

**THE RELATIONSHIP BETWEEN WORKING CAPITAL MANAGEMENT
AND TOTAL SHAREHOLDER RETURN OF MANUFACTURING FIRMS
LISTED AT THE NAIROBI SECURITIES EXCHANGE**

BY

LUCY WAMBUI MBURU

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DECLARATION

This research project is my original work, as far as I am aware it has never been submitted to any university or other institution of higher learning for the award of a degree or any other academic award

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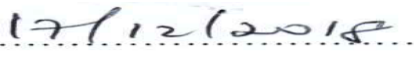
Lucy Wambui Mburu

D61/84189/2015

SUPERVISOR

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

SIGNATURE .....

DATE .....

Mr. James Karanja

LECTURER, DEPARTMENT OF FINANCE AND ACCOUNTING

UNIVERSITY OF NAIROBI

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DEDICATION.

I dedicate this project to my husband Evans Nangulu and my brothers for their immense support through out my course.

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ABSTRACT

Working capital Management plays an integral part in the day to day running of any firm. This is because working capital represents the liquidity of a firm. Liquidity is the life line of a business entity and for it to survive it needs to meet its short-term obligations as an when they fall due. Proper management of working capital ensures that manufacturing companies survive in the ever changing and complex business environment in Kenya. This ensures that shareholders returns are maximized hence achieving firms' goals of maximizing shareholders wealth. This study looks at the relationship between working capital management and total shareholder return of manufacturing and allied firms listed at the Nairobi Securities Exchange. In the study working capital is measured by the cash conversion cycle and there are two control variables namely firm size and risk. The research used secondary data collected from the Nairobi Securities Exchange and annual reports published by the firms. Descriptive analysis and inferential analysis were used to analyse data from eight out of the nine firms listed under the manufacturing and allied sector of the securities exchange. In the descriptive analysis a negative correlation coefficient of -0.01 was found between total shareholder return and the cash conversion cycle. In addition, a positive correlation was found between the firm size which was measured by the natural logarithm of total sales and risk measured by the debt equity ratio. Hence, the study recommends that firms should reduce the cash conversion cycle through efficient management of components of working capital which are receivable, payables and components in order to increase the total shareholder return thus achieving the shareholders wealth maximization objective.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financial decisions normally are divided into both short-term and long-term decision. Long term financial decisions are important as they give rise to future cash flows when discounted at the optimum capital cost. They determine the firm's value. However, these decisions produce the expected outcome if attention is paid to short term decisions which relate to short-term liabilities and assets which are decisions relating to the management of net working capital. For effective working capital management, managers need to have clear objectives. These objectives are to increase the firm's profitability and ensure enough liquidity(Watson and Head, 2007).

Liquidity guarantees the ability of the firm to pay for its current liabilities and ensure smooth running of operations whereas profitability goal relates to shareholders' wealth maximization objective. The financial measure that represents operating liquidity of a business is what is referred to as Working Capital. Eljelly (2004) defined liquidity as a firm's ability to settle immediate financial debts. Liquidity is a prerequisite for the survival of a firm. It helps analyze the sustainability of any firm that aims to derive maximum returns to its shareholders. According to Fuse (1996), most businesses fail due to lack of proper management of working capital. Further, he states that the firm success depended on its ability to generate cash. It is important for a firm to maintain its ability to meet its current obligations through having proper working capital management policies this enables it to prosper in future competitive market. Deloof (2003) in his study noted that majority of companies have diverted large resources in net working capital and use their trade payable as a short term financing source.

A host of theories associated with the net working capital management of companies exist. Keynes (1936) developed the Keynesian Money Demand Theory that seeks to explain why people hold money. The theory states that there are three motives the first being the transactions, then the speculative, and precautionary motive. In the Agency Theory, there's an agency association between financial managers and

shareholders of a company. The financial managers are charged with the responsibility of routine financial management of the firm. A conflict occurs where the managers make decisions that do not advance the shareholders' interests, the company's real owners, thus not maximizing the shareholder return on investment. A firm's liquidity is measured using the cash conversion model developed by (Gitman, 1974). As per the model, the shorter the cycle the more liquid it will be.

The manufacturing industry in Kenya plays a crucial role as it is an important driver of economic development. In the year 2017 the sector contributed 8.4% of the country's gross domestic product which was a decline from the previous 9.2% (KAM, 2018).

1.1.1 Working Capital Management

This is the amount of funds necessary for an organization to continue in its operations until it is able to replenish its cash flow through receipt of payments from sale of goods and services. It is reached at by finding the difference between the cash requirements of the firm known as current liabilities and the readily convertible resources into cash or resources in cash known as current assets.

The management of net working capital entails managing of the inventory, accounts receivables, cash, as well as payables. The management of cash involves the management of ready monetary resources which are currency notes, coins, bank balances and near cash which are marketable treasury and security bills. Accounts receivables are claims by a customer to a firm which are a result of selling goods or services. Accounts receivables are sundry debtors. The receivables balance is dependent on the credit policy of a firm. For example, a Liberal credit policy will lead to an increase in sale and at the same time leading to an increase in accounts receivable. Therefore, it is imperative for a company to have a cost and benefit analysis on the policy implemented (McGuigan, Kretlow & Moyer 2009).

Accounts payables are the payments a firm is obligated to pay in the short term. A firm needs to strike a balance while maintaining the maximum cashflow by having a balance between delaying making payments for a reasonable period of time. This is

because accounts payable is normally perceived as less expensive financing due to the fact that interest is never charged on balances outstanding. However, it is of the essence for an organization to choose a moderate course and maintain a good credit rating to enable it to continue getting credit. Inventory is the primary asset of a firm that later becomes sales. How a company converts stock and replenishes it is important to a firm as it results to the maximization of earnings to shareholders. While managing inventory, a firm should minimize the investment in inventory and at the same time strike a balance to maintain a smooth flow of production and its sales if the inventory levels are low. However, high levels of inventory lead to wastefulness and inefficient use of working capital (Mcguigan, Kretlow & Moyer 2009).

