5 Summary

In summary, we see that WCM is well aligned to existing theories in finance. The trade-off theory seeks a balance between two extremes; aggressive and conservative WCM policies in order to reduce the costs and maximize the benefits associated with both extremes. The pecking order theory on the other hand provide insights on financing options available to firms and the apparent preferences of various sources of funding by firms in specific order with specific reasons. All these are important as we seek to understand the WCM policies and their impact on Stock return of manufacturing entities listed at the NSE.

Further, past empirical studies provide useful information of what has so far been determined by other researchers in this topic and the gaps that remain unresolved. A review of most of these studies reveals a relationship between WCM and profitability of firms in general with the exception of firms in the financial services sector. However the differences in the variables tested and the context of the various studies makes it difficult to generalize the findings across different regions and sectors and demand that region and sector specific studies be conducted from time to time to take in to consideration the ever changing business environment. New developments in trade such as e-commerce, mobile payments and

innovations in the financial services sector may have profound effects on various aspects of trade including WCM thereby making a case for current studies done against the background of such emerging business practices.

The following are the gaps noted from literature review that deserve further scrutiny through an independent study. First, most if not all of the past studies done in the Kenyan context have relied on profitability as the dependent variable in their studies on the impact of WCM on performance of firms. Studies on impact of WCM on stock performance in the local context are scanty and far between. This study attempts to address this gap and looks at the impact of WCM on their Stock return at the NSE.

The other notable gap is that most studies have looked at WCM in terms of financing and investing policies and seem to have ignored or given less emphasis to the effect of WC policies such as inventory policy, AR policy, cash management policies and their possible influence on Stock return of firms. Broadly speaking, not much research is available that directly compares the WCM policies; aggressive and conservative policies on one side and Stock return as the dependent variable. The study will seek to address this gap by specifically investigating the various policies adopted by firms to control their working capital and how these have impacted their overall value reflected in the price of their stocks over a period of time.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In order to conclusively address the gaps found in the past studies, the research needed to adopt a specific and suitable methodology that outlines the necessary steps to be taken to collect and analyze data, which would then form the basis of any findings and discussions thereon. This includes research design, sampling criteria and analysis methodology.

3.2 Research Design

The research relied on exploratory research design. This provided an opportunity to critically examine existing working capital policies and practices among various NSE listed manufacturing companies and the effect of such policies on Stock return of the firms. The approach not only provided detailed understanding on the existing WCM practices and measures adopted by NSE listed manufacturers but also helped identify their effect on the Stock return of the firms. The detailed findings realized have not only enriched the existing discourse in WCM practices in NSE listed manufacturing firms but also provided insights in to the possible causal relationship between the identified policies and practices and Stock return of the selected companies.

3.3 Population of the Study

The research was conducted on 8 manufacturing firms listed at the NSE. Records from NSE reveal that there are 12 manufacturing firms listed at the NSE. Nine of these are categorized under manufacturing and allied. These are: Mumias Sugar, Kenya Orchards, British American Tobacco, Unga Group and East African Breweries all categorized under manufacturing and allied. The other 3 are under different categories even though they are manufacturing entities. These are Sameer Africa, categorized under automotive and Crown

Burger and East African Cables both categorized under construction and allied. The research had considered a census but due to difficulty experienced in obtaining data for all the 12 firms, this was not possible and a study shifted focus to the 8 whose data was readily available.

3.4 Data Collection Methods

The research used secondary data obtained from various sources including the websites of the companies and NSE. Other sources of data included industry magazines, newspapers, and available hard copies of audited financial statements of listed manufacturers. Data was collected for a period of 5 years from 2009 to 2013.

3.5 Data Analysis Techniques

The research employed descriptive statistics to analyze the various the relationship between the various working capital policies adopted by the company and their impact on returns to shareholders over the five year period. Pierson Correlation Analysis was used to evaluate the level of association between the independent variables while multiple regression analysis was used to investigate any causal relationship between the dependent and independent variables. Statistical Package for Social Sciences (SPSS) was used in the analysis of the raw data collected. The other measures investigated were the significance of association between the variables and these were compared to the 5% threshold set for the research.

