THE IMPACT OF WORKING CAPITAL MANAGEMENT ON FIRMS' PERFORMANCE:

EVIDENCE FROM MANUFACTURING FIRMS LISTED IN THE EAST AFRICAN STOCK EXCHANGES

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EVIDENCE FROM MANUFACTURING FIRMS LISTED IN THE EAST AFRICAN STOCK EXCHANGES.

By

Samson Bulenga

A Theses Submitted to the Department of Accounting and Finance to carry out a Research in Partial Fulfillment of the Requirements for the Award of Degree of Masters of Science (MSc) in Accounting and Finance.

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled "**The impact of Working Capital Management on firms' performance: Evidence from Manufacturing Firms listed in the East African Stock Exchanges** "in Partial Fulfillment of the Requirements for the Award of Degree of Masters of Science (MSc) in Accounting and Finance of Mzumbe University.

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DECLARATION AND COPYRIGHT

I, **Samson Bulenga**, declare that this dissertation is my own original work and that it has never been presented and will never be presented to any other University for a similar or any other degree award.

Signature: _____

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ACRONYMS

ACP- Average Collection Period

AIP- Average Inventory Period

AP -Accounts Payables

AR – Accounts Receivables

APP- Average Payment Period

CA- Current Assets

CCC – Cash Conversion Cycle

CL- Current Liabilities

COC- Cash Operating Cycle

DSE – Dar-es-Salaam Stock Exchange

EASE- East African Stock Exchange

GDP- Gross Domestic Product

GVA- Gross Value Added

ICP – Inventory Conversion Period

MVA- Market Value Added

ROA- Return on Assets

ROE- Return on Equity

SME- Small and Medium Enterprises

WCM – Working Capital Management

SPSS- Statistical Package for Social Science

ABSTRACT

The purpose of this research is to examine the impact of Working Capital Management on Firms performance. A sample of 20 Firms from three countries of East Africa (Tanzania, Kenya and Uganda) was taken. Working Capital Management is measured using Cash Conversion Cycle (CCC), Average inventory period (AIP), Average collection period (ACP) and average payable period (APP) and firm's performance as return on assets (ROA). Additionally, age, size, leverage, financial crisis, market book value and liquidity as control variables to estimate robust outcomes. The study used a case study design and 20 listed manufacturing firms were sampled. Secondary data from published financial statements for a period of 14 years (2001-2014). After controlling aforesaid indicators, it was found that, there exist an adverse impact of working capital on firm's performance (ROA). These outcomes specify that extensive recovery periods affect fund availability and supply of material, which consequently impact on firm operations and profitability. The results demonstrate that working capital management plays a role in increasing the wealth of the shareholders by making a firm more profitable through shortening CCC. Therefore, manufacturing firms should seriously manage their working capital to improve their performance.

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CHAPTER ONE

1.1 Introduction

This chapter introduces the context on how to manage working capital and its impact on the performance of listed manufacturing Firms in East African Stoke Exchange. The chapter is divided into number of section including background of the study, problem definition, objectives, limitations, delimitations, and significance of the study.

1.2Background of the Study

The role of working capital on financial management is crucial as it has direct relationship to the profitability of the firms (Afrifa&Tingbani, 2018). It is advisable for companies to ascertain the ratio between liquidity and profitability in their daily activities (Ullah et al., 2017). Ineffectiveness of long-term capital among firms leads to dependency on Working Capital Management (WCM). However, receivables and inventories occupy the substantial percentage of the enterprise total assets. Therefore, extreme level of current asset may bring forth insufficient return on investment of the firm (Mathuva, 2015).

Effectiveness of working capital management can be resolute by appropriate evaluation of the liquidity of the firms (Mathuya, 2015). According to Eljelly (2004), extreme investment on current assets can be avoided by prohibiting inability risk of an enterprise which is scrutinized by efficient of managing working capital. WCM is regarded as a crucial key in financial management since it comprises of decision on amount and structure of current resources and their financial status (Mathuya, 2015). For instance, decisions that aiming at to increasing profitability have a tendency to diminish level of liquidity indicating proficient management of working capital has significant impact on performance of the enterprise (Deloof, 2003). However, most of the peer studies have elicited the cash conversion cycle (CCC) as the significant degree for assessing the effectiveness of working capital management (Singh et al., 2017). The studies are supported by Richards et al., (1980) argument claiming that, CCC is a major component for measuring WCM.

"The Cash Conversion Cycle shows the time interval between the cash outflow for consumptions and manufacture of raw materials and the cash inflows subsequent from the sales of the finished goods and the collection of debts (Singh et al., 2017)"

According to Agha (2014), majority of the companies in the developed countries have established an independent unit known as working capital management unit for dominating balance sheet issues, in this case, Izadinia and Taki (2010) refers working capital management as a special unit that articulates fundamental decisions and policies for affecting various context of working capital sector including short-term financing and current assets. Profit of a company can be evaluated by generating substantial revenue with minimal expenses; therefore, profitability can be applied as a measurement unit of company financial performance as well as the key factor for sustainability of company in business (Pouraghajan&Emamgholipourarchi, 2012). On the other hand, management may face profitability consequences if the working capital is poorly invested, this implies proficient management of payable, inventories, and receivables have positive effect on profitability and success of a company.

Working capital explains 30% to 40% of the overall investment of the enterprises (Uchenna et al, 2012). In other words, working capital represents crucial part of total assets of any company business (Usman et al, 2017). Profitability could be deteriorated by poor management of working capital. This poor management of working capital could as well outpourings risk and monetary crunch (Ukaegbu, 2014). Therefore, it has significant impact on the performance of enterprise accounting as well as market performance (Abuyazed, 2012).

Industrial sector is referred as backbone of national economy worldwide particularly in developing countries (Mohamad et al, 2017). In most of the emerging countries the sector contributes about one third of the national GDP. For example, in Malaysia, it covers over 97% of the total national business establishment contributing approximately one-third of the country GDP (SME Annual Report, 2013).Similarly, in Indonesia it contributes over 60.6% of the national GDP (Sualang et al, 2017). In Tanzania the sector yields over 27% of the country GDP comprising approximately

6800 SME's (Mashenene et al, 2014). Despite the remarkable high number of companies globally, most of the firms struggle to attain long-term growth, survival, and profitability (Lyndagaas&Berg, 2016).Pais and Gama (2015) stresses that, regardless of firms having long-run objectives, poor working management may lead to substantial losses and inadequate profitability. WCM is ascertained as the significant indicator of the SME's financial health (Mohamad et al, 2017). Effective WCM is more important in SME's than in large businesses (Afrifa&Padachi, 2016).

Manufacturing firms are crucial for economic development. Their importance lies from providing the society with the products and employment to exportation of the products. The sector has been facing several challenges including insufficient infrastructure and mismanagement of various financial components. Most of East African Countries are failed in managing working capital due to poor political policies.

Several studies have shown there is strong link between WCM and firms performance in terms of profitability. For instance, Simon et al (2017) investigated relationship between WCM and SME performance in Nigeria. Their results found existence of quadratic relationship between performance and WCM. Conversely, Gorondutse et al (2017) assessed impact of WCM on profitability in Malaysia including 66 SME's established between 2006 and 2012. Their findings indicated profitability of the firms depends on proficient WCM. There was positive effect of days' account payable of SME's in terms of equity return and asset return. However, their study found negative impact on net operating profit. Another study was carried out by Afrifa&Tingbani(2018) to investigate relationship between working capital management and SME performance in United Kingdom. Their results showed WCM has negative effect on firms' performances. However, with available cash flow the relationship was found positive.

Hence, it is important to apprehend the impact of WCM and its influence on company profitability. Several studies have been conducted in different countries but little or no study have referred to Tanzania, Kenya and Uganda. Thus, Current study elucidate the impact of WCM on performance of listed manufacturing firms on East African

Security Exchanges by scrutinizing the significant relationship between profitability and working capital management.

1.3 Statement of Research Problem

Manufacturing sectors currently contributing substantial amount of GDP percentage in global scale. In Tanzania it contributes 25% of the GDP. 11% of country GVA is contributed by Manufacturing sector in UK, 25% in Japan, and 60.0% in China (BIS, 2010). In East Africa, Manufacturing sector have been considered as one of the major sources of employment for instance, in Kenya 36% of the country population has been employed (Ngui et al,2016) while approximately 2.5 million people in Uganda, and 23.4% of the Tanzania employments. Despite SME being one of the largest employer in Tanzania, yet the enterprises suffer from poor performance due to poor WCM practices in current assets and current liabilities (Page, 2016). This is because most of the manufacturing firms tend to acquire higher current resources and current obligations compared to total resources and total obligations.

A successful manufacturing firm should have a sustainable working capital ratio with minimum expenses while maintaining cash flow so as to raise profitability (Zhang et al, 2017). Notwithstanding, there are number of initiative programs that have been established in Tanzania to create convenience environment of this sector in terms competition, role of bank, infrastructure, government assistance, and environmental problems (Isaga, 2017). Therefore, there is a need to scrutinize the role of firm's owners in management of their businesses in respect of working capital. Effective management of working capital has been ascertained to create value in firm's profitability by different scholars globally (Pais& Gama, 2015; Chodorow-Reich, 2014; Yazndafar&Ohman, 2014; Christopher, 2016; Diamond &Kayshap, 2016. However, few/no studies have recently analysed the relationship between WCM and profitability of manufacturing firms within East African Countries. This study intends to assess the relationship between working capital management on firms and performance.

1.4 Objective of the Study

The objectives of the study are divided into two types which are general objective and specific objectives.

1.4.1General Objective

Since there are differences in profitability among manufacturing firms there is a requirement to examine the major effect of working capital that contributes to their performances. Generally, this study determined the impact of Working Capital Management on performance of listed manufacturing firms.

1.4.2 Specific Objectives

1. To determine the impact of cash conversion cycle on the performance of manufacturing companies.
2. To assess the impact of Average Payment Period on the performance of manufacturing companies.
3. To establish the impact of average Collection Period on the performance of manufacturing companies.
4. To determine the impact of inventory turnover rate, on the performance of the manufacturing companies.