Working Capital management essentially involves finding a moderate course between profitability as well as liquidity. Liquidity management ensures that the firm generates sufficient cashflow to meet its needs. The cash-flows of a firm are important because they determine the ability to survive. This is because they are what a firm uses to meet its short term needs. A firm cannot spend its net income or profit because this includes non-cash outlay such as depreciation. Companies with strong cash-flows are favored by investors who create high demand for its shares that consequently lead to a rise in the market price per share. Conversely, profitability makes sure that an organization is in a pole position to pay dividends to its shareholders. Gupta & Gupta (2015) argued that the optimum level of current assets should be determined to earn maximum profit for the creation of maximum wealth to shareholders.

1.1.2 Total Shareholder Return

Watson and Head (2007) defined a return as a financial reward obtained due to financial investment. Individuals who purchase common shares anticipate an earning in form of dividend receipts as well as capital gains following an increase in a firm's share price. Pass, Lowes and Davies(2005) defined total shareholder return as the nominal capital growth that can be achieved by a shareholder over a specified period assuming if all dividends were reinvested back to the firm. The total shareholder's return is the Internal Rate of Return of all cashflows to an investor during the period that they hold an investment. It represents the overall financial benefit a shareholder

expects to generate from his investment. It's a comparative measure of a firm's financial performance against other firms by combining capital gain on shares and dividends paid. It is computed as

$$\text{Total Shareholder Return} = (P_0 - P_1 + D) / P_0$$

Where:

P_0 = Share price of a firm at the beginning of the year

P_1 = the price of the firm's share at the end of the year

D = Dividends paid in the year

As a performance measure, it allows the performance of shares to be compared even though firms could be high growth and low dividends or have low growth and high dividends.”

1.1.3 Working Capital Management and Total Shareholder Return

A company's main goal is to maximize the value of shareholders through optimization of investment return. Managers in financial departments have the duty to come up with decisions that aim at optimizing shareholders' value thus maximizing the total shareholder return. Since shareholders receive their return on investment in the form of either dividends or capital gains, then the shareholders return is maximized by enhancing to the maximum the value of dividends and capital gains on ordinary shares that a shareholder receives over time, (Watson and Head, 2007). The combination of dividends paid to a shareholder and capital gain of shares held is the total shareholder return. Managers are required to implement relevant policies and procedures that generate optimal returns to the investors by making sure that the performance of the firm is favorable resulting in increased stock prices and dividends payout ratio hence maximizing shareholders' value.

Shin & Soenen (1998) noted that efficiently managing the working capital creates value to a firm's shareholders. Management is continuous, and it involves daily operation decisions. Working capital decisions determine the investment in short term assets and the level of financing needed by a firm. This enables the firm to find a moderate course amid optimal liquidity level and at the same time still remain profitable thus giving a maximum return to the shareholder.

1.1.4 Manufacturing Firms Listed at Nairobi Securities Exchange (NSE)

The Nairobi Securities Exchange was constituted in the year 1954. It is a company licensed by the Capital Markets Authority and it offers a trading platform for local and international investors to trade in equities, government and corporate bonds. The name of the Nairobi Securities Exchange Ltd was changed in the year 2011 from Nairobi Stock Exchange Ltd. This was a strategic move to provide exchange, settlement, and clearance of derivatives, equity and debt in the market for financial securities. In its 2015 to 2019 strategic plan, the firm seeks to enhance new listings and products with an aim of venturing into new growth opportunities thus contributing to Kenya's economic growth and also the country's sustainable development (NSE, 2017).

Currently there are Sixty-Five firms listed and are categorized in thirteen categories. For our study companies listed in the manufacturing and allied sector will form the main focus of the study. This is because, for a country to be competitive, the manufacturing industry plays a pivotal role in its development. In Kenya the manufacturing industry forms part of the big four agenda whereby the government is seeking to enhance the industry with an aim of increasing its contribution to the gross domestic product from the current 8.4% to 20% by the year 2022 (KAM, 2018).

There is no working capital threshold set for firms listed in the securities exchange. Mokeira and Odieki (2014) stated that the working capital management policy that a firm adopts varies and depends on the industry they operate in, the size of the firm and the length of the production cycle. Over the past years, several listed firms have had financial problems that have led to their suspension from trading, shutting down some of the operations or being put under receivership. Their inability to meet payments to suppliers of goods and bank commitments has been proposed as one of the reasons. Such firms include Mumias Sugar Co. Ltd which over the years has had problems paying its farmers who supply raw materials for sugar production.

To maximize total shareholders' return, firms need to make sound working capital decisions by finding the right mix of current and non-current financing employed to back up the investment as well as the optimal investment level (Mcguigan, Kretlow& Moyer 2009). Emery (1998) stated that good profitability instills confidence for investors who see profitable firms being able to give them a higher return.

1.2 Research Problem

Effective control of net working capital contributes leads to the attainment of a company's objective of maximizing shareholders'wealth. Shin &Soenen (1998) observed that proper working capital management contributes to and supports the achievement of the general business strategy of shareholder wealth maximization. In addition, it ensures that a firm maintains the optimum liquidity level thus reducing the risk of defaulting on short term payments. Smith (1980) argued that financial managers' inability to properly manage short term assets and liabilities have contributed greatly too many business failures. Therefore, managers of firms are expected to make appropriate decisions in the management of accounts payable, accounts receivable and inventory.

Several research works have been carried out on variables of working capital and working capital management. Most of these studies have focused on its link to profitability, financial performance and stock/share return. For instance, Owino (2014) researched on net working capital as well as its impact on the profitability of manufacturing company. Kanji (2017) examined the effects of net working capital on performance among the service firms listed at the NSE. The study found that net working capital influences a firm's financial performance and Capital Market Authority should regulate the net working capital of listed companies in order to improve financial performance. Njuguna (2015) investigated the association amidst stock return and the management of working capital. He discovered that there is a strong link between accounts payable, inventory days and stock return.

From the above studies, it has been evident that there's a link with the share/stock return, financial performance, profitability and working capital. However, no study

has been carried out on the link between total shareholders' return and management of working capital. The total shareholders' return factors both capital gains and dividends payments resulting from a rise in the price of shares of companies. This research, therefore, will seek to establish whether a direct association between total shareholders' return and components of working capital exists.