The dependent variable in this study was returns to shareholder (RTS) over a given period. On the other hand, the independent variables were the various working capital policy indicators or metrics such as inventory days, inventory month on hand, accounts receivable days and accounts payable days. There were control or intervening variables that the research held constant so that their contribution or influence on the dependent variable was

reduced or eliminated altogether. These were size of the firm and quality of management of the firm. The regression model below best illustrates the relationships between the variables in the study:

$$RTS = A_0 + wICP + xACP + yAPP + c_1P + c_2Q + E$$

Where:

RTS is the stock returns, theoretically given by: $R_e = d_i/P_o + (P_1 - P_0) / P_0$, Where R_e is the return on equity, d_i is dividends paid, P_0 is initial purchase price of shares and P_1 is the final price of the shares in the market.

A_0 is a constant

ICP is the inventory conversion period

ICP = Total Inventory ÷ Average cost of sales per day

ACP is the Average Collection Period for receivables

ACP = Total Receivables ÷ Average Credit sales per day

APP is the Average Payables Period for trade creditors

APP = Total Trade Creditors ÷ Average Cost of Credit Sales

w,x,y, are the coefficients of the independent variables

P,Q are the control variables representing size of firm and quality of management team respectively and their respective coefficients c_1 and c_2.

E is the error term

The size of the firm was represented by the natural log of total assets while quality of management team was measured by the number of Board of Directors (BOD). Some researchers have argued that companies with more members of BOD are likely to benefit from the wealth of experience and qualifications of the different board members which is synonymous with high quality management capable of making value-adding decisions (Bratland & Hornbrinck, 2013).

Each of the above variables was determined from the available audited financial statements since these are generally publicly available for listed companies. The NSE and Capital Markets Authority (CMA) provided bulk of the audited financial statements for the companies.

3.6 Test of Significance

Test of significance assisted the research in eliminating or reducing the effects of possible sampling errors in arriving at the conclusions or confirming or rejecting null hypothesis. It set the threshold or significance level which the findings have to meet in order to confirm or reject the relationship that is the subject of the research. This research used the z-tests of significance to validate or ascertain the relationship or dependence of the various WCM initiatives and policies to the Stock return of manufacturing firms listed at the NSE.

$$Z = \frac{(x-\mu)}{\delta/\sqrt{n}}$$

Where x is the sample mean, μ is the mean of the population, δ is the standard deviation and n is the population of the study. The z-statistic provides probabilities of having extreme observations beyond what is observed by the research, commonly referred to as P – values, which were compared to the preset levels of significance of the research. A significance level of 5% was adopted for this research.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The study has applied two types of analysis in this chapter; namely descriptive analysis and inferential analysis. The descriptive analysis helps the study to describe the relevant aspects of the phenomena under consideration and provide detailed information about each relevant variable. It provides insights on to the various statistical properties or measures of the variables under consideration and firsthand comparative information. The inferential analysis on the other hand attempts to determine any relationships between the variables. The study used Pearson correlation, the panel data regression analysis and the t-test statistics. While the Pearson correlation measures the degree of association between variables under consideration, the regression estimates the relationship between working capital management and stock returns. Further, chi-squire test and T-test were used determine the level of significance of the various WCM measures between the different firms studied.

4.2 Descriptive Statistics

Table 4.1: Summary statistics for Stock returns variables.

	N	Minimum	Maximum	Mean	Std. Deviation
Inventory Conversion period	40	27.00	171.00	89.0500	35.01937
Average payment period	40	6.00	158.00	47.0750	35.29610
Average collection period	40	.00	183.00	52.9000	40.39408
Size of the firm	40	6.00	18.00	15.5150	1.92295
Quality of management	40	4.00	12.00	8.1750	3.13694
Valid N (listwise)	40				

Source: *Computed by the researcher from annual reports of listed firms (2014)*

The above table 4.1 shows the results of summary statistics of all the variables in the analysis. It provides the information about number of observation included and mean its dispersion and standard deviation. From the finding, the average ICP and APP among the manufacturing firms studied is 89.05 days and 47.08 days respectively. Average ACP is 52.9 days leading us to an average Cash Conversion Cycle of 95 days. This is the average period it takes the firms to realize cash from their purchased raw materials. It is noteworthy to state that the firms that had lower than average CCC also tended to have high quality of management represented by the number of board of directors.