1.5 Research Questions

1. What is the impact of cash conversion cycle on the performance of manufacturing companies?
2. What is the impact of Average Payment Period on the performance of manufacturing companies?
3. What is the impact of average Collection Period on the performance of manufacturing companies?
4. What is the impact of inventory turnover rate, on the performance of the manufacturing companies?

1.6 Research Hypothesis

H1: The higher the cash conversion cycle, the higher the performance of the firm.

H0: The higher the cash conversion cycle, the Lower the performance of the firm

H2: Higher Average Payment Period positively impacts the performance of manufacturing companies

H0: Higher Average Payment Period negatively impacts the performance of manufacturing companies

H3: Higher average Collection Period negatively impacts the performance of manufacturing companies

H0: Higher average Collection Period positively impacts the performance of manufacturing companies

H4: The higher the inventory turnover rate, the higher the performance of the firm.

H0: The higher the inventory turnover rate, the lower the performance of the firm.

1.7 Significance of the Study

The importance of this study is established from the point that it will observe the impact and the underlying factors that contributes to the profitability of firms looking on the working capital management. Therefore, a researcher postulates significance of the study in reference to the researcher and the companies in Tanzania, Kenya and Uganda.

To Companies: Researcher will detail the explicit and implicit outcomes of implementing good policies on working capital management on profitability of organization. Therefore, findings will help the companies to examine the current status and position of their policies to ensure profitability. Thus, the study will assist them in

taking appropriate measure for improving the systems, policies and come up with sustainable strategies.

To the Researcher: This theses will add value on the Working Capital management fields. Therefore, it will help researcher for future reference in relevant studies especially on how to deal with Current assets of the organisations to increase profitability.

1.8 Limitation of the Study

Researcher expects to encounter several constraints in terms of methodology, and timeframe. Methodological limitation is expected since secondary data will be used. The problem with secondary data is, if the preparation process was not good the results could be misleading as the data contains error. Also, timeframe can be viewed as limitation since only three months have been scheduled for data collection and analysis.

1.9 Delimitations of the Study

This study delimitation are traced through research statement, objectives, methodology, and sample size. The statement of the problem clearly specifies working Capital management as a key variable to be investigated and elicit scope of the research which comprises listed manufacturing firms in East African Stock Exchange. The intentions on the other side evidently set out the intended results and enlighten what the study will encompass. Another delimitation is methodology; this study used a mixed approach which comprises qualitative and quantitative techniques. The evaluation of the results provided evidence on the impact of managing working Capital on firms' performance. Furthermore, sample size of this study involved listed manufacturing firms on East African Stoke Exchange.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This part analyses the theoretical and empirical literatures relating to the impact of working capital management on firms' performance. The part of theoretical literature presents conceptual definitions of key terms and basic concepts which have been used in the study. The part of empirical literature review provides the ideas and knowledge provided by other scholars who published about working capital and research gap

2.2 Definitions of Key Terms

2.2.1 WCM:

Working capital management involves all the decisions of the firms about how to manage current resources to the current obligations whereby if the Current liabilities are high than Current Assets then it is said to be Working Capital Deficiency. It comprises the operating liquidity available to the business. It is simply the capital available for conducting daily activities/operations of an organization. It represents difference between current assets and current liabilities. According to Harris (2005) Working capital management is a simple and straightforward concept of ensuring the ability of the firm to fund the difference between the short term assets and short term liabilities. Nevertheless, complete mean and approach preferred to cover all its company's activities related to vendors, customer and product. (Hall, 2002).WCM is probably high proportion of total firm's resources. The top-level management underlining the high usage of short term resources and sources but because of the idea that there is no high standard results and observation about WCM's effect on firm's performance (Hill et al., 2010). As we use more efficient working capital or manage it more effectively, our performance increase and risk of bankruptcy also decreases.

The main objective of working capital management is to maintain an optimal balance between each of the working capital components. Business success heavily depends on the financial executives' ability to effectively manage receivables, inventory, and payables (Filbeck and Krueger, 2005). Firms can reduce their financing costs and/or increase the funds available for expansion

2.2.2 Firm Performance

Firm performance can take several meanings due to its complex in measurements. it entails the results achieved by firms. Firms have common objective of achieving a certain financial target. Therefore performance measures how well the firm has achieved its objectives. Financial performance of a firm can be measured by Revenue, ROE, ROA, profit margin, liquidity ratio etc. in manufacturing sector the common measure of performance includes ROA and inventory turnover.

Return on assets means how much a firm generates profits and effectiveness with given resources. It is also called return on investment (ROI). A study was made on the correlation of operating performance and liquidity in two countries (Japan plus Taiwan) (Wang, 2002). He also checks it out the correlation among value of firm plus liquidity. He takes the results and found that there was indirect relationship between return on equity, return on assets and CCC. He pointed out that although there must be dissimilarity into monetary structure as well as constitution distinctiveness of both states. Nevertheless, if the liquidity is high then the performance is also better that direct affected the firm's value. Therefore, for this study firm performance means the level of ROA achieved.

2.2.3 Inventory:

This are the things with value which a Company purchase or make for the aim of selling with higher value, is a complete list of stock or merchandise of the business this includes Complete goods, unfinished goods and raw materials. Inventory or stocks are goods held for sale or for processing end products.

Inventory in many firms will be in the form of raw materials, proceeds materials and complete items. In many fields, it is a balancing act to hold inventory for trading and having low stock to increase working capital. For example, a company will lose out on sales if customer's demand is not met due to stock-out.

On the other hand, holding too much inventory will have an opportunity cost and may give rise to obsolescence. The trend has been to lower inventory levels over the past decades. For example, 30 years ago U.S companies had approximately 12% of total assets tied up in inventory, whereas today it has reduced to 6%. A concept that has originated from Japan for managing inventory is just-in-time (JIT). The just-in-time keeps suppliers ready to supply goods or stocks when the need arises to satisfy customer demand. By this way, inventories are held at zero or in low levels. (Brealey et al, 2006). The composition of an inventory differs depending on what kind of production or business companies are involved in. Most companies have an inventory that they more or less depend on in their operation. The manufacturing companies can hold an inventory that consist of all five different materials and for them keeping an inventory is essential for their production. For most companies the inventory can be seen as an unavoidable cost (Lantz, 2008, p. 306). But Arnold, 2008; Cinnamon, Helweg-Larsen, and Cinnamon, 2010; Gitman, 2009 stated that Inventory is generally made up of three elements such as raw materials, work-in progress (WIP) and finished goods

2.2.4 Return on Assets (ROA):

Most of the shareholders who invest their fund in the company expect the return on the investment, so ROA as the ratio shows how much the company can invest so that it can generate desired earnings. The company should utilize available resources to the maximum level for better return. Therefore ROA observe the increase or decrease of company's financial operations by the available resources. (Bertoneche and Knight, 2001) This ratio explains how efficient a company is to utilize its assets to generate more profit. This ratio explains that how efficient a company is to utilize its available assets to generate profit. It calculates the percentage of profit a company is earning against per dollar of assets (Weston and Brigham (1977, p. 101). The higher value of ROA shows the better performance..

Mathematically ROA is calculated as;

$$\text{ROA} = \frac{\textit{Earnings before Interest and Tax}}{\textit{Total Asset}}$$

2.2.5 Cash Conversion cycle (CCC):

This is the time taken for the cash spent to purchase materials until when that cash gets received after selling of goods and services in an organization. It is the time interval between the cash paid for purchases and production of raw materials and the cash received resulting from the sales of the finished goods and the collection of accounts receivable (Singh et al., 2017). Gitman (2009) explains that a cash budget is a forecast of the future cash inflows and outflows of the business and how cash has been used for business operational activities. But the "cash conversion cycle" is the duration of time that cash is tied up in accounts receivables and inventory. According to Gitman (2009) firms can budget their cash by estimate the operational cash on receivables and payables within the business activities so that at the end they can measure the outflow and inflow of the cash. Therefore the Cash Conversion Cycle is concerned with the extent of period a firm's funds are utilized. (Dong and Su, 2010)

The following formula of CCC was used in the study:

Cash Conversion Cycle (CCC) = (ACP+AIP) – APP

2.2.6 Return on Equity (ROE):

This ratio measure the return on fund invested by shareholders by observing how the management is good on generating income which is attractive to the investors. The ratio shows amount in percentage of resources invested by shareholders within the company at a certain period by analyzing profit after deducting tax to the resources invested by shareholders.

Mathematically to get ROE;

$$\textbf{ROE} = \frac{\boldsymbol{Profit\ attributable\ to\ Ordinary\ Shareholders}}{\boldsymbol{Equity}}$$

2.2.7 Average Payment Period (APP):

This is the time taken by firms to pay their debts. (Deloof, 2003)

Mathematically APP can be calculated by:

$$\boldsymbol{APP = \frac{Average\ Accounts\ Payable}{Net\ Sales} * 365}$$

2.2.8 Average Collection Period (ACP):

This is the time taken always in days to collect the receivables.(Mohammadi, 2007).

$$\boldsymbol{ACP = \frac{Average\ Accounts\ Receivable}{Net\ Sales} * 365}$$

2.2.9 Current Assets

These are the assets which can be converted into cash within an accounting year which includes Cash, short term securities, debtors, accounts receivable, and stock. (Pandey, 2005). Current assets are assets consisting of cash, items that normally will be converted into cash within one year, or items that will be used up within one year.

2.2.10 Current Liabilities

These are firms' present obligations of which the economic benefits will be transferred from the firms within accounting period as due to past transactions (Weston and Brigham, 1977). Current liabilities are debts that must be paid within one year.

2.3 Working Capital Policy

This policy can be well explained as an approach or technique which delivers the standard to switch the current resources and current obligations in such a way that it diminishes the threat of default (Brian, 2009). It is generally pointing on the ability of current resources to meet current obligations. Liquidity is very vital because if the level of liquidity is too high then a company has idle resources and it has to abide the cost of these resources but if the liquidity is too low then it will face shortage of resources to honor its current economic liabilities (Vishnani& Shah, 2007). The firms could reduce its financing cost and increase the funds available for expansion if they minimise the funds tied up in current assets. They found that cash helps to keep the firm liquid. It enables the firm to pay its obligations and also protects the firm from becoming bankrupt

2.3.1 Aggressive policy

By backing its CAs with short term obligation, manufacturing firms may use this policy since it gives low interest rate. However, there is higher threat associated with short term obligation compared to long term obligation. Moreover, some finance administrators take greater risks when financing long term resources with short term

debts and this impulse the working capital on the adverse side. Most decision makers tend to improve the performance by forfeiting minor interest rate but this policy can be proved very risky if the short term interest rate swings or the cash influx is insufficient to fulfill the current liabilities (Andrew & Gallagher, 1999, p.427).