1.3 Objectives of the Study

This research project purpose to determine whether there is a relationship between working capital management and total shareholder return.

1.4 Value of the study

The study results will form part of the existing body of knowledge. It will show working capital management as a key performance measure by establishing its contribution to organization's objectives of maximizing shareholders' wealth. The findings of the study will propose recommendations to financial managers on the ways working capital can be managed so as to optimize total shareholder's return.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The existing literature on the relationship between total shareholders return and management of working capital is the focus of discussion in this section. The chapter seeks to review theories and empirical studies of existing literature. It will summarize research from other researchers on the same topic who have researched in the same field. A theoretical study facilitates the understanding of the tenets existing in the available knowledge on the topic of research under investigation while the empirical review provides knowledge on the elements and findings and suggestions of other related studies.

2.2 Theoretical Review

There are several theories that relate to working capital management. These theories are the cash conversion cycle model, theory of Keynesian Money Demand, and agency theory.

2.2.1 Keynesian Money Demand Theory

Keynes (1936) sought to explain why people prefer liquidity and what the determinants of liquidity are. The theory is primarily based on two functions that include the store of value and medium of exchange. In his general theory, he interrogates the three motives of spending and the demand for funds. First, transaction motive states that cash is held for current transactional exchanges. Precautionary motive is another type of motive which means the need for security corresponding to the monetary or cash equivalent of a specific amount of all resources. A final motive is the speculative motive which proposes that people hold cash to take advantage of the rise and fall in prices of bonds and securities (Davidson, 1965).

The theory explains that funds held for transactions and precautionary are mainly as a result of the monetary income as well as general system of the economy. Starleaf and Reimer (1967) further proposed that these funds are contingent to reliability of the methods of acquiring funds, cheapness, and the cost of holding cash. This theory is crucial in net working capital management of companies because it seeks to propose reasons why firms would maintain certain levels of liquidity and the purpose of the resources held.

2.2.2 The Agency Theory

The theory seeks to describe the relationship between an investor of equity or shareholder (principal) and managers of a firm (the agents). In Jensen & Meckling (1976) definition, the agency relationship is a contract between the principal who engages the agent to act on their behalf and an agent. When managers pursue their self-interests without regard for shareholders' interests, agency problem arises. Financial managers have to make decisions on the degree of net working capital to be kept with an aim of maximizing shareholder's wealth.

If short term asset balances are kept high shareholders wealth is sacrificed due to the opportunity cost of funds. Here, a conflict occurs because if the manager decides to maintain a high level of working capital with an aim of meeting the short term needs of the firm and sacrificing the total shareholder return. Watson and Head (2007) suggested that to resolve the problem, there is a need to monitor the actions and behaviors of managers. The agency theory, therefore, seeks to provide guidelines for firms to ensure that shareholders' interests are protected through effective management of net working capital.

2.2.3 Cash Conversion Cycle Model (CCC)

The CCC model in essence involves the movement of cash from the dealers to the inventory from which it again moves to account receivable less the deferred payments days to merchants. The model explains the firm's cycle beginning with making

payments on the procurement of raw materials to production of finished goods to payments received from customers. It shows the number of days a firm's cash is used in its operations.

The CCC theory measures a firm's performance and liquidity. Le Roux (2008) noted that the cycle for cash conversion analysis offers an insight for a company's working capital control in a manner that ensures optimal level of funds is available to meet its liquidity need. The firm's level of liquidity is directly affected by the length of cash tied up in operations. The cash cycle becomes longer and the investment in net working capital increases if the payment period to creditors shortens or the turnover period for stocks and debtors lengthen.

Arnold (2008) noted that if the cycle is short, fewer resources are invested in net working capital and inversely, if the cycle is long, more resources are invested. The model therefore provides a tool that ensures working capital of a firm is properly managed thus maximizing return to shareholders.

2.3 Determinants of Total Shareholder Return

Total Shareholder Return is determined by the change in the market price of shares and dividends paid to shareholders. It is important to note that determining shareholders return is a market concept as opposed to an accounting concept. The firm's cash flows, size, and risk are factors that affect the total shareholder return. This is because they affect both dividend payments and a firm's share prices.

2.3.1 A Firm's Cash flows

Jensen (1986) defined a firm's cash flow as the amount of cash in excess of funds required for funding all available investments with a positive net present value. They are what is used to acquire assets in the firm and also make valuable distributions to shareholders. Maximizing the present value of anticipated future cash flows will result in enhancement of the overall firm's financial performance which will be reflected

both in the firm's financial statements as well as in the market value of its shares. The financial health of a firm depends on its cash flow generation ability as this ensures the smooth running of operations.

The valuation of debt and equity securities is based on the present value of the cashflows that the two securities are expected to bear to shareholders. Hence, a financial manager who focuses on the cash flow of a firm in their decision making is likely to achieve the firm's objective of maximizing shareholders return. Firms that have good cash flows are able to pay dividends to their shareholders. Jensen (1986) argued that companies having extra cash flows receive pressure from shareholders to pay the surplus cash flow to them in form of dividend payouts. This payout increases the market prices of shares due to an increased demand in the firm's shares as investors are attracted to firms that pay a higher dividend. Inversely, firms that retain excess cash reduce the marginal utility of investment by shareholders who perceive the firm less attractive for investment this reducing the share prices. Opler and Titman (1993) also supported this argument where they observed that a higher payout to shareholders increases the price of a firm's shares due to demand created for shares.

2.3.2 Size of the Firm

An organization's size is measured by its total assets, sales level, the number of employees, or market capitalization. According to Pandey (2004), the size of the firm refers to the total amount of assets owned or held by an organization. The firm size reflects the competitive advantage of the firm. Treacy (1980) in his study noted that the firm size has a relationship to the level and variance of shareholder return. This is because; larger firms have a larger market share that translates to increased sales level. This increased sales level translates to higher profits that make it attractive to investors thus increasing the market price of the shares. In addition, higher profits lead to higher dividends to shareholders thus leading to an increase in total shareholder return.