The average size of the firms was noted to be 15.52, this values were seen to go as high as 18 and as low as 6. The size of the firm measured by the natural log of the total assets had the least standard deviation of 1.9. This implies the relative sizes of most of the studied manufacturing companies did not differ significantly a part from a few extreme cases. Manufacturing is a capital intensive undertaking and understandably, most of the listed manufacturers reported huge investment in fixed assets making up the total assets.

The quality of management was seen to have a mean of de 9, however these values were seen to go as high as 12 and as low as 4. This is often a difficult measure but the number of board of directors has been considered an indicator of the level of expertise and experience available for a company that would help give it profitable and sustainable strategic direction. A large number of directors from diverse backgrounds would then be interpreted as high quality management. The other measure that was not considered for this research is the presence of founder-chairman or founder Chief Executive, which represents high quality management to some extent.

4.3: Correlation Analysis

Pearson correlation was used to measure the degree of association between variables under consideration i.e. independent variables and the dependent variables. Pearson correlation coefficients range from -1 to +1. Negative values indicate negative correlation and positive values indicates positive correlation. A correlation coefficient value less than 0.3 indicates weak positive or negative correlation and that which is between 0.3 and 0.5 represents moderate positive or negative correlation. Pearson correlation coefficient that is greater than 0.5 represents strong correlation.

The dependent variable for this study was returns to shareholders that were measured or represented by capital gains and dividends declared and paid every year for the five years under study. On the other hand, the independent variables were ICP, ACP and APP all measured in days, with control variables being quality of management and size of the firms. Table 4.2 presents the correlation coefficients for all the variables considered in this study.

Correlations

		Inventory Conversion period	Average payment period	Average collection period	Size of the firm	Quality of management
Inventory Collection period	Pearson Correlation	1				
Average payment period	Pearson Correlation	.385**	1			
Average collection period	Pearson Correlation	.371**	.402	1		
Size of the firm	Pearson Correlation	511**	.433	.409	1	
Quality of management	Pearson Correlation	.465**	.081	.515	.620	1

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

Table 4.2: Correlation coefficient

From the analysis of the findings it was seen that the size of the firm had the highest positive correlation with quality of management of (Pearson correlation coefficient 0.620). This however is expected since larger firms tend to have more numbers in their board due to the large number of functions they have. Coincidentally, the large number of members of the BOD is considered beneficial to the company due to the large talent and skills pool it offers to such companies in making value-adding decisions both in the short term and long term.

Further, there was also a strong significant correlation between the inventory conversion period and the size of the firm with Pearson correlation coefficient of 0.511. This implies that larger firms tended to convert their inventories in to receivables faster than smaller companies. This could possibly be due to the fact that the large firms have been able to invest in more efficient machinery and supply chain that has made this possible.

It was also noted that there was an averagely moderate correlation between the APP and the size of the firm with Pearson correlation coefficient of 0.433. Even though the correlation is relatively weak, it is clear that large firms are able to negotiate better credit terms than their smaller counterparts.

The correlation among the independent variables in the study was relatively low even though reasonably significant in some cases. The highest correlation among the independent variables was noted between APP and ACP, which had a correlation coefficient of 0.401. The positive correlation in this case is consistent with general expectations of industry practice where companies tend to pay accounts payables from collections received from accounts receivables. This implies that whenever there would be delays in collecting accounts receivables leading to longer ACP, then this would translate in to delays in honoring payables leading to equally longer APP.