The policy is adopted by the company which is functioning in a steady economy and is fairly fixed about future cash flows. A company with this policy bids short credit period to customers, grips minimal portfolio and has a small amount of cash. (Vishnani& Shah, 2007). Paramasivan and Subramanian (2009) pinpointed that in aggressive policy the entire estimated requirement of current assets should be financed from short-term sources and even a part of fixed assets financing be financed from short- term sources. This approach makes the finance mix more risky, less costly and more profitable. Furthermore, few finance managers take even more risk by financing long term asset with short term debts and this approach push the working capital on the negative side.

2.3.2 Defensive policy

A company is said to be following defensive policy if it uses long term debt and equity to finance its long term assets and major portion of short term assets. As a result, the level of working capital becomes quite high which means that a company has more liquid or current assets than the short term liabilities. This policy reduces risk by reducing the short term liabilities but it affects performance because long term funding offers high interest rate which increases the cost of financing (Andrew & Gallagher, 1999, p.428). This means a company is not ready to take risk and feels that it is proper to keep cash or near cash balances, higher inventories and loose credit terms. Mostly companies that are operating in a hesitant environment prefer to adopt such a policy because they are unsure about the level of future prices, demand and short term rate of interest.

In such a situation it becomes better to keep current assets high. This includes higher level of inventory in the stock to meet the abrupt rise in demand and to minimize various production risk that could happen. This policy leads a longer cash conversion

cycle for the company using it. The policy provides the protection against the financial distress resulting from the lack of funds to meet the short term liability. However, it should also be noted that long term debt attracts high interest rates. Similarly, when fund are tied up to in business has its opportunity cost. Hence this policy might impair the profitability of the company due to the fact that and the cost of following this policy might be higher than the benefits of the policy (Arnold, 2008, p.530).

Defensive policy reduces the risk by reducing the current liabilities but it also affects profitability because long term debt offers high interest rate which will increase the cost of financing (Arnold, 2008 p.530). This means a company is not willing to take risk and feel it appropriate to keep cash or near cash balances, higher inventories and generous credit terms. Mostly companies that are operating in an uncertain environment prefer to adopt such a policy because they are not sure about the future prices, demand and short term interest rate. In such situation it is better to have a high level of current assets. Which means, keeping higher level of inventory in the stock, to meet sudden rise in demand and to avoid the risk of stoppage in production. This approach gives a longer cash conversion cycle for the company. It also provides the shield against the financial distress created by the lack of funds to meet the short term liability but as the researcher discussed earlier long term debt have high interest rate which will increase the cost of financing. Similarly, funds tied up in a business because of generous credit policy of company and it also have opportunity costs. Hence, this policy might reduce the profitability and the cost of following this policy might exceed the benefits of the policy (Arnold, 2008 p.530).

2.3.3 Conservative policy

Most firms do not want to be aggressive by dropping the level of current resources as compared to current obligations. Not only that, but they also do not want to be apologetic by increasing the level of current resources as compared to current obligations. To balance the risk and return, firms the sensible approach which is an assortment of defensive WCP and violent WCP. In this way, resources which appear on the balance sheet for short period(provisional current resources), will be financed by the short term borrowings whereas long term debts are used to finance fixed assets

and permanent current assets. On the other hand, apart from the above points the level of working capital also depends on the level of sale, because, sales are the source of revenue for every companies. Sales can influence working capital in three possible ways (Arnold, 2008 p.534-35).

Company with stable sale or growing sale can adopt the aggressive policy because it has a confidence on its future cash inflows and is confident to pay its short term liabilities at maturity. On the other hand, a company with unstable sale or with fluctuation in the sale can't think of adopting the aggressive policy because it is not sure about its future cash inflows. In such a situation adoption of aggressive policy is similar to committing a suicide. Hence, searching other method might be the best choice. Therefore, firms following this approach may find the adequate level of working capital with moderate risk and return (Andrew & Gallagher, 1999, p.429).

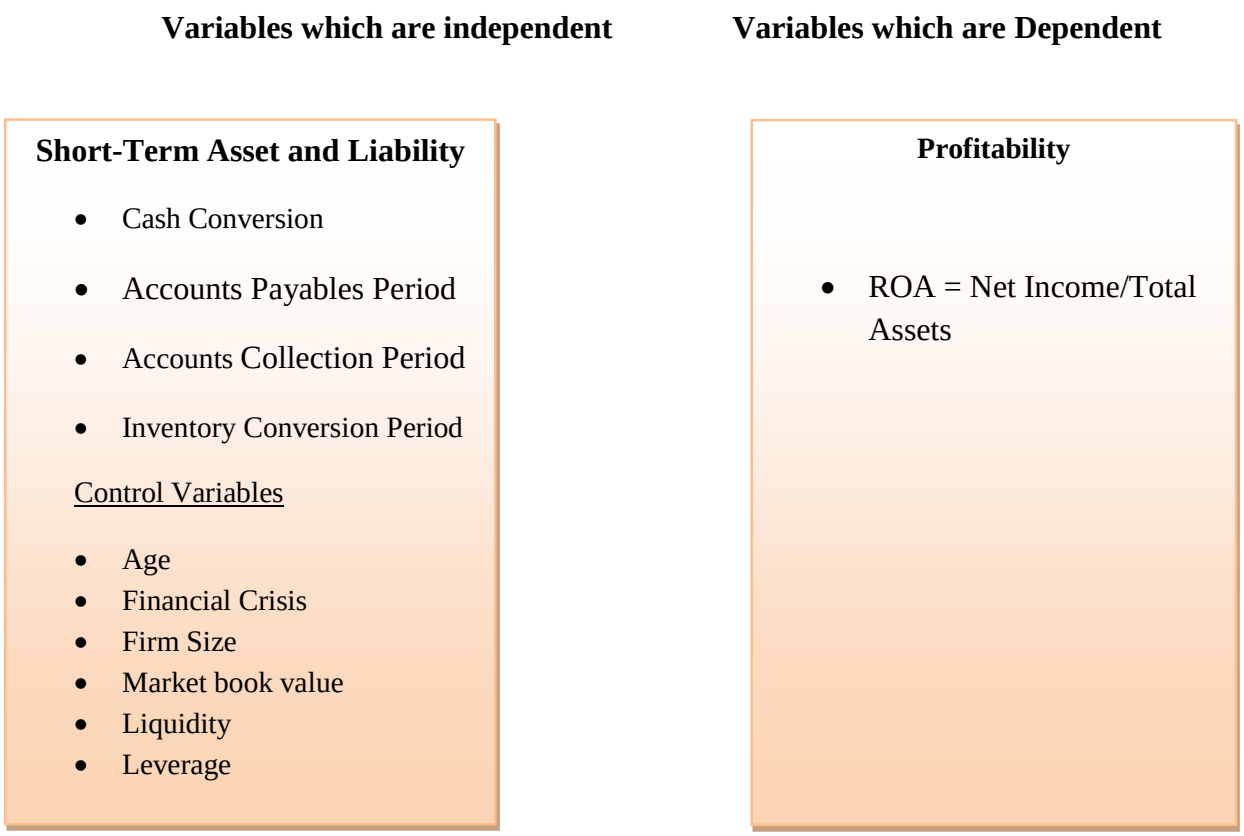
2.4 Conceptual Framework

From the theoretical framework, influenced by trade-off theory, operating cycle theory, cash conversion cycle theory and pecking order theory have influenced the conceptual framework of this study.

2.4.1Developing the Framework: Variables

In this section the variables are identified based on empirical studies. The independent variables are identified from the working capital ratios including cash conversion cycle, inventory conversion cycle, accounts collection period and payables period. All predictors will be measured in ordinal scale since they are categorical in nature. On the other hand, dependent variable of the study will comprise profitability measured by Return on Asset (ROA). ROA is chosen as a proxy for performance because the research is based on listed firms which comprises of different shareholders. Therefore, the objective of these companies is to maximise shareholders return. ROA is believed to be a good measure on how firms' assets are utilized. The essence of this relationship will be determined by multiple linear regressions. Assumptions of multivariate analysis will be deployed to investigate the validity of estimates and the significance of the effect size obtained from the resulting relationship.

Figure 1.1 Conceptual Framework



Research hypotheses

The independent variables are identified from the working capital ratios including cash conversion cycle, inventory conversion cycle, accounts collection period and payables period.

On the other hand, dependent variable of the study comprise profitability measured by Return on Asset (ROA). ROA is chosen as a proxy for profitability because the research is based on listed firms which comprises of different shareholders.

The essence of this relationship will be determined by multiple linear regressions. Assumptions of multivariate analysis will be deployed to investigate the validity of estimates and the significance of the effect size obtained from the resulting relationship.

The objective of this study is to determine the impact of Working Capital Management on Performance of Manufacturing firms, thus the study presents set of hypothesis to be tested.

2.5 Theoretical Framework

There are several theories that adheres the significance of working capital in the context of management and profitability. Researcher adopted one significant theory that has been brought forth by different scholars explaining working capital and its relationship to profitability, including trade-off theory.

2.5.1The Trade-off Theory

This theory was developed from two major cost trade-off models, including tax benefit-bankruptcy cost trade-off model by DeAngelo and Masulis (1980) and Agency theoretical models by Jensen and Meckling (1980), Jensen (1986), and Myers (1977). DeAngelo and Masulis (1980) stresses that, enterprises develop sustainable capital structure by controlling the balance of debts cost and the benefits. The cost comprises distress costs whereas benefits comprises shield of taxes. On the other hand, agency theoretical models articulate enterprises adopt benefit- oriented approach associated with cash flow, shareholders, and managers to evade cost related problems initiated by underinvestment and substitution of assets. The following general equation was developed to ascertain the process of adjustment towards the target of leverage based on the difference between target debt and lagged debt.

$$D_t - D_{t-1} = \alpha_0 + \alpha_1(D_t^* - D_{t-1}) + \varepsilon_t$$

Where, D =total debts, D*=optimal debt, α_1=coefficient of adjustment rate, and ε_t= Error term.