2.3.3 Risk

The market value of a share is influenced by the kind of risk it is expected to pose on future cash flows. Risk is defined as the probability that actual return deviates from the expected return. It created opportunities, where opportunity creates value and value in a firm will lead to an increase in shareholders return. The greater the perceived risk associated with the cash flows the higher the rate of return demanded by shareholders. Risk reduction has a direct impact on future cash flows of a firm which consequently has a direct impact on shareholders return. Hence, financial managers are therefore expected to manage risk efficiently. Tahir and Razali (2011) did a study on 528 Malaysian firms in the year 2007. In his study he found a direct association amid shareholders' return and the risk management.

2.4 Empirical Review

Various research works have been conducted on the control and components of net working capital, as well as the way they relate to other factors such as profitability, return on the stock, shareholders' wealth, and financial performance of firms

2.4.1 Global Studies

On the global studies, Ahmed et al (2017) researched on how management of working capital affected the profits of a firm. Their study was on textile companies for an eight-year period. Their findings found a significant relationship between current liabilities to the firms ROA and total assets. The study findings showed that effective control of working capital improves the company's profitability.

Mensah, J. K. (2015) in his study on manufacturing firms in Ghana, tried to establish if a direct association amid average payment period and profitability, profitability and the cash conversion cycle, as well as profitability and average collection period exists. The findings showed that there is an indirect relationship amid the cycle of cash conversion and profitability. Also, it was shown that gross operating profit was linked

to a rise in accounts payable period implying that less profitable companies took more days before paying its creditors. More so, he found a positive association amid profitability and inventory turnover days thus suggesting that a drop-in sale as a result of mismanagement of inventory lead to excess capital being held up in working capital.

Madiha & Babar (2014), however, sought to show that management of net Working Capital doesn't influence a firm's profitability in entirety. The sample size comprised of twenty companies listed at the Karachi Stock Exchange. The years under study were from the year 2009 to 2013. The study findings unearthed that management of Working Capital doesn't solely influence firms' profitability, however, the impact of managing short-term liabilities and assets was insignificant

Kieschnick et al (2012) did a study on shareholder's wealth and the management of working capital. The study examined American institutions from the year 1990 to 2006. The sample consisted of 3786 companies per year. In their findings, it was discovered that a rise in dollar held in cash by an average firm has a huge impact that a rise in dollar investment in net operating capital. In addition, a rise in dollar invested in inventory for the average firm is has minimal effect on shareholder's value relative to a rise in dollar invested in credit to one customer.

Gill et al (2010) wrote in their journal the link amid profitability and the management of net working capital in America. The sample size comprised of 88 listed manufacturing firms for a period of three years starting 2005 to 2007. The study found a positive association amid profitability and cash conversion cycle as well as a negative correlation amid average days of accounts receivable and profitability. However, no substantial association was found amid profitability measured in terms of gross operating income and the average number of day's inventory was held. It was recommended that by reducing the number of days accounts receivables, managers create value for shareholders.

In a study by Eljelly (2004) on stock firms, a relationship between liquidity and profitability was examined. In his examination, Eljelly computed the current ratio as well as the cycle for cash conversion. He noted that current ratio was a good measure for profitability whereas cash conversion cycle was a better measure of liquidity. The study findings revealed an indirect association between profitability and liquidity

exists. This is because an organization that maintains high liquidity levels by investing more in the working capital and less in long term non-current investments that contributes a lot to the profit levels of a firm.

In Belgium, Deloof (2003) investigated an association amid institutional profitability and management of working capital of non-financial organizations. In his study, he took a sample of 1,009 big companies as per the National Bank of Belgium from the year 1992 to 1996. The Gross Operating Income was employed to measure the profitability. The cycle for cash conversion cycle was applied as a test of net working capital while inventory turnover, accounts payable, and accounts receivable were used to measure inventory policies as well as trade credit. The findings found that an indirect correlation between the components of working capital and the gross operating income exists. This led to the conclusion that, a reduction in the number of days customers take to pay their debts can increase profitability.

Shin & Soemen (1998) in their finance journal also sort to analyses whether profitability of firms listed at the American Stock Exchange is influenced by the Cash Conversion Cycle in the years 1974 to 1994. It was found that a considerable reduction in the cycle for cash conversion resulted to an increase in company's profits.

2.4.2 Local Studies

Locally, Kiarie (2014) researched on the management of working capital together with its impact on performance of listed manufacturing firms. The study examined the variables of net working capital and found that the inventory turnover, receivable period, as well as cycle of cash conversion are negatively correlated with a company's profitability. He, however, found a positive association amid profitability and the Accounts Payable Period. The conclusion was that the profits of a firm can be increased through a reduction of inventory turnover and the period debtors take to settle their debts.