In summary, larger firms such as East African Breweries and British American Tobacco, posted better working capital management metrics compared to the smaller firms. This is with the exception of Mumias Sugar whose average APP had a large deviation from the overall mean APP possibly due to due to the much publicized cash flow management problems that affected its operations from as early as 2011. Larger firms also had the highest number of BOD and this possibly gave them an edge in their quality of management. There is a general understanding among researchers that a large number of highly qualified and experienced BOD imply better corporate governance and consequently high quality management in terms of internal controls and development of sound programs for strategic development and long term growth in value

The overall positive correlation between all the independent variables is also consistent with expected realities in most industries. Generally, in commoditized industries, manufacturers tend to have their way over their suppliers of raw materials and may even dictate payment terms including credit days. This would normally lead to higher APP. The credit days demanded would often take in to consideration the ICP and ACP so that payments to suppliers become due around the same time that collections from customers would have been realized. Therefore, APP, ICP and ACP tend to move along in the same direction for the studied manufacturing firms in Kenya with the strongest correlation seen between ACP and APP.

4.4: Regression Analysis

Multiple regression analysis was used to measure the relationship between working capital management measures and stock returns of manufacturing companies listed at the NSE. The regression model's goodness of fit was determined using overall correlation and the

coefficient of determination between the independent variables and stock returns; that is, the strength of the relationship. The table below shows the summary of the model:

Table 4.3: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.974[a]	.948	.906	.2973998	2.018

a. Predictors: (Constant), Inventory collection period, average payable period, average collection period, size of the firm and the quality of management
b. Dependent Variable: Stock returns

The model summary in regression analysis reveals the extent to which the variations of dependent variables are explained by the variations in the independent variable. It measures the extent of dispersal of the observed dependent variables around the regression line. This is given by the R^2 values, which lies between 0 and 1. The table reveals a correlation coefficient, represented by R, of 0.974 and determination coefficient, represented by R^2 of 0.948. This implies that 94.8% of variations of the dependent variable are explained by the variations in the independent variables thereby indicating a strong relationship between the independent variables (ICP, APP, ACP) and the dependent variable, Returns to Shareholders (RTS) while holding the control factors; size of firm and quality of management constant.

Durbin Watson (DW) test was also conducted to determine auto-correlation of the model residuals from the regression analysis. The general rule of thumb is that values less than 1 or substantially less than 2 would indicate possible autocorrelation. On the other extreme, values that are substantially greater than 2 would also indicate negative auto-correlation. With DW of 2.018 determined for this research, it may be concluded that there was no autocorrelation of the variables under consideration.

4.4.1 Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) provides the levels or degree of variability of variables within the regression model and is used to test the significance of the relationship that exists between variables; the model's significance. The table below represents ANOVA for the research:

Table 4.4: Analysis of Variance (ANOVA)

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Regression	.665	5	.133	3.6944	.002b
Residual	1.224	34	.036		
Total	1.889	39			

a. Predictors: (Constant), Inventory collection period, average payable period, average collection period, size of the firm and the quality of management
b. Dependent Variable: Stock returns

The ANOVA results presented in Table 4.4 shows a significance of 0.002, which is lower than the significance threshold sent for the research of 5%. Therefore, we conclude that the model has predictive value and the independent variables may be used to predict the outcomes of the dependent variable.

4.4.2 Regression Coefficients

Having determined an existence of a relationship between the dependent and the independent variables, the next step was to complete the regression equation by ascertaining the regression coefficients. These would be used to derive the final equation or model of the research that may be applied in similar scenario given the variables. The table below shows the regression coefficients:

Table 4.5: Regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.325	.721		2.316	.564
	Inventory Conversion period	.431	.213	.003	3.246	.036
	Average payment period	.362	.229	.026	3.996	.027
	Average collection period	.603	.316	.034	4.383	.019
	Size of the firm	.533	.346	.067	4.899	.014
	Quality of management	.428	.366	.033	5.699	.008

a. Dependent Variable: RTS

By incorporating the determined regression coefficients in to the original regression equation, we now have the final equation that may be used to determine returns to shareholders given the values of the other independent variables:

$$RTS = 12.325 + 0.431ICP + 0.603ACP + 0.362APP + 0.533P + 0.428Q + \boldsymbol{\varepsilon}$$

The significance level for all the independent variables is less than 0.05 which implies all were significant in the study. The Standardized Beta Coefficients provide a measure of the contribution of each variable to the model. The values of the standardized coefficients range from 0 to 1 with 1 representing perfect correlation or maximum contribution to the outcomes of the dependent variable. This table reveals that ACP has the strongest influence on returns to shareholders with a standardized coefficient of 0.034 followed by APP with standardized beta of 0.026.