Trade-off theory articulates how level of liquidity affects profitability. The theory implies that, high level of liquidity minimize problems associated with profitability (Jakpar et al, 2017).

2.5.2 Pecking Order Theory

Pecking Order theory portrays the relationship between profitability and debts. It scrutinizes how the firms with larger debts incur low profitability and how low debts influences higher profitability. According to this model firms prefer internal funding over external funding. In case firms require external funding they would prefer debt over equity and equity is generated as last resort. So the firms don't have predetermined or optimum debt to equity ratio due to information asymmetry. The firms adopt conservative approach when it comes to dividends and use debt financing to maximize the value of firm.

Besides, the theory articulates how high working capital reduces risk insolvency, and when it is low increases profitability stability and maximizes investment. Researcher adopted pecking order and trade-off theories in this study since they reflect the relationship between working capital management and profitability. Pecking Order Theory – considered in the context of working capital policy, companies with higher financial leverage tend to choose more aggressive working capital strategies, which involve such practices as tightening credit conditions for customers and reducing inventory, in order to ensure the internal financing and therefore avoid the issuance of debt and equity. A significant correlation between the level of debt and the company's working capital is found e.g. by Jeng-Ren, et al. (2006), Chiou, Cheng and Wu (2006), Nazir and Afza (2008), as well as Palombini and Nakamura (2011).

2.5.3 Cash Conversion Cycle Theory

The theory shows the relationship between the components of working capital and the flow of cash within a firm. It is used to determine the amount of cash needed for any sales level. This theory was developed by Gitman (1974) as part of operating cycle which is calculated by adding inventory turnover period to accounts receivables collection period and then subtracting accounts payables from it. The Centre of the theory is on the length of time between the acquisition of raw materials and other inputs and the collection of cash from the sale of finished goods.

The CCC measures how a firm manages its liquidity, since it combines both balance sheet and income statement data to create a measure with a time dimension (Jose and Lancaster, 1996). When firms are analyzing their performance using CCC it is important for them to compare themselves with firms in the same industry. This is due to the fact that CCC nature may differ from one industry to another. Hence industry benchmarking is important. Therefore, the correct way is to compare a specific firm to the industry in which it operates (Hutchinson, 2007). Day -to-day management of a firm's short term assets and liabilities plays an important role in the success of the firm. Firms with growing long term prospects and healthy bottom lines do not remain solvent without good liquidity management (Jose and Lancaster, 1996). By approximating these three periods with the financial ratios of inventory turnover days, trade receivables collection days and trade payables days, the length of the cash conversion cycle (CCC).

In a study of Belgium's firms, it was noted that, a shorter cash conversion cycle is related to better performance of the enterprises. On the same note, efficient working capital management is pivotal in creation of shareholders' value. In a study carried out in Saudi Arabia, cash conversion cycle (CCC) on a sample of joint stock companies, was established to be of greater importance than current ratio in measuring liquidity that affects profitability. In other words, the former (CCC) has greater effect on the Profitability of an enterprise than the latter (current ratio).

The firm's ongoing liquidity is a function of its cash exchange cycle, that is to say the liquidity is more of the suitability of how the cash conversion is being evaluated rather than the actual liquidity measures. Arnold (2008) insisted on this by stating that the company will need fewer resources if that particular company has and is operating on the shorter CCC and due to this fact the company that will be having the longer cycle will be facing the higher need for the working capital investment. In spite of the fact that the shorter CCC favors the company's liquidity there is also the benefit of having the longer cycle and one of the best advantage is the increase of sales which as a result will lead to higher profitability and apart from increasing sales which eventually increase the profit the longer cycle has also a great impact In the facilitation of the

higher investment and it can make the investment rise faster than the benefits of the higher profitability that is obtained via shorter CCC.

Longer cash conversion policy indicates satisfaction it indicates liquidity and indicates higher sales volume that is the company is having so higher sales to the extent that the company may using the lax credit policies and high inventories techniques as their marketing and competitive strategy which is very different form the shorter CCC , although the most disadvantage of longer CCC is it can be in a position to can badly damage a company's profitability and this is because the time that the fund is withheld in the position of no multiplying possibility is like debtors extended while if this cash is quicker collected there will be plenty of cash at the net present with no subject to risks associated with time like inflation

2.5.4 Operating Cycle Theory

The concept of liquidity can be developed by extending the static balance sheet analysis of potential liquidation value coverage to include measures placed on the income statement of a company's activity. A more accurate method of viewing liquidity is to add receivables and inventory turnover to create an operating cycle concept. These extra measures help to identify the impact of the three key activities namely production, distribution, and collection have on liquidity (Weston and Eugene, 1979).

Accounts receivable turnover is a sign of how frequent a company's average receivables investment is changed into cash. Therefore, any changes in credit and collection policy can directly impact on a firm's average accounts receivable balance.

2.5.5 Capital Structure Theory

In the 1950's, Modigliani and Miller tried to expound more on the capital-structure theory by establishing the capital-structure irrelevance proposition. First, they assumed that in a perfect market, a firm's capital structure is essentially irrelevant. They also

determined that a firm’s market value of a firm is significantly determined by how much it earns, and the risks on its assets.

Modigliani and Miller based the concept of their proposition on the following key assumptions: zero transaction costs, zero taxes, zero bankruptcy costs, and an equal share of market information and borrowing costs for both investors and firms.

2.5.5.1 Modigliani and Miller's Capital-Structure Irrelevance Proposition

The concept of irrelevance proposition by Modigliani and Miller assumes no bankruptcy or tax costs. This means that the weighted average cost of capital (WACC) remains the same even when the capital structure of a firm changes. For example, a firm doesn’t get any tax benefits even if it borrows more. In the same manner, a company’s capital structure is essentially irrelevant in influencing the stock price.

2.5.5.2 Modigliani and Miller's Tradeoff Theory of Leverage

The tradeoff theory is basing on the assumption that financing the corporation with more debt within the scope of the optimal capital structure is way more benefit able than financing the firm with more equity. And according to this theory the benefit on using more of the leverage is existence of the tax benefit from interest payments - that means, since interest paid on debt is net of tax payable the issuing of bonds automatically minimizes the company’s liability in relation to tax. Consequently, this reduces a company's tax liability. Thought in a different manner, the rate at which companies pay on their issued bonds is comparatively lower than the nominal rate of interest as a result of tax savings. However, multiple studies show that most companies have increasingly low leverage which is opposite of what this theory suggests is optimal.

In contrasting these two theories, the key difference between them is the possible benefit from debt in a capital structure, which comes from the tax benefit of the interest payments. Considering that the M&M capital-structure irrelevance theory assumes

that no taxes are involved, this benefit is overlooked. This is contradictory to the tradeoff theory of leverage which recognizes both the taxes, and the resulting interest.

2.6 Empirical Literature Review

In Athens, Lazaridis and Tryphonidis conducted a cross sectional thesis on the Companies listed in Greece Stock Exchange in Greece where by a sample of 113 companies with reported statements listed in the stock Market were selected to investigate the relationship between working Capital and Profitability. The key indicators were Gross Operating Profit and Cash Conversion Cycle and the results portrayed that there was a relationship between working Capital management and Profitability of the Companies listed in EASE. The analysis was done by using correlations and regressions tests. In Conclusion the Researchers recommended Organisation Managers to handle correctly the Cash Conversion Cycle in order to bring profits to their Organisation while also controlling the Optimum level of other indicators like, AR, AP and Inventories.

Alipour (2011) researched about working capital management and corporate profitability while taking sample of 1063 companies from Tehran stock exchange. To test the hypothesis, multiple regressions and Pearson's correlation was used. He analyzed that sale and profit of a company is greatly influenced by the working capital management. Due to inefficient working capital management, a company may be incapable to pay its debts on time. The results show a significant relationship between working capital management and profitability of a company. There is a negative relationship between cash conversion cycle, average collection period, inventory turnover in days and profitability.

Mathuva (2010) examined the impact that working capital management has on the profitability of companies. He picked 30 Companies listed in the NSE stock market where by secondary data was gathered from the website, a Pearson and Spearman Correlation and regression techniques were employed to analyse the collected data. The Findings proved that there was a negative relationship between Cash Conversion Cycle and the profitability of the Company meaning that a Company to become

profitable they have to take short period of time to collect the debts, also there was a significant relationship between Inventory conversion cycle and profitability of the Company meaning that the more a company keeps stock without realizing sales there will be inefficiency in profit making. A third point was a positive relationship between average payment period and profitability meaning that the Company becomes profitable as they delay in paying their creditors. But if the companies want to increase or improve its liquidity, then it has to increase its working capital. In the response of this policy the organization has to lower down its sales and hence the profitability will be affected due to this action.

Oladipupo and Okafor (2013) examined the implications of a firm's working capital management practice on its profitability and dividend payout ratio. The study focused on the extent of the effects of working capital management on the Profitability and Dividend Payout Ratio. Financial data were obtained from 12 manufacturing companies quoted on the Nigeria Stock Exchange over 5 years' period (2002 to 2006). Using both the Pearson product moment correlation technique and ordinary least square (OLS) regression technique, they observed that shorter net trade cycle and debt ratio promote high corporate profitability. While the level of leverage has negative significant impact on corporate profitability, the impacts of working capital management on corporate profitability appeared to be statistically insignificant at 5% confidence level.

The relationship that exists between performance and working capital management was looked into by Gakure, et al (2012) who conducted a study relating to 15 manufacturing companies registered at the Nairobi NSE, Kenya between 2006 and 2010. In total, they relied on secondary data from a sample of 18 companies at the NSE. To establish relationships existing between the dependent variable and the independent variables, they used the regression model.

Moyer et al. (2003) found that Working Capital consists of a large portion of a firm's total investment in assets, 40% in manufacturing and 50-60% in retailing and wholesale industries respectively. The firms could reduce its financing cost and increase the funds available for expansion if they minimise the funds tied up in current assets. They found that cash helps to keep the firm liquid. It enables the firm to pay its obligations and also protects the firm from becoming bankrupt.