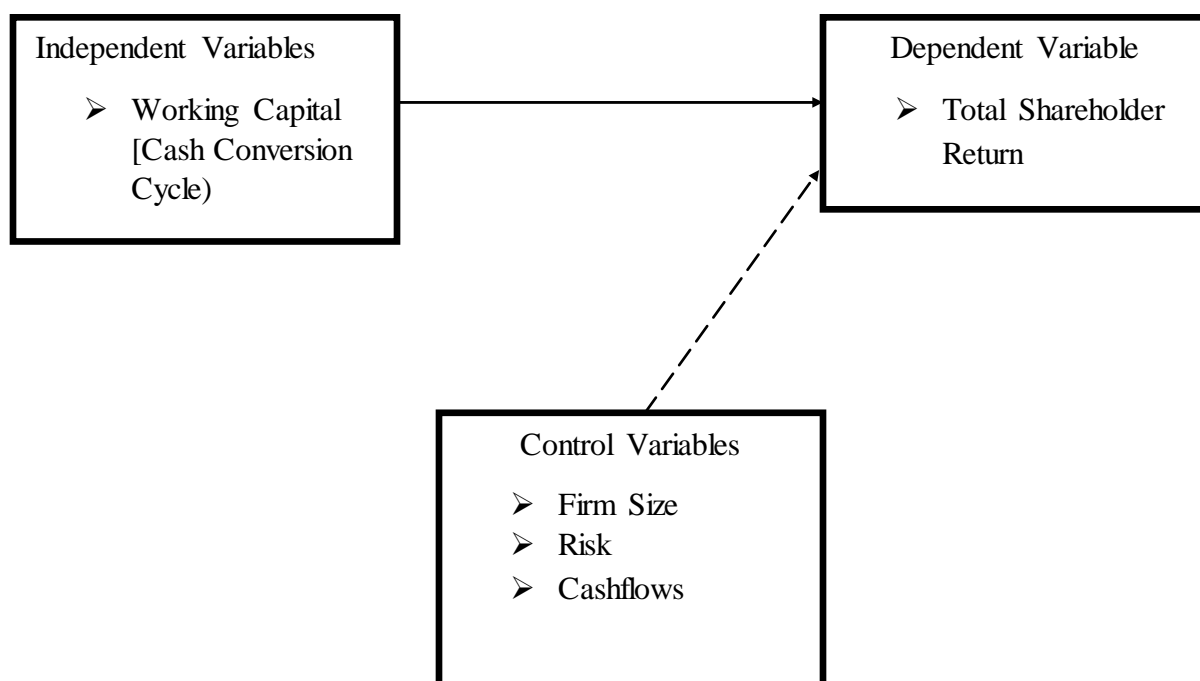
Nyoro, (2013) researched on the management of net working capital and its effect on shareholder's value. The study intended to establish the extent to which short-term liabilities and short-term assets affect a firm's dividends and market price of common

stock. A sample of 32 firms was taken and the findings were that effects of dividend payout ratio and the effects of level of short-term assets and liabilities on price of one share in the market differ per industry. For the agricultural sector, an increase in the level of short-term assets had an indirect impact both on dividends payout ratio and the market price per share. In the commercial industry sector, a rise in the level of short-term assets had a positive effect on the market price per share but did not influence dividend payout ratio. In the Industry and Allied sector, the level of current liability was negative. The overall outcome was that very small proportional changes in the short-term liabilities and assets affect the dividend payout ratio and the market price per share.

Mbugua J.M. (2013) studied the connection between profitability and inventory turnover of Kenyan supermarkets. In his study he collected data from the five main super markets at the time which were Uchumi, Naivas, Ukwala, Nakumatt and Tuskys from the year 2008 to 2012. His finding was that a strong, direct association amid financial performance and inventory turnover exists. The returns on assets are higher when the inventory turnover is high. He advised that, for a supermarket to improve its performance it needed to improve on its inventory turn-over.

2.5 Conceptual Framework Working Capital and Total Shareholder Return

It shows the independent and the dependent variables relate.



2.6 Literature Review Summary

In this chapter we have looked at the available literature relating to working capital management and total shareholders return. We have discussed the three major factors that influence the total shareholder return. These factors are the firm's cashflow, the size of the firm and risk factor associated with the cashflow. In our empirical studies a review of how working capital and profitability relates from Deloof (2003), Ahmed et al (2012), Mensah (2015), Shin & Soemen (1998) reveal a direct association amid profitability and variables of working capital. However, Madiha et al (2015) found that management of net working capital doesn't affect firms in isolation. Nyoro (2013) in his studies found that changes in the level of short-term liabilities and assets affects the market price per share and dividend payout ratio. The conceptual framework indicates the association amid financial management, total shareholder's return, and the net working capital management.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Discussed in this chapter are the study population, research design, and the criterion applied in the collection and analysis of data.

3.2 Research Design

The descriptive study design is majorly employed to detail the features of population under study. It addresses what are the characteristics of the population under study. Descriptive research takes two approaches either quantitative or qualitative. Quantitative descriptive research is interested in obtaining of quantifiable information that can describe classes of information including like age, patterns of relationship when applying technology in a group event, or can be tabulated and analyzed, and scores given.

3.3 Population

The study's target population includes all manufacturing and allied firms listed for a five-year period starting 2013 to 2017. There are nine firms listed as listed in Appendix 1 and a census approach shall be adopted given the small size of the population. However, one firm Flame Tree Group Ltd is excluded in the data analysis as the researcher was unable to get the firms share prices for the year 2013.

3.4 Data Collection

Data collection involves collecting relevant information for our study. Data normally comes from both secondary and primary sources. This study used secondary sources of information and data was derived from financial reports and statements of manufacturing and allied firms listed. The collected data came from audited financial statements including balance sheet as well as statement of comprehensive income.

This allowed ease in computing the total shareholder return, cash conversion cycle, inventory turnover, accounts payable days, and accounts receivable days and debt equity ratio.

3.5 Data Analysis

Data analysis can either be qualitative or quantitative in nature, and in this study, quantitative data analysis will be used. The process will involve analyzing and interpreting figures collected from financial statements in trying to determine the correlation amid total shareholders' return and the net working capital variables. The relationship will be determined using both Correlation and regression analysis.

3.5.1 Analytical Model

The study is aimed at knowing whether a link between total shareholder's return and different components of net working capital exists.

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Y = Total Shareholder return

β_1 β_4 are regression coefficients of the respective independent variables

ϵ = error terms.

a = Constant

X_1 = Working Capital [Cash Conversion Cycle]

X_2 = Firm Size [Natural Logarithm of Total Sales]

X_3 = Business Risk [Financial Leverage ratio]

Data will be analyzed using Multiple Linear Regression analysis. The size of the firm will be represented by converting the total sales into natural logarithm and Business risk computed by the firm's financial leverage ratio are the control variables. Working capital is to be represented by cycle of cash conversion computed as (Inventory Conversion Days + Average Collection Time – Accounts Payable Period).