4.5 Discussion of Findings

The study relied on both descriptive and inferential statistical analysis to understand the relationship between WCM measures and returns to shareholders. The descriptive statistics helped the study to describe the relevant aspects of the phenomena under consideration and

provide detailed information about each relevant variable. For the inferential analysis, the study used the Pearson correlation, multi-variate regression analysis to determine the relationship between the variables, the level of significance of the relationship, evaluate possibility of auto-correlation and determine the coefficient of determination needed to complete the model.

First and foremost, the findings reveal a correlation between WCM policies and measures that were used as independent variables in the study; ICP, ACP and APP. This implies that movements or changes in either of the measures affect or influences the other measures. The understanding here is that in practice, organizations attempting to attain optimal WCM must consider all the WCM parameters since they have influence on each other. This finding is generally expected since there is a process link from payables to inventories, and then to receivables. They are all part of the same process and correlation is expected. What may be contested is the degree of correlation where all the independent variables posted respective correlation coefficients ranging from 0.385 to 0.409.

This finding is consistent with findings of many past researchers who have similarly found differing degree of correlation between inventories, payables and receivables. Bratland and Hornbrinck, (2013) found general correlation between AR and inventory balances, with slightly lower correlation found with AP. In a local study conducted by Makori and Jagongo, (2013) on listed construction firms, there was generally strong correlation between AR and AP signifying a similar correlation between ACP and APP since these measures are generally proxies for AR and AP balances respectively.

The other notable finding that was the primary objective of this research was the apparent causal reletionship between the independent variables; ICP, ACP and APP and the dependent variable that was Returns to shareholders (RTS). From the model summary, it was clear that

94% of changes in the dependent variable were caused by the independent variables for the studied listed manufacturers. Further, the determined correlation was 0.782 with p-value of .000 signifying strong positive correlation. This finding is validated by numerous prior studies both locally and abroad that have found a link between WCM and financial performance of firms. In a number of studies that sought to investigate WCM and profitability, the findings were positive.

Makori and Jagongo, (2013), Mwangi, Makau and Kosimbei (2014) all found that WCM affect profitbility and financial performance respectively in their independent studies. Profitability and financial performance are synonymous with returns to shareholders since conventional practice and regualtions dictate that dividends can only be paid from profits. Similarly performance of shares on stock exchange that yield capital gains is greatly influenced by information on financial performance announced from time-to-time. It is there safe to conclude that WCM also influence RTS as determined by this research and prior studies on similar or related topic.

The other finding that became apparent in the research was that manufacturing firms dealing in Fast Moving Consumer Goods (FMCG) generally posted lower than average ACP and APP. This may be explained by the fact that selling transactions in this sub-sector tend to be mostly cash-based with minimal or no credit period. Consequently, these companies are first and foremost able to turn their inventories in to cash almost immediately and therefore afford to pay their suppliers much earlier thereby posting below average APP. In the study, BAT, EABL and Unga Ltd posted ACP of 1, 31 and 15 respectively against industry average of 52 days. The same companies paid their suppliers earlier and posted APP of 24, 54 and 15 days respectively. These findings are also consistent with conventional industry practice where payables are normally honored from sales realized (Bratland & Hornbrinck, 2013). Entities

thus demand for payment periods that are more than their ACP to give them room to collect and pay (Bratland & Hornbrinck, 2013). This way, the firms ensure a large proportion of their AR are financed by AP that is a cheap source of credit compared to taking short term bank facility to fund net WC requirements.

On the contrary, the findings also revealed that manufacturing firms dealing in industrial products or those in non-FMCG category tended to have longer ACP and in some cases still had shorter APP. Shorter APP in this case may be explained by the fact that APP may be influenced by various factors including demand and supplier forces in the inputs market that may also influence the terms of sale. Thus dealers in less competitive inputs markets may have the leeway to demand upfront payment from their customers thereby translating to lower APP at the user level. Thus the Kenyan manufacturers' WCM policies are not only influenced by desired profitability and need for higher returns through prudent use of resources, but also by external market forces in the inputs market and their own products market. These findings are consistent with a study conducted among manufacturing firms in Sri Lanka in 2010, where it was found that their WCM policies are primarily driven by sales growth and profitability (Nimalasathan, 2010). In both cases, there is need to maintain focus on sales growth and offer competitive terms. These terms such as more credit days to customers may contradict short term objectives of achieving lower CCC but remain aligned to long term strategic growth objectives.