Dong (2010) reported that the firms' profitability and liquidity are affected by working capital management in his analysis. Pooled data are selected for carrying out the research for the era of 2006-2008 for assessing the companies listed in stock market of Vietnam. He focused on the variables that include profitability, conversion cycle and its related elements and the relationship that exists between them. From his research it was found that the relationships among these variables are strongly negative. This denote that decrease in the profitability occur due to increase in cash conversion cycle. It is also found that if the number of days of account receivable and inventories are diminished then the profitability will increase numbers of days of accounts receivable and inventories.
For this analysis, the Pearson's correlation and regression methods were used. The results showed that there exists a strong negative relationship between a company's performance and its liquidity. These studies also found that there is a negative coefficient relationship between the average payment period, accounts collection period, and ultimately profitability.

Teruel and Martinez–Solano (2007) also provided the empirical relationship between both the variables. They chose the small and medium sized Spanish firms, a sample of about 8872 small to medium sized enterprises for 1996 to 2002. After the in depth view it was found out that the negative relationship between the profitability of SME's and the number of days account receivable and days of Inventory. But it did not provide the exact impact of no. of days' account payable affect and SME's return on Assets.

The study on the relationship between cash flows and earnings performance measures for firms listed in the Nairobi Securities Exchange (NSE) found that there exists a negative relationship between cash flows from financing and investing activities and returns performance indicators. In the same breadth, the effect of working capital management on the performance of 30 firms listed in NSE was studied. It was established that there exists a negative correlation between the time when the cash is collected from customers and the firm's productivity. Interpretatively, more profitable enterprises are bound to take less time to collect cash from their customers contrary to less profitable firms. Company meaning that the more a company keeps stock without realizing sales there will be inefficiency in profit making. A third point was a positive relationship between average payment period and profitability meaning that the Company becomes profitable as they delay in paying their creditors.

Bigger &Mathur (2010) conducted a cross sectional survey in USA the aim of the study was to examine the relationship of working capital management and firms 'performance of which they took 88 firms in New York Stock Exchange for three years. Where by the indicators were Cash Conversion Cycle and Gross Profit Margin of the American Manufacturing Firms. The Results indicated that there was a significant relationship between Cash Conversion Cycle and profitability measured through a Gross Profit. In Concluding Managers were advised to control the Cash conversion cycle to ensure profitability in Companies. Also by keeping Accounts Receivable in Optimum level.

Gill, Biger, and Mathur (2010) in their research selected 88 companies from New York. They carried out their research between 2005 and 2007. The independent variables were; receivable days, payable days, inventory days, natural logarithm of sales and gearing. The dependent variable was gross operating income. They used regression analysis to evaluate the variables. They concluded that there is a negative relationship between the profitability and receivable days. Further they also concluded that the relationship between the cash conversion cycle and profitability is positive.

IkramulHaq, Sohail, Zaman, and Alam (2011) selected 14 firms from cement industry in Pakistan. The period covered for the study was 2004 to 2009. They used receivable days, payable days, inventory days, current ratio, liquid ratio and current assets to total assets ratio to predict the behavior of the return on investment.

Saswata Chatterjee (2010) focused on the importance of the fixed and current assets in the successful running of any organization. It poses direct impacts on the profitability. There has been a phenomenon observed in the business that most of the companies increase the margin for the profits and losses because this act shrinks the size of working capital relative to sales. But if the companies want to increase or improve its liquidity, then it has to increase its working capital. In the response of this policy the organization has to lower down its sales and hence the profitability will be affected due to this action. For this purpose, 30 United Kingdom based companies were selected which were listed in the London Stock exchange. The data were taken of three years 2006-2008. It analyzed the impact of the working capital on the profitability. The dimensions of working capital management included in this research which is quick ratios, current ratios C.C.C, average days of payment, Inventory turnover, and A.C.P (average collection period. on the net operating profitability of the UK companies.

Nuru (2011) studies the effect of working capital investment and financing policies on firms' profitability a sample of 11 manufacturing private limited companies in Tigray region, Ethiopia for the period of 2005 to 2009. The study used return on assets, return on equity and operating profit margin as dependent profitability variables. Accounts receivable period, inventory holding period and accounts payable period are used as independent working capital investment policy variables. Moreover, cash conversion cycle and current assets to total assets ratio are used as comprehensive measures of working capital investment policy.

Etale&Bingilar (2016) conducted a survey in Nigeria to the listed Brewery Companies in NSE whereby investigation based on the reported Financial Statements from 2005 to 2014.Their Title was to look the Impact of Inventory Cost Management and

Profitability of Brewery Listed Companies the Key Indicators of the Independent variables were Raw Material Cost, Finished Goods Cost and Work in Progress Cost while the Dependent Variable Indicator was Gross Profit Margin. Multiple Regressions' technique was run to analyze the collected data through a SPSS computer package version 20. The results revealed that management of Inventory Costs (Raw Material, Finished Goods, Work in Progress) do influence the Profitability of the Brewery Companies. In conclusions Researchers advised the Brewery management to control the costs in order to realize good profits from their products.

Nyabwanga, Ojera, Lumumba, Odondo and Otieno (2012) assessed the effect of working capital management practices on the financial performance of SSEs in Kisii South District. A sample of 113 SSEs comprising 72 trading and 41 manufacturing enterprises was used. Pearson's correlation coefficients and multiple regression analysis techniques were used to analyze data. Consequently, the findings of the study were that, working capital management practices were low amongst SSEs as majority had not adopted formal working capital management routines and their financial performance was on a low average. The study also revealed that SSE financial performance was positively related to efficiency of cash management (ECM), efficiency of receivables management (ERM) and efficiency of inventory management (EIM).

Usama (2012) extended the work of Rehman and Nasar regarding working capital management while taking the sample of 18 companies from other food sector listed on Karachi Stock Exchange for the period of 2006-2010. The researcher used different variables to measure working capital management such as average collection period, inventory turnover in days, cash conversion cycle, average payment period, debt ratio, firm size, current ratio, and financial asset to total asset. Using common effect model and pooled least square regression, the results indicated that working capital management has significant positive association with firm's profitability and liquidity. He also concluded that firm size and minimum inventory turnover in days has positive influence on firm's profitability. It seems quite clear that there should be a considerable impact of the firm size on its working capital management, e.g. due to the fact that

scale provides large companies more bargaining power with suppliers and customers compared to small ones. Consequently, it is easier for a large company to negotiate favourable payment terms with customers and suppliers (Valipour, Moradi & Farsi 2012).

Regression analysis and correlation analysis were used to measure the relationship between the variables. Finally it was concluded that the relationship between these variables and return on investment was moderate.

Nobanee et.al, (2011) used 2,123 Japanese non-financial firms in their study. They concluded that managers can increase the profitability by reducing the Cash Conversion Cycle.

2.7 Research Gap

Majority of scholars have conceptualized the impacts of working capital management on firm's performances in the context of relationship and areas of competencies for example Mahadalle et al (2017); Nwachukwu et al (2017); Abaho et al (2017). Their studies show working capital management has positive relationship on performance in terms of sales growth, customer base, profitability, and firm effectiveness. Furthermore, most of the peer studies have articulated six areas of entrepreneurial competencies that influence firms' performances including, conceptual competencies, organizing competencies, strategic competencies, commitment competencies, opportunity competencies, and relationship competencies Mohamed et al (2017); Salim (2015); Kabir et al (2017); Madata (2011). Again most studies have used ROA as a proxy for profitability. This research as also opted to use ROA as a proxy for profitability so as to be able to compare the findings. Furthermore empirical studies shows that most studies have been done in developed countries. Those done in Africa

comes from West Africa and very few in East Africa Countries. However, very little literatures have ascribed the impact of working capital management on Performance of listed manufacturing firms in East African Stock Exchange. Therefore, current study aims to determine the impact of Working Capital Management on Performance of listed manufacturing firms in EASE (Tanzania,Kenya and Uganda) so as to bridge the gap.

CHAPTER THREE

RESEARCH DESIGN

3.1 Introduction

This chapter presents the methodology employed by the researcher which includes research design, sample selection and size, data collection and administration procedures. It also presents data measurements and analysis methods. *When talk of Research Methodology is not only talking about Methods employed but also the logic behind the chosen methods (Kothari 2004)*

3.2 Research Design

According to Kothari (2004), a research design entails organization of conditions to facilitate collection and analysis of relevant data. This is important to combine relevance to the research purpose with the economy in procedure.

This study used case study design whereby the information was collected from sampled manufacturing companies or unity under investigation. Secondary data was collected from published financial statements for a period of 14 years thus from 2001 to 2014.

3.3 Unit of Analysis

The unit of analysis is the major entity that should be analyzed in a research study. "*A unit may be seen, judged, measured not only in absolute terms but also relative to other units of the same kind of belonging to the same set. And it often is fruitful to look for the structure of this set, i.e. for the set of relations defined for the elements in the set*". (Galtung, 1967:37-38). For this particular study the unit of analysis will be the listed manufacturing companies in East African Countries.

3.4 Population

The study involved listed companies in East African Stock Exchange involving in manufacturing only, whereby selection of manufacturing only is essential because it influences the convenience of information collection, analyzing and production. A researcher chooses this group of study due to the fact that there a good number of established manufacturing firms on the Stock Exchange of which the information will be easily obtained from published financial statements. In Tanzania there are 27 listed companies out of which 11 are manufacturing (DSE, 2018). In Kenya there are 67 out of which 24 are manufacturing while in Uganda there 17n listed firms out of which 3 are manufacturing.

Target population of the current study is listed manufacturing firms in EASE (Tanzania, Kenya and Uganda). Currently there are 35 listed manufacturing firms in the selected countries i.e (8 in Tanzania, 24 in Kenya and 3 in Uganda) that are listed on the East African Stock Exchange.

3.5Sampling Techniques

In this study purposive sampling technique was adopted to obtain study participants. The use of this method gives chances to few conveniently available members to participate in the study.

Due to small number of population the sample included the whole population of 35 listed manufacturing companies. However, of the listed manufacturing companies only

twenty (20) of them have a track history of financial statement for the prescribed period of five years (2001 to 2014).