3.5.2 Test of Significance

In the regression analysis, correlation coefficient, coefficient of determination and variance was computed with an aim of performing the significance test. The Analysis of Variance (ANOVA) was used to measure the test of significance. It provided the degree of variability of the variables to be used and also test if a significant correlation amid the variables exists. In the regression analysis a regression coefficient was derived and thus gave the regression equation.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRATATION

4.1 Introduction

The objective of this study is to establish whether there exists a relationship between working capital management and total shareholder return. Hence this chapter seeks to analyse the data collected and discuss the findings. Inferential analysis and descriptive data analysis were used to analyse data in the study. The inferential analysis was to establish whether there exists a relationship between our independent variable which is working capital measured by the cash conversion cycle, the control variables and the dependent variable which is the total shareholder return. The descriptive data analysis was used to summarize the sample by using measure of central tendency the mean, mode and median and standard deviation was used as a measure of dispersion.

4.2 Descriptive Analysis

Table 4.1 Summary of descriptive statistics

	N	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION	SKEWNESS
Working Capital (Cash conversion cycle)	40	-44.17	310.67	86.12	72.42	0.61
Firm Size (Natural Logarithm of Total Sales)	40	17.67	27.28	21.88	2.30	-0.6
Risk (Debt/Equity Ratio)	40	0.3	31.84	3.57	6.61	3.39
Total Shareholder Return	40	-35.67	0.63	-0.83	5.66	-6.29

Source: Computed by researcher from annual financial reports of manufacturing and allied firms listed (2013-2017)

Table 4.1 above gives a summary of the descriptive analysis results of all the variables used in the study. As shown above, there were a total of forty observations from eight firms listed under the manufacturing and allied sector at the Nairobi Securities Exchange. On average, the cash conversion cycle of the firms is 86.12 days as reflected by the mean and the lowest being a negative of 44.17 which indicates that the firm receives revenue from its customers before making payment to its suppliers. The standard deviation of the cash conversion cycle is 72.42. The average firm size as measured by the total revenues of the firms is 21.88 with the largest firm being 27.28. On average the shareholders of the listed firms got a negative return of 0.83 with the firm giving the best return giving a return of 0.63 as determined by the total shareholder return that includes both capital gains on shares and dividends paid to shareholder. The firm size and total shareholder return are negatively skewed whereas the cash conversion cycle and risk as measured by the debt/equity ratio are positively skewed.

4.3 Correlation Analysis

The correlation analysis used is the Pearson Correlation analysis. The Pearson Correlation Coefficient denoted as r has a range of +1 to -1. Where the value of the coefficient is +1 there exists a strong positive correlation coefficient and -1 means that the association is negative whereby as the value of the independent variable increases the value of the dependent variable decreases and vice versa. The table below establishes the strength of the relationship between the variables under study.

Table 4.2: Correlation Matrix

	Cash Conversion Cycle	Firm Size	Risk	Total Shareholder Return
Cash Conversion Cycle	1.00			
Firm Size	-0.16	1.00		
Risk	-0.20	-0.24	1.00	
Total Shareholder Return	-0.01	0.27	0.01	1.00

Source: Computed by researcher from annual financial reports of manufacturing and allied firms listed (2013-2017)

From the study, the dependent variable was the total shareholder return and the independent variable was working capital as measured by the cash conversion cycle. From the table above there is a negative correlation between the two variables of -0.01. The control variables firm size and risk have a positive correlation of 0.27 and 0.01 respectively.

4.4 Regression Analysis

Regression analysis seeks to investigate the relationship between the independent variable and the dependent variable. The independent variables for this regression analysis are the cash conversion cycle, firm size and risk and the dependent variable is the total shareholder return. Using the coefficient of determination, a measure of how well the statistical model can predict future outcomes is established as it seeks to explain how changes in the dependent variable are explained by changes in the independent variable.

Table 4.3: Model Summary

R	R ²	Adjusted R ²	Standard Error
0.29	0.08	0.01	5.64

a: Predictors: (Constant) Cash Conversion Cycle, Firm Size and Risk

b: Dependent Variable: Total Shareholder Return

Source: Computed by researcher from annual financial reports of manufacturing and allied firms listed (2013-2017)

The table above shows a correlation coefficient of 0.29 and a coefficient of determination R² of 0.08. This indicates that the independent variables only contribute

8% to the variations in the total shareholder return. Hence further studies should be conducted to investigate other factors that affect the total shareholder return.

4.4.1 Analysis of Variance (ANOVA)

Table 4.4: ANOVA

	df	Sum of Squares	Mean Square	F	Significance F
Regression	3	105.00	35.00	1.10	0.36
Residual	36	1,143.17	31.75		
Total	39	1248.17			

Source: Computed by researcher from annual financial reports of manufacturing and allied firms listed (2013-2017)

The Analysis of Variance seeks to give the extent of variability of the independent and dependent variables in a regression model. From table 4.4 above the total variation of the dependent variable total shareholder return as shown by the sum of squares is 1,248.17. The total number of degree of freedom is 39 and the number of degree of freedom associated with the error term is 36. The number of degree of freedom in the regression equation is 3 which are the three independent variables. An F statistic of 1.10 has been found at a significance level of 0.36.

4.4.2 Regression Coefficient

From previous sections, a relationship has been established between the independent and dependent variables. Hence from the table below a regression equation will be derived.

Table 4.5: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-18.002	9.588		-1.878	0.069
	Cash Conversion Cycle	0.005	0.013	0.059	0.354	0.725
	Risk	0.081	0.145	0.095	0.557	0.581
	Firm Size	0.753	0.414	0.306	1.817	0.078

a. Dependent Variable: Total Shareholder return

From the data above the regression equation derived is

$$Y = -18.002 + 0.005 X_1 + 0.753 X_2 + 0.081 X_3$$

From the regression equation above there is a negative constant of -18.002. The constant is negative because from the descriptive statistics table 4.1 the dependent variable total shareholder return has a negative mean of -0.83. In addition for every unit increase in the cash conversion cycle, the total shareholder return only increases by 0.5% also for every unit increase in the firm size the total shareholder return increases by 75.3% and for every unit increase in the risk of the firm the total shareholder return increases by 8.1% . this equation shows that out of the three independent variables namely cash conversion cycle, firm size and risk, the firm size as measure by the total sales has the highest impact on total shareholder return. It is also true that working capital as represented by the cash conversion cycle has the least impact on the total shareholder return.