The above findings on high ACP among manufacturers in non-FMCG segment are also support a study conducted by Makori and Jagongo, (2013) who looked at the impact of WCM on profitability of listed construction firms in Kenya. Their findings implied that effective WCM yield higher profitability and growth. Thus WCM is not an end in itself but a means to achieving companies' strategic growth objectives. Thus different companies may adopt

different WCM objectives in order to attain overall growth in sales and profitability, grow in to new markets by offering favourable terms that may not necessarily result in to lower CCC.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1: Introduction

This chapter summarizes the study and makes conclusion based on the analysis and results. The implications from the findings and areas for further research have also been highlighted. Further, comparison and relevance is drawn between the study findings and past research conducted on related topics as well as existing theories and concepts as applicable and possible.

5.2: Summary

From the results, it is clear that optimal WCM practices would translate in to higher returns for the NSE listed manufacturing companies. Thus a lower ACP and ICP coupled with moderately high APP would result in to better cash flows and high returns for the firms. This is consistent with common knowledge in financial management that underscores the importance of steady cash flows in enabling companies acquire cheap credit and other facilities thereby reducing their costs and increasing their returns. However, there would be exceptions, often driven by company policy geared towards achieving certain short term or long term objectives. It is common to find companies that give no credit at all but also make no demand for their suppliers for more credit days. Such companies project a cash-rich image that signifies stability and profitability that portray positive information with investors thereby increasing demand for their shares leading to increase in their share prices. These are more often cash rich companies that have moved beyond aggressive WCM characterized by high AP and low AR as one way of achieving strategic growth and are instead pursuing other

long term value adding programs such as efficient processes, investment in new markets, effective and efficient supply chain or research and development initiatives.

In summary, the findings from this study suggest that listed manufacturing firms can improve their stock return by reducing their current asset to total asset ratio. These findings are generally in line with many previous studies done on working capital management that found significant impact of WCM initiatives on profitability, stock returns and business expansion and growth (Hillman & Keim (2001), Bratland & Hornbrinck (2013), Ebenezer & Asiedu, (2013).

Further, from a theoretical perspective, firms with good track record with suppliers are often more likely to get better credit terms and also positive sentiments in the market. Firms that have built strong cash flow position over time and are considered cash-rich not only benefit from favorable terms from suppliers and lenders, but are also viewed favorably by investors who are likely to buy such shares due to their perceived stability. Such firms experience high demand for their shares, which lead to increase in MPS and resultant capital gains. Their cash-rich position also makes them more likely to pay dividends. Thus WCM enables firms to achieve dual objectives of getting favorable terms from suppliers and lenders and positive sentiments from investors.

5.3 Conclusion and Recommendations for Policy

There is a strong case for efficient and effective WCM for listed manufacturing entities if they are to remain competitive in the global economy. WCM presents opportunities for manufacturing companies to reduce costs in terms of interests paid on short term facilities, opportunity losses from unfavorable trade terms and gain competitive edge that may not be easily replicated by competitors.

Industry regulators and associations such as KAM may develop programs to encourage sectorwise benchmarking with global best practices for WCM. Measures such as APP, ACP and ICP may be used to rate companies and recommend best practices for improvement. Manufacturing companies in different segments but sharing common suppliers may come together under strategic sourcing partnership to approach such suppliers as one entity in order to have a strong bargain for better terms.

Similarly, government's commercial attaché in supplier countries may assist in both enforcement of collections for exports and negotiation of better terms with suppliers. By joining or forming effective lobby groups, such initiatives could go a long way in improving the overall CCC of local manufacturing firms.