3.8 Reliability and Validity issue

3.8.1 Data Reliability

According to Bryden, (1995) Reliability is the tendency of measuring variables and get the same results at different time. Generally, it refers to consistence of research procedures of research or instruments. This study in that case used relevant procedures to achieve researcher objectives. The research used already published data i.e secondary data. For this case the data are assumed to be reliable for use.

3.8.2 Data Validity

Validity refers to the quality that a procedure or an instrument (tool) used in the research is accurate, correct, true, meaningful and right. In this research the researcher made sure that no wrong conclusions were observed. There is accuracy on research tools, research procedures and a Pilot study was made to make assurance of measuring what is supposed to be measured.

3.9 Types and Source of Data

Secondary data will be used in this study. The data were collected by utilizing published financial statements of selected companies listed on the East African Stock Exchange. Financial statements covered a period of five years from 2001 to 2014.

3.9.1 Secondary Data

Secondary data include those already collected data which includes documentary, publications, thesis, journals, and magazine and internet websites. For this study we used the available information from Websites, brochures and Company Magazines.

3.10Data Collection Methods

Researcher collected information from the organization records relating to the working Capital management. This was done in order to overcome the difficulties, which may arise from the physical access of some owners and areas of study especially when tracing the background of the Companies Financial Information's. The data were obtained from published audited financial statements.

3.11Data Analysis and Presentation

Researcher used quantitative techniques in analyzing data gathered from secondary sources. Inferential and descriptive statistics were adopted as quantitative techniques. Inferential statistics involved correlation analysis by using r and r-squared and panel regression using the random effect model while descriptive involved measures of central tendency and dispersion. For correction analysis is done by using correlation coefficient r and coefficient of determinationr^2.

The findings are presented in tables and figures using analysis software known Statistical Package for Social Science (SPSS) 21st Version and Microsoft Excel 2016.

3.12Model Specification

This research used five control Variables which are, age, financial crisis, Firm size, leverage and Liquidity. Firm size was measured by natural logarithm of total assets while liquidity was measured by current ratio. Furthermore leverage was measured by long term borrowing of the firm.

Model 1:

$$ROA_t = \beta_0 + \beta_1 CCC + \beta_2 SIZE + \beta_3 LIQU + \beta_4 LEV + \beta_5 CRISIS + \beta_6 MKTBV + \varepsilon_t$$

Model 2:

$$ROA_t = \beta_0 + \beta_1 APP + \beta_2 SIZE + \beta_3 LIQU + \beta_4 LEV + \beta_5 CRISIS + \beta_6 MKTBV + \varepsilon_t$$

Model 3:

$$ROA_t = \beta_0 + \beta_1 ACP + \beta_2 SIZE + \beta_3 LIQU + \beta_4 LEV + \beta_5 CRISIS + \beta_6 MKTBV + \varepsilon_t$$

Model 4:

$$ROA_t = \beta_0 + \beta_1 AIP + \beta_2 SIZE + \beta_3 LIQU + \beta_4 LEV + \beta_5 CRISIS + \beta_6 MKTBV + \varepsilon_t$$

Where,

ROA is Return on Assets (%)

APP is Average Payment Period (days)

AIP is Average Inventory Period (days)

CCC is Cash Conversion Cycle (days)

ACP is Average Collection Period (days)

LIQU is Liquidity (number of time)

MKTBV is Market Book Value

CRISIS is Financial Crisis

LEV is Leverage

β_0 is a constant term and

$\mathscr{E}$ is error term

The following relationships were analyzed:

$$\boldsymbol{ROA_t = f(APP_t)}$$

$$\boldsymbol{ROA_t = f(ACP_t)}$$

$$\boldsymbol{ROA_t = f(AIP_t)}$$

$$\boldsymbol{ROA_t = f(CCC_t)}$$

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter comprises of presentation and analysis of data collected during the study. The data obtained were fitted into the equations by using regression method and the relationship between dependent and the independent variables were generated. Correlation analysis and regression was conducted to meet the two specific objectives. Correlation results explain the relationship that exists between components of working capital and performance proxy (ROA). Regression is used to determine the extent of impact the independent variables has on dependent variable of the study. The results analysed using SPSS 21st Version.

4.2 Correlation between Variables

Correlation shows the relationships between variables of which it covers and explain the objective one of the study. From the table below (4.1) which shows that all working capital management variables and the performance (ROA) are robust. From the tables, results show that ROA has negative relationship with Cash Conversion Cycle, Average Collection period, Average Inventory Period and Average Payment Period.

Table 4.1 Correlation analysis of ROA with all the working capital management variables

	ROA	ROE	ACP	CCC	APP	AIP	LQDTY	SIZE	AGE	CRISIS	DEBTEQUITY	MKTBV
ROA	1											
ROE	.362**	1										
ACP	-.062	-.088	1									
CCC	-.077	.026	.193**	1								
APP	-.129	-.107	.633**	.029	1							
AIP	-.068	.063	.049	.943**	.040	1						
LQDTY	-.031	-.147*	.182**	-.008	.134*	-.083	1					
SIZE	-.318**	.008	-.381**	-.148*	-.140*	-.063	-.216**	1				
AGE	.213**	.015	.205**	-.040	.175**	-.085	.300**	-.242**	1			
CRISIS	-.134*	-.081	-.126	-.010	-.147*	-.007	-.125	.206**	-.132*	1		
DEBTEQUITY	-.113	.066	-.032	-.062	.078	-.057	-.158*	.264**	-.074	-.039	1	
MKTBV	.008	.090	-.083	-.085	-.087	-.086	-.089	-.178**	-.072	.003	-.047	11

*Correlation is significant at the 0.05 level (2-tailed).

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

From the table 4.1 above which shows the results of the relationships of working capital management variables and ROA. From the results Cash Conversion Cycle has an impact on the performance of the firms (ROA). The hypothesis of the study was basing on higher Cash Conversion Cycle with higher performance which means the CCC has an impact on ROA. From the table 4.1 above correlation coefficients of cash conversion cycle with ROA are - 0.077 and the *p* value is (0.252). It is significant at *ά.* = 5%. This shows that if the firms tend to increase CCC the performance decrease, so CCC has one of the major variable has insignificant impact on ROA.

Again from table 4.1 above, the average inventory period (AIP) has insignificant impact on ROA since it has correlation coefficients of -0.068 and p value of 0.301 showing that as the period of holding inventory become high there is low in performance which disagree with the hypothesis two.

On average collection period(ACP) from the table it shows that correlation coefficient is -0.062 and p value is 0.0350 which is insignificant and goes positively with hypothesis three and therefore ACP has no impact on ROA as from the results above from the table.

Average Payment period (APP) has insignificant impact on ROA as from the above results from the table 4.1, the hypothesis four from the study shows that the higher the payment period the low the performance and the results are proportional with the hypothesis of the study. Although the correlation results show that APP has insignificants impact on ROA for 0.129 and p value of 0.054 but hypothesis with the hypothesis four from our study.

Therefore, by using correlation analysis all independent variables have negative correlation with ROA. The correlation is -0.062 for ACP, -0.077 for CCC, -0.129 for APP and -0.068 for AIP (see table 4.1). This implies that for any firm to increase performance it should reduce the length of Average collection period. Theories supports as earlier payments may attract discounts and good supply chain.

Again for Average inventory Period it is important to keep it short so as to reduce the CCC but also to ensure availability of goods and liquidity. This will enhance firm's profitability. Short AIP reduces other inventory associated costs like storage, stocktaking and obsolesce. Results also suggest that firms should collect their receivables as early as possible so as to increase profitability. Early collection reduces cash conversion circle and reduces default risk.

For control variables correlation analysis results in table 4.1 shows that Liquidity and leverage are negatively related to ROA. This suggest that when liquidity increases profitability decreases (Trade off theory). Also the negative correlation between leverage and profitability implies that firms with high debt have lower profitability. This could be due to the fixed costs associated with debt like interest costs.

4.3 ROA and Cash Conversion Cycle variables

Table 4.2a Regression Coefficients of ROA with Cash Conversion Cycle variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37.177	7.896		4.708	.000
	LEVERAGE	-4.080E-008	.000	-.033	-.406	.685
	SIZE	-1.724	.464	-.313	-3.716	.000
	AGE	.020	.026	.059	.776	.439
	CRISIS	-5.155	4.840	-.079	-1.065	.288
	MKTBV	9.605E-010	.000	.021	.263	.793
	CCC	-.046	.015	-.226	-3.091	.002

a. Dependent Variable: ROA

Source: Field Data (2018)

The estimated results are reported in Table 4.2a. The coefficients of unstandardized show the coefficients (B) and the error of standard tend to have negative relationship for CCC

and profitability. The results shows that CCC and Profitability are negatively related by -0.046. This means when CCC increases profitability decreases. Significance level of the CCC is 0.002 which is less than 0.05 therefore the null hypothesis that the higher the cash conversion cycle, the Lower the profitability of the firm is rejected.

Table 4.2 b ROA and Cash Conversion Cycle variables Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig
1	.414[a]	.171	.139	9.41499	5.576	0.000[b]

a. Predictors: (Constant), CCC, LEVERAGE, CRISIS, AGE, MKTBV, SIZE

Source: Field Data (2018)

When we consider the "**percent of variance explained** (R^2) the above table, indicates that the value of R coefficient is 0.414 and The R^2 is at 0.171. This shows that 17.1% on all difference of ROA is accounted for by CCC, and the other 82.9% is for other variables tested in the study. (See table 4.2b above). The F value is 5.576 with a significance of 0.000 which is less than 5% (0.00% < 5%). It is therefore, concluded that a linear relationship exist -between the endogenous and the exogenous variables of the model. Based on the research findings, the second null hypothesis is rejected.