4.5 Summary of findings and Interpretation

The relationship between working capital management and total shareholder return of Manufacturing and allied firms listed was the area of study. In the study the independent variables were the cash conversion cycle, firm size and risk and the dependent variable was the total shareholder return. In the descriptive analysis the

companies average cash conversion cycle is 86.12 days this means that it takes on average the firm's 86,12 days to convert their inventory into cash. Firm with the lowest cash conversion cycle was Mumias Sugar Company limited with a negative cycle of -44.17 days. This negative cycle means that the firm took less time to sell its inventory and receive payments from customers and inversely takes longer to pay its suppliers where by the on the positive the firm is able to exploit short term interest free borrowing from its suppliers but on the negative suppliers of their raw materials mainly sugar cane farmers are not paid on time. This affects the firm's relationship with the farmers who may opt to sell the produce to competing firms thus affecting future access to raw materials. The average total shareholder return shows a negative return of -0.83 which means that on average firms listed are not able to give a return on investment to their shareholders through payment of dividends and shares of the firms do not perform well in the market hence no capital gains on their sales.

The Pearson correlations analysis shows a negative correlation between Cash Conversion Cycle and Total Shareholder Return. This means that an increase in the cash conversion cycle leads to a decrease in the total shareholder return. Pitt (2014) in her study of the association between working capital management and profitability also used the cash conversion cycle and found a negative correlation between the two variables. Raheman and Nasar (2007) also found a negative relationship between the cash conversion cycle and net operating profits of Pakistani Firms. Thus, it is imperative for to manage their working capital efficiently to reduce the cash conversion cycle in order to increase total returns to shareholders. For the firms size a positive coefficient of 0.27 has been derived meaning that large firms as measured by the total revenue offer a better return to the shareholders.

The coefficient of determination R^2 as derived in the regression analysis is only 0.08 meaning that only 8% of changes in the independent variable affect the dependent variable. This is a low coefficient hence there is need for further studies to investigate other factors that affect the total shareholder return.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The objective of this study was to investigate the relationship between working capital management and total shareholder return of manufacturing and allied firms listed at the Nairobi Securities Exchange. This chapter gives a summary of the findings, conclusions and recommendations on areas that can be researched further. It also gives insight to the limitations of the study.

5.2 Conclusions

A firm's primary objective is to create wealth for its shareholders by increasing the total shareholder return normally a function of dividends payment and capital gains on shares. Thus, efficient management of working capital ensure this objective is achieved as supported in this study where from the data analysis a negative correlation coefficient means that a reduction in the cash conversion cycle leads to an increase in the total shareholder return. For this to be achieved, managers of firms ought to formulate proper policies on receivables, payables and inventory.

A proper credit policy gives a balance between the costs and benefits of achieving high level of sales and without necessary maintaining high account receivable balances. The management of inventory is important as it ensure that the firms policy enables it to maintain a balance between holding low inventory and at the same time ensure smooth flow of production that will ensure adequate supplies of goods to availed for sale. Mcguigan, Kretlow & Moyer (2009), noted that where firms hold large volumes of stock, they experience wastefulness. A firm's suppliers offer it interest free short term borrowing by offering terms of credit for payment of raw materials. It is therefore imperative for a firm to ensure that it honors its terms of payment with the suppliers in order to cultivate good relations for better terms.

In the study two control variables were also tested namely the firm size and risk. From the correlation analysis firm size had the higher positive correlation of 0.27. This shows that firms that have higher sales levels offer a better return on investment. Therefore, since managers have been charged by shareholders with the responsibility of managing firms on their behalf, they are expected to make decisions that maximize their return on investment through making proper working capital decisions as most business failures are a function of poor management of short term assets and liabilities.

5.3 Recommendation for Policy

From the study working capital management does affect the total shareholder return hence firms are expected to formulate proper policies relating to inventory management, customer credit terms, supplier payment in order to maintain an optimum balance between liquidity and profitability. These policies will enable firms maximize returns to shareholders who have invested their resources in the company. In addition, regulatory bodies such as the Capital Market Authority and Nairobi Securities Exchange should formulate policies on the optimum threshold for firms listed in the exchange to enable them to maintain proper liquidity levels that enable them meet their short term obligations.

5.4 Limitation of the study

In Kenya there are about one hundred and seventy manufacturing companies in Kenya. However only nine are listed in the Nairobi Securities Exchange which is only 5% of the total number of companies. This means that the listed firms are a very small percentage of the total firms in Kenya thus the findings of this study may not be a proper representation of most manufacturing firms in Kenya. The study was limited for a period of five years from the year 2013 to 2017. This means that it is possible that the findings may change if the study was to be carried out for a longer period of time.

The data collected was mainly extracted from annual financial reports. the level of disclosure varied from firm to firm hence some firms did not provide adequate disclosure for some figure thus the researcher had to compute them from information given. Also, annual reports are based on historical data. This was the data used to derive the regression equation to be used for future prediction however historical data may not be relevant for future predictions because of factors such as change in the economic environment.

Total shareholder return is a market concept. However, during computation time value of money is not taken into account. This means that factors such as inflation rate were not factored which otherwise had an impact on the market price of the companies' shares.

5.5 Recommendation for further research

Small and Medium enterprises in Kenya form a large portion of companies that have played a pivotal role towards economic development of the country. Hence their survivor is important to the country and a similar study on the relationship between how they manage working capital and the return they offer their shareholders will provide an insight as to whether companies that manage their working capital efficiently achieve shareholders maximization objective.

From the analysis of the data in this study as computed by the coefficient of determination, only 8% of changes in the independent variables under study contribute to the changes in the dependent variable total shareholder return. Hence, an insight as to the effect of factors such as ownership structure, management characteristics, changes in economic environment and political environment would be useful while looking at maximizing total shareholder return.