5.4 Limitations of the Study

The main limitation of the study was the inability to include all listed manufacturing firms in Kenya. This was primarily due to lack of audited financial statements for all the units for the entire five year duration of the study. The study is therefore based on only eight manufacturing firms whose full data could be retrieved from available sources. This however represents over 70% of total number of manufacturing firms that is twelve. It is not clear the extent to which the findings and conclusions would have been affected had the whole population been studied and given the diverse nature of the manufacturing firms in NSE, it may not be practical to generalize the findings from this study to all the listed manufacturing firms.

The other limitation has to do with the computation of returns to shareholders that never considered the time-value of money. The research considered the accounting gain of holding the shares of manufacturing companies for each of the years under study for one calendar year. Thus total returns to shareholders was given as sum of dividends declared and paid plus

capital gains for the respective years. Excluded from this analysis were the impact of inflation and the present values of the returns over the five years. By ignoring inflation and assuming and failing to capitalize the returns to their present values, the research findings may not hold in unstable business environments characterized by high risks and high inflation.

5.5 Recommendation for Further Research

The study suggests that similar studies to be done on large and medium-sized manufacturing companies but to also consider the effect of inflation and cost of capital. The opportunity cost of holding on to shares of such firms should be taken in to account while determining the returns to shareholders. This will provide better understanding on the effect of WCM on returns to shareholders under more practical business environments where inflation and other market risks are taken in to account.

The other area that deserved further detailed review through an independent research is the influence of behavioral finance on WCM. There is a possibility that certain WCM policies and measures adopted by organizations are influenced by industry practices rather than genuine requirement or non-requirement of working capital financing. For this reason, cash-reach companies may still demand for longer credit periods even though they may have very short ICP and ACP thereby posting very low CCC. The study could not ascertain the basis of the WCM policies adopted by the various manufacturing entities and there is a possibility that there is some degree of influence from industry leaders on smaller entities, which then sets the trend for WCM policies adopted. A separate and more focused study would help provide more insights on this.

Thirdly, another relationship that the research did not focus on is the influence of the size of the firm on WCM policies adopted. Issues to be looked at here include whether size matters in the adoption of WCM policies and measures and if firms of similar sizes and within the

same industry are likely to have similar or near similar WCM policies and measures. What was apparent in the research was that larger and seemingly cash rich companies tended to adopt less conservative policies characterized by lower APP. What could not be independently verified is whether this is deliberate policy adopted by large companies or mere coincidence. A separate study would help provide more detailed understanding on whether size matters in WCM.

The fourth area that the research could evaluate is the nature of ownership and management of the company and its impact of WCM policies and measures adopted. Here, a distinction would be made between owner-managed companies and those who have independent professionals in top management. Owner-managed companies would be those companies where executive management or directors have substantial shareholding in the company and are thus able to influence policy direction taken by the company. Such companies include those where the chairman, who has a controlling stake in the company, is actively involved in running of the company. It would be interesting to determine any difference with WCM policies adopted between such firms and non-owner-managed firms or firms where executive management have no or insignificant stake in the company

The last area that the research would recommend for further independent research is the influence of the regulatory regime on WCM policies and measures adopted by the various listed manufacturers. A part from regulation from the Capital Markets Authority (CMA) and Nairobi Securities Exchange that mainly focus on corporate governance and general compliance with listing rules and regulations, there are certainly industry-based regulatory bodies that have put in place certain standards to be met by different companies in order to ensure high quality products and general industry integrity and responsibility to the wider public. These include such bodies such as National Environment Management Authority

(NEMA), Kenya Bureau of Standards (KEBS) etc. Certain pronouncements by such regulatory bodies may have far reaching implications on operations of the company and influence their policies such as inventory holding periods and by extension influence their WCM policies. A detailed and more focused independent study would provide more information on this and possibly identify specific influences on WCM from regulation.