4.4 APP and Performance (ROA)

Table 1.3a APP and Performance (ROA) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.422[a]	.178	.146	9.36133	5.655	.001

a. Predictors: (Constant), APP, LEVERAGE, CRISIS, AGE, MKTBV, SIZE

Source: Field Data (2018)

Table 4.3a above shows the results of the model when APP is considered, the independent variable entered i.e APP against the dependent variable (ROA).The results shows that the value of R coefficient is 0.442. The coefficient of determination (R^2) stood at 0.178. This indicates that only 17.8% of the total variation of ROA is accounted for by APP, while the remaining 82.2% is accounted for by other variables. The F value is 5.655 with a significance of 0.001 which is less than 5% (0.00% < 5%). It is therefore, concluded that a linear relationship exist -between the endogenous and the exogenous variables of the model. Based on the research findings, the null hypothesis is rejected.

Table 4.3b APP and Performance (ROA) Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.238	7.721		4.564	.000
	LEVERAGE	-4.778E-008	.000	-.039	-.478	.633
	SIZE	-1.695	.458	-.310	-3.697	.000
	AGE	.035	.026	.102	1.354	.178
	CRISIS	-5.500	4.355	-.094	-1.263	.209
	MKTBV	1.105E-009	.000	.024	.305	.761
	APP	-.078	.024	-.238	-3.245	.001

a. Dependent Variable: ROA

Source: Field Data (2018)

Again from the table 4.3b above, the coefficients of unstandardized show the coefficients (B) and the error of standard tend to have negative relationship for APP and profitability. The results shows that Average Payment Period and Profitability are negatively related by -0.078. This means when APP increases profitability decreases. This indicates that the estimate for the constant is statistically significant.

4.5 ACP and Performance (ROA)

Table 4.4a ACP and Performance (ROA) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.435[a]	.190	.159	9.27750	6.157	0.001

a. Predictors: (Constant), ACP, CRISIS, MKTBV, AGE, LEVERAGE, SIZE

Source: Field Data (2018)

Table 4.4a above shows the independent variable entered i.e ACP against the dependent variable (ROA). It also shows the control variables used in the model which includes Financial Crisis, Debt equity, Market to book value, Age, Size and Liquidity.

From the table, the value of R coefficient is 0.435. The coefficient of determination (R^2) stood at 0.190. This indicates that only 19% of the total variation of ROA is accounted for by ACP, while the remaining 81% is accounted for by other variables. The standard error of ACP is 9.27750.

The F value on the results is 6.157 with a significance of 0.001 which is low from 5% (0.00% < 5%). It is therefore, concluded that a linear relationship exists between the variables of the model. Based on the research findings, the null hypothesis is rejected.

Table 4.4b ACP and Performance (ROA) Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	41.740	7.988		5.226	.000
	LEVERAGE	-5.120E-008	.000	-.042	-.517	.606
	SIZE	-2.100	.466	-.386	-4.503	.000
	AGE	.038	.026	.112	1.496	.137
	CRISIS	-4.561	4.296	-.078	-1.062	.290
	MKTBV	1.498E-009	.000	.033	.418	.676
	ACP	-.074	.021	-.271	-3.548	.001

a. Dependent Variable: ROA

Source: Field Data (2018)

From the table 4.4b above, the coefficients of unstandardized show the coefficients (B) and the error of standard tend to have negative relationship for ACP and profitability. The results shows that Average Collection Period and Profitability are negatively related by -0.074. This means when ACP increases profitability decreases. The error of standard for the constant is 9.53317. This indicates that the estimate for the constant is statistically significant.

4.6 AIP and Performance (ROA)

Table 4.5a AIP and Performance (ROA) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.384[a]	.147	.115	9.53317	4.657	.000[b]

a. Predictors: (Constant), MKTBV, AIP, CRISIS, AGE,LEVERAGE, SIZE

Source: Field Data (2018)

Table 4.5a above shows the independent variable entered i.e AIP against the dependent

variable (ROA). It also shows the control variables used in the model which includes Financial Crisis, Debt equity, Market to book value, Age, Size and Liquidity. The standard error of AIP is 9.53317.

Table 4.5a shows that the value of R coefficient is 0.384. The coefficient of determination (R^2) stood at 0.147. This indicates that only 14.7% of the total variation of ROA is accounted for by AIP, while the remaining 85.3% is accounted for by other variables.

F value is 4.657 with a significance of 0.000 which is less than 5% (0.00% < 5%). It is therefore, concluded that a linear relationship exist between the endogenous and the exogenous variables of the model. Based on the research findings, the fourth null hypothesis is rejected.

Table 4.5b AIP and Performance (ROA) Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.630	7.853		4.282	.000
	AIP	-.033	.015	-.162	-2.119	.036
	LEVERAGE	-5.078E-008	.000	-.042	-.499	.619
	SIZE	-1.535	.472	-.281	-3.253	.001
	AGE	.015	.027	.045	.575	.566
	CRISIS	-5.357	4.905	-.082	-1.092	.276
	MKTBV	7.780E-010	.000	.017	.210	.834

a. Dependent Variable: ROA

Source: Field Data (2018)

From the table 4.5b above, the coefficients of unstandardized show the coefficients (B) and the error of standard tend to have negative relationship for AIP and profitability. The results shows that Average Inventory Period and Profitability are negatively related by -0.033. This means when AIP increases profitability decreases. The error of standard for the constant is 9.53317. This indicates that the estimate for the constant is statistically significant.

CHAPTER FIVE

DISCUSION OF THE FINDINGS

5.1 Introduction

This chapter presents the discussion of the findings of the study. The findings are discussed based on hypothesis. Also the results are compared with the empirical studies reviewed in chapter two. The agreement or disagreement of the results compared is also discussed.

5.2 Relationship between Average Collection Period and Performance

From correlation results (table 4.1) it has been revealed that ACP is negatively related to ROA(r=-0.062). However, the relationship is insignificant. This implies that to a certain level the increase in Average Collection period reduces ROA. Therefore, if ACP is minimized in a long term it may enhance ROA. Shorter ACP has an implication on the CCC. The longer the ACP the longer the CCC and low profitability. In his research (Dong 2010) found that, if number of days of account receivable and are diminished then the profitability will increase. For this analysis, the Pearson's correlation and regression methods were used. The results showed that there exists a strong negative relationship between a company's performance and its liquidity. This study also found that there is a negative coefficient relationship between the average collection period, and ultimately profitability. Another study conducted by Gill et al (2010) found a negative relationship between the profitability and receivable days. The results of these studies are similar to this study.

5.3 Relationship between Average Payment Period and Performance

The present study found that there is negative (r= -0.129) relationship between the average payment period and ROA. From correlation results (table 4.1) it has been revealed that when APP increases ROA decreases (r= -0.129). This implies that firm's ROA is dependable on how creditors are paid. This tells us that firms that have

different policy of managing creditors can have different profitability level as profitability is affected by payables payment period. Firms need to pay their creditors earlier so as to reduce cost associated with creditors' relationship. This also improves the cash conversion circle. The shorter the CCC the better. Dong (2010) conducted a similar study. He found that there is a negative coefficient relationship between the average payment period, and ultimately profitability.

5.4 Relationship between Average Inventory Period and Performance

The present study found that there is negative (r= -0.068) relationship between the average inventory period and profitability. From correlation results (table 4.1) it has been revealed that when AIP increases Profitability decreases. This implies that firm's profitability is dependable on inventory levels. This tells us that firms that have different policy of inventory management can have different profitability level as profitability is affected by inventory period. Firms need to hold minimal inventories to avoid stock outs and sell their stocks early. The findings align with findings of Etale&Bingilar (2016) who conducted a survey in Nigeria to the listed Brewery Companies in NSE whereby investigation based on the reported Financial Statements from 2005 to 2014.The results revealed that management of Inventory Costs (Raw Material, Finished Goods, Work in Progress) do influence the Profitability of the Brewery Companies.

5.5 Relationship between Cash Conversion Cycle and Performance

With regard to CCC there is a negative relationship (-0.077) see table 4.1. This implies that reducing CCC will enhance firm profitability. Shorter CCC enhances firms' financial performance. Therefore, through management of working capital variables CCC can reduced to increase profitability. This is similar to Ghamlath and Rathiranee (2014) conducted their study in Colombo Sri Lanka. The results showed that there was a relationship between working capital management on profitability of Sri Lanka Commercial banks. Also Mathuva (2010), examined the Influence of Working Capital

management on Corporate Profitability a Case of Kenya Listed Companies in NSE. The Findings proved that there was a negative relationship between Cash Conversion Cycle and the profitability of the Company.

Similarly, Bigger &Mathur (2010) conducted a cross sectional survey in USA to see the relationship between working capital Management and Company Profitability, the results indicated that there was a significant relationship between Cash Conversion Cycle and profitability. Despite of differing time and geographical location of the companies their results are similar to this research.

5.6 Relationship between Control Variables and Performance

With regard to control variables, the results reveal a significant positive relationship between ROA and the two control variables: liquidity, leverage, Crisis, age, market to book value and firm size. There is significant negative correlation between ROA and Liquidity (r= -0.31) implies that ROA and liquidity are indirectly related. Besides, firm size is negatively related to ROA (r= -0.318) which demonstrates that an increase in size of the firm decreases ROA. While leverage and Crisis are negatively related to ROA (r= -0.113 and -0.134 respectively) age and market book value are positively related to ROA (0.213 and 0.008 respectively) these relationships are insignificant.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Introduction

This chapter comprises of summary, conclusions and policy implications of the findings. The summary is based on the findings presented in chapter five.

6.2 Summary

The results of this research show that a firm's working capital management significantly influences how much profits and wealth shareholders are likely to accumulate and consequently the overall value of the company. By shortening CCC, it means that adopting a more limiting credit policy, making timely payments to suppliers, and maintaining a lower inventory level for increased profitability. On the issue of control variables, liquidity, crisis and leverage are negatively related to ROA while size is positively related to ROA.

The results have revealed relationship between WC variables and Profitability. There exists a negative relationship between WC variables and profitability. Omesa et al (2013) conducted their study in manufacturing firms through Nairobi Securities Exchange. The results showed that there was a relationship between WCM and profitability significant at 95% confidence. Lazaridis and Tryphonidis (2006) conducted their study in Athens- Greece, the results portrayed that there was a relationship between working Capital management and Profitability of the Companies listed in EASE.

The findings revealed a negative relationship between AIP and ROA. This implies that the longer the inventory period the lower the profit. Shorter inventory periods indicate firm's efficiency in selling its products. Shorter periods reduce inventory costs of raw material and finished goods.