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APPENDICES

Appendix I: Descriptive Data

		2013	2012	2011	2010	2009
1	**CARBACID LTD**					
	ICP	36	27	50	100	68
	APP	26	6	18	25	13
	ACP	62	69	82	57	80
	RTS=d/p +(p1-p0)/p0	-52%	39%	-31%	42%	-18%
	Size of firm	14.6	14.5	14.4	14.2	14.1
	Quality of management	4	4	4	4	4
2	**EAST AFRICAN CABLES**					
	ICP	94	113	72	94	151
	APP	117	158	68	67	60
	ACP	183	159	100	98	90
	RTS=d/p +(p1-p0)/p0	46%	19%	-27%	-20%	8%
	Size of firm	15.8	15.7	15.4	15.3	6
	Quality of management	6	6	6	6	6
3	**MUMIAS SUGAR**					
	ICP	86	55	42	33	34
	APP	136	97	44	53	48
	ACP	11	108	66	41	59
	RTS=d/p +(p1-p0)/p0	-31%	-1%	-39%	47%	52%
	Size of the company	17	17	17	17	17
	Quality of Management	12	11	12	12	12
4	**UNGA GROUP**					
	ICP	83	53	61	69	79
	APP	15	14	13	12	19
	ACP	31	25	16	18	19
	RTS=d/p +(p1-p0)/p0	44%	53%	-11%	14%	38%
	Size of the company	15.9	15.7	15.6	15.4	15.5

	Quality of Management	8	6	8	8	8
5	**SAMEER AFRICA**					
	ICP	157	132	122	119	171
	APP	33	28	27	6	24
	ACP	30	62	57	69	76
	RTS=d/p +(p1-p0)/p0	32%	0%	-41%	48%	17%
	Size of the company	15.1	15.0	14.8	14.9	14.7
	Quality of Management	6	7	7	7	7
6	**BAT**					
	ICP	138	134	102	96	91
	APP	46	43	20	18	21
	ACP	1	1	0	1	1
	RTS=d/p +(p1-p0)/p0	29%	115%	4%	63%	43%
	Size of the company	17	17	16	16	16
	Quality of Management	12	12	12	12	12
7	**CROWN BERGER**					
	ICP	99	85	100	86	117
	APP	77	60	63	54	84
	ACP	66	52	54	59	59
	RTS=d/p +(p1-p0)/p0	81%	113%	-40%	55%	84%
	Size of the company	15	15	15	14	14
	Quality of Management	6	5	5	5	5
8	**EAST AFRICAN BREWERIES LTD**					
	ICP	86	109	70	67	81
	APP	39	38	80	42	71
	ACP	34	30	29	25	36
	RTS=d/p +(p1-p0)/p0	13%	57%	-10%	46%	26%
	Size of the company	18	18	18	17	17
	Quality of Management	12	12	12	12	12

Appendix II: List of Firms at NSE

AGRICULTURAL
Eaagads Ltd
Kakuzi Ltd
Kapchorua Tea Co. Ltd
The Limuru Tea Co. Ltd
Rea Vipingo Plantations Ltd
Sasini Ltd
Williamson Tea Kenya Ltd
AUTOMOBILES & ACCESSORIES
Car & General (K) Ltd
Marshalls (E.A.) Ltd
Sameer Africa Ltd
COMMERCIAL AND SERVICES
Express Kenya Ltd
Hutchings Biemer Ltd
Kenya Airways Ltd
Longhorn Kenya Ltd
Nation Media Group Ltd
Scangroup Ltd
Standard Group Ltd
TPS Eastern Africa Ltd
CONSTRUCTION & ALLIED
ARM Cement Ltd
Bamburi Cement Ltd
Crown Paints Kenya Ltd
E.A.Cables Ltd
E.A.Portland Cement Co. Ltd

ENERGY & PETROLEUM

KenGen Co. Ltd

KenolKobil Ltd

Kenya Power & Lighting Co Ltd

Total Kenya Ltd

INVESTMENT

Centum Investment Co Ltd

Olympia Capital Holdings Ltd

Trans-Century Ltd

MANUFACTURING & ALLIED

A.Baumann & Co Ltd

B.O.C Kenya Ltd

British American Tobacco Kenya Ltd

Carbacid Investments Ltd

East African Breweries Ltd

Eveready East Africa Ltd

Kenya Orchards Ltd

Mumias Sugar Co. Ltd

Unga Group Ltd

TELECOMMUNICATION & TECHNOLOGY

Safaricom Ltd