Cash conversion cycle has shown negative relationship with profitability. The CCC includes the working capital variables. Therefore this complements the relationship that exists between WCM and profitability. Gakure, et al (2012) in Nairobi through NSE, Kenya they examined the relationship between WCM and profitability the results indicated that there is a strong negative relationship between WC elements and profitability of the firm. Their results are similar to the results of this research.

However the findings obtained regarding the relationship between WCM and profitability is different to results by IkramulHaq, Sohail, Zaman, and Alam (2011) who conducted research in Pakistan. They measured the relationship between WCM and profitability, they concluded that the relationship between WCM and profitability was moderate.

The findings imply that if WCM is done well it will bring positive impact on profitability. Nobanee et.al, (2011) in Japanese they concluded WCM has positive impact on profitability of the company. Deloof (2003), also showed that there is positive relationship between Working Capital Management and profitability in any sound business. Therefore for companies to increase profitability they should manage their working capital effectively and efficiently.

6.3 Conclusion

This study examined the impact of working capital management on the performance of the manufacturing firms listed on the East African Stock Exchange (EASE). In most East Africa Countries' firms managing working capital seems to be so difficult so a substantial resources of fund should be invested under supervised experts. ACP is negatively related to profitability while it is also revealed that when APP increases

ROA decreases. This implies that firm's ROA is dependable how creditors are paid. This tells us that firms that have different policy of managing creditors can have different profitability level as profitability is affected by payables payment period. Firms need to pay their creditors earlier so as to reduce cost associated with creditors' relationship.

The study found a negative relationship between the average inventory period and profitability. This tells us that firms that have different policy of inventory management can have different profitability level as profitability is affected by inventory period. Firms need to hold minimal inventories to avoid stock outs and sell their stocks early.

With regard to CCC there is a negative relationship profitability Shorter CCC enhances firms' financial performance. Therefore, through management of working capital variables CCC can reduced to increase profitability

After observing results of the study, the study showed relationship of working capital and the performance of the manufacturing firms in Tanzania, Kenya and Uganda. So manufacturing firms should seriously control their collection to improve their performance. And for the firms who pay their debts on short period perform well than those that delay on payments.

6.4 Policy Implication

By managing minimum inventory level, paying creditors on time, collecting receivables on time this will help them to improve on their performance hence increase profit level within the firms.

Using correlation analysis there are still other variables than liquidity reveal to have no strong relationship with profitability. For the case of liquidity, there is a relationship of about 30% which is significant at 10 percent significance level. This relationship is positive as it has been shown by the results from correlation analysis.

Considering the nature of the industry firms in this sector invest huge amounts of cash in working capital. Low levels of stock could a good strategy of firms to increase profitability. Low inventories could avoid costs associated with stock keeping. Again minimum inventories turnover could help firms maintain their liquidity.

Moreover managers should revisit their payment policy. Early payment could help firms acquire discounts on payment and improve their relationship with creditors. Again as it is known that the future is uncertain. Early payment could be a good strategy to avoid future uncertainties.

Also regarding debtors collection period firms should try to collect their receivables as early as possible. However this should be done with care as it reduce sales. Strict policy is likely to reduce credit sale. Therefore firms could categorise their customers in different payment period i.e credit policy should be customized. This will help firms to retain differing customers.

6.5 Areas for further studies

The study examined the impact of working capital management on the performance of the manufacturing firms listed on the East African Stock Exchange. However from the results it has been observed there are more areas to be researched on. The study could not definitely examine on whether the working capital has negative or positive impact on profitability of the organization. The existence of positive or negative working capital amounts for firms present managerial implications on financing strategies that demand further study.

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APPENDICES

APPENDIX 1

SUMMARY OF VARIABLES USED

TATEPA

	2010	2011	2012	2013	2014
ROE	0.00%	-0.16%	0.09%	-0.47%	-12.05%
ACP	46	54	49	52	30
LIQDTY	1.8	1.5	1.3	0.8	0.7
CCC	70	87	79	61	63
APP	45	64	67	69	83
SIZE	17	17	17	17	17
AIP	69	97	97	78	116

TWIGA

YR/VAR	2010	2011	2012	2013	2014
ROE	0.33%	0.27%	0.29%	0.17%	0.24%
ACP	36	18	27	36	41
LIQDTY	3.4	2.5	3.9	2.9	2.7
CCC	-11	89	-13	2	4
APP	73	114	81	100	112
SIZE	19	19	19	19	19
AIP	26	185	41	66	75

TOL GASES

YR/VAR	2010	2011	2012	2013	2014
ROE	-1.17%	0.07%	0.36%	0.23%	0.20%
ACP	50	118	46	81	102
LIQDTY	0.4	1	1	1	1
CCC	-137	114	-104	14	70
APP	213	189	191	133	107
SIZE	16	16	16	16	16
AIP	26	185	41	66	75

TBL

YR/VAR	2010	2011	2012	2013	2014
ROE	0.46%	0.38%	0.41%	0.36%	0.37%
ACP	19	12	26	36	37
LIQDTY	1	1.5	1.5	1.3	1.5
CCC	-29	-36	-66	-17	2
APP	106	104	150	105	89
SIZE	13	13	13	13	13
AIP	58	56	58	52	54

TCC

YR/VAR	2010	2011	2012	2013	2014
ROE	0.47%	0.48%	0.50%	0.43%	0.38%
ACP	32	21	22	13	6
LIQDTY	3	3	4	3	3
CCC	-91	-81	-14	-85	-77
APP	186	167	110	186	166
SIZE	12	12	12	12	12
AIP	63	65	74	88	83

TANGA CEMENT

YR/VAR	2010	2011	2012	2013	2014
ROE	0.30%	0.19%	0.25%	0.19%	0.15%
ACP	15	6	6	8	28
LIQDTY	2.3	2.9	3.7	3.3	1.3
CCC	18	1	7	0	-18
APP	59	50	52	43	103
SIZE	19	19	19	19	19
AIP	62	45	53	35	57

APPENDIX 2

Correlations													
		ROA	ROE	ACP	CCC	APP	AIP	LQDTY	SIZE	AGE	CRISIS	DEBT EQUITY	MKTBV
ROA	Pearson Correlation	1	.362**	-.062	-.077	-.129	-.068	-.031	-.318**	.213**	-.134*	-.113	.008
	Sig. (2-tailed)		.000	.350	.252	.054	.301	.642	.000	.001	.041	.128	.905
	N	234	232	227	223	224	231	231	226	234	234	184	209
ROE	Pearson Correlation	.362**	1	-.088	.026	-.107	.063	-.147*	.008	.015	-.081	.066	.090
	Sig. (2-tailed)	.000		.190	.702	.112	.342	.026	.901	.818	.221	.376	.197
	N	232	232	226	221	223	229	230	225	232	232	183	208
ACP	Pearson Correlation	-.062	-.088	1	.193**	.633**	.049	.182**	-.381**	.205**	-.126	-.032	-.083
	Sig. (2-tailed)	.350	.190		.004	.000	.460	.006	.000	.002	.058	.667	.238
	N	227	226	227	222	223	226	227	222	227	227	182	206
CCC	Pearson Correlation	-.077	.026	.193**	1	.029	.943**	-.008	-.148*	-.040	-.010	-.062	-.085
	Sig. (2-tailed)	.252	.702	.004		.671	.000	.903	.029	.556	.881	.413	.229
	N	223	221	222	229	222	228	222	217	223	229	179	202
APP	Pearson Correlation	-.129	-.107	.633**	.029	1	.040	.134*	-.140*	.175**	-.147*	.078	-.087
	Sig. (2-tailed)	.054	.112	.000	.671		.551	.045	.038	.009	.028	.296	.218
	N	224	223	223	222	224	223	224	219	224	224	180	203
AIP	Pearson Correlation	-.068	.063	.049	.943**	.040	1	-.083	-.063	-.085	-.007	-.057	-.086
	Sig. (2-tailed)	.301	.342	.460	.000	.551		.209	.348	.199	.911	.445	.218
	N	231	229	226	228	223	236	229	224	231	236	182	207
LQDTY	Pearson Correlation	-.031	-.147*	.182**	-.008	.134*	-.083	1	-.216**	.300**	-.125	-.158*	-.089

	Sig. (2-tailed)	.642	.026	.006	.903	.045	.209		.001	.000	.058	.032	.201
	N	231	230	227	222	224	229	231	225	231	231	184	208
SIZE	Pearson Correlation	-.318**	.008	-.381**	-.148*	-.140*	-.063	-.216**	1	-.242**	.206**	.264**	-.178**
	Sig. (2-tailed)	.000	.901	.000	.029	.038	.348	.001		.000	.002	.000	.010
	N	226	225	222	217	219	224	225	226	226	226	181	209
AGE	Pearson Correlation	.213**	.015	.205**	-.040	.175**	-.085	.300**	-.242**	1	-.132*	-.074	-.072
	Sig. (2-tailed)	.001	.818	.002	.556	.009	.199	.000	.000		.044	.320	.298
	N	234	232	227	223	224	231	231	226	234	234	184	209
CRISIS	Pearson Correlation	-.134*	-.081	-.126	-.010	-.147*	-.007	-.125	.206**	-.132*	1	-.039	.003
	Sig. (2-tailed)	.041	.221	.058	.881	.028	.911	.058	.002	.044		.601	.967
	N	234	232	227	229	224	236	231	226	234	271	184	209
DEBTEQUITY	Pearson Correlation	-.113	.066	-.032	-.062	.078	-.057	-.158*	.264**	-.074	-.039	1	-.047
	Sig. (2-tailed)	.128	.376	.667	.413	.296	.445	.032	.000	.320	.601		.548
	N	184	183	182	179	180	182	184	181	184	184	184	165
MKTBV	Pearson Correlation	.008	.090	-.083	-.085	-.087	-.086	-.089	-.178**	-.072	.003	-.047	1
	Sig. (2-tailed)	.905	.197	.238	.229	.218	.218	.201	.010	.298	.967	.548	
	N	209	208	206	202	203	207	208	209	209	209	165	209
**. Correlation is significant at the 0.01 level (2-tailed).													
*. Correlation is significant at the 0.05 level (2-tailed).													