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**APPENDIX 1: MANUFACTURING AND ALLIED FIRMS LISTED AT THE
NAIROBI SECURITIES EXCHANGE**

1	B.O.C Kenya Ltd
2	British American Tobacco Kenya
3	Carbacid Investment Ltd
4	East African Breweries Ltd
5	Mumias Sugar Co. Ltd
6	Unga Group Ltd
7	Eveready East African Ltd
8	Kenya Orchards Ltd
9	Flame Tree Group Ltd

Source: www.nse.co.ke

APPENDIX 11: DESCRIPTIVE DATA

Name	Year	Cash Conversion Cycle	Firm Size	Risk	Total Shareholder Return
BOC KENYA LTD	2013	71.76	20.94	0.27	(0.20)
	2014	85.18	20.98	0.32	0.04
	2015	43.86	20.89	0.35	0.23
	2016	(19.19)	20.80	0.24	0.25
	2017	65.89	20.69	0.38	(0.24)
BAT KENYA LTD	2013	102.20	23.70	1.17	(0.15)
	2014	127.09	23.77	1.25	(0.45)
	2015	166.73	23.83	1.11	0.18
	2016	188.46	23.71	1.10	(0.09)
	2017	164.64	23.65	1.27	0.21
CARBACID INVESTMENTS LTD	2013	61.59	20.67	0.15	0.63
	2014	34.70	20.53	0.17	0.59
	2015	60.55	20.51	0.20	0.26
	2016	92.77	20.54	0.15	0.22
	2017	138.34	20.19	0.13	0.15
E.A BREWERIES LTD	2013	82.63	24.80	6.60	(0.07)
	2014	91.83	24.84	5.90	(0.04)
	2015	102.46	24.89	3.88	0.13
	2016	84.61	24.89	4.68	0.16

	2017	30.31	27.28	4.56	0.06
MUMIAS SUGAR LTD	2013	7.05	23.20	1.04	0.41
	2014	(10.87)	23.29	1.21	0.40
	2015	(14.96)	22.43	3.38	0.15
	2016	(35.50)	22.56	3.55	0.21
	2017	(44.17)	21.46	31.84	0.15
UNGA GROUP LTD	2013	79.80	23.44	0.88	(0.32)
	2014	84.05	23.56	0.71	(1.17)
	2015	70.45	23.65	0.62	0.18
	2016	54.52	23.71	0.62	0.01
	2017	57.19	23.70	0.92	0.19
EVEREADY E.A LTD	2013	175.55	21.08	1.38	(0.32)
	2014	212.54	20.92	3.25	(0.33)
	2015	165.30	20.85	0.87	0.25
	2016	1.88	20.13	1.22	0.13
	2017	310.61	19.64	0.41	0.40
KENYA ORCHARDS LTD	2013	72.41	17.67	27.45	0.00
	2014	84.63	17.88	3.19	(35.67)
	2015	99.60	17.93	12.07	0.11
	2016	145.33	17.98	8.17	0.03
	2017	153.12	18.12	6.02	(0.02)

APPENDIX 111: SAMPLE OF FINANCIAL STATEMENT USED

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 30 JUNE 2017

	Note	2017 Shs'000	2016 Shs'000
Revenue	5	2,091,751	6,285,917
Cost of sales		(5,279,897)	(8,048,406)
Gross loss		(3,188,146)	(1,762,489)
Fair value gain on biological assets	21	97,137	133,803
Other income		16,756	42,000
Marketing and distribution costs		(56,617)	(103,918)
Administrative expenses		(2,329,932)	(2,176,058)
Impairment of assets	6	(2,572,703)	(1,388,856)
Interest income	7 (a)	2,480	59,381
Finance costs	7 (b)	(1,500,153)	(874,382)
Loss before tax expense	8	(9,531,178)	(6,070,519)
Tax income	9	2,757,244	1,313,928
Loss for the year attributable to the owners of the company		(6,773,934)	(4,756,591)
Other comprehensive income			
Items that will not be reclassified subsequently to profit or loss:			
Surplus on revaluation of property, plant and equipment		-	8,829,860
Deferred tax relating to surplus on revaluation of property, plant and equipment		-	(2,648,958)
Remeasurement of defined benefit obligations	16 (b)	(42,071)	91,531
Deferred tax relating to remeasurement of defined benefit obligations		12,621	(27,459)
Other comprehensive (loss)/income for the year, net of tax		(29,450)	6,244,974
Total comprehensive (loss)/income for the year attributable to the owners of the company		(6,803,384)	1,488,383
Earnings per share		Shs	Shs
Loss per share - basic and diluted	10	(4.43)	(3.11)



STATEMENT OF FINANCIAL POSITION

As at 30 June 2017

	Note	2017	(Restated)	(Restated)
		Shs'000	2016 Shs'000	2015 Shs'000
EQUITY				
Share capital	12	3,060,000	3,060,000	3,060,000
Revaluation surplus	13	6,464,988	6,845,313	1,955,580
Retained earnings		(8,768,408)	(2,345,349)	1,056,001
Total equity		756,580	7,559,964	6,071,581
Non-current liabilities				
Borrowings	14	6,286,941	6,961,892	725,139
Deferred income tax	15	-	1,408,657	55,255
Provision for service gratuity	16 (a)	7,909	26,166	4,724
Deferred grant income	26	18,420	18,420	45,811
		6,313,270	8,415,135	830,929
		7,069,850	15,975,099	6,902,510
REPRESENTED BY				
Non-current assets				
Property, plant and equipment	17	20,531,484	24,518,655	17,786,484
Intangible assets	18	119,647	130,045	110,780
Deferred income tax	15	1,366,556	-	-
Non-current staff receivables	19	36,159	31,145	49,458
Retirement benefit asset	16 (b)	176,958	164,829	57,700
		22,230,804	24,844,674	18,004,422
Current assets				
Inventories	20	408,468	489,811	741,233
Growing produce	21	103,966	149,728	115,273
Trade and other receivables	22	1,194,017	1,049,001	1,533,876
Current tax recoverable		145,071	150,403	158,954
Cash at bank and in hand	23	8,769	117,519	18,759
		1,860,291	1,956,462	2,568,095
Current liabilities				
Trade and other payables	24	11,174,555	8,029,332	7,630,451
Borrowings	14	5,330,062	2,312,067	5,569,017
Provision for service gratuity	16 (a)	81,307	44,941	29,093
Unclaimed dividends	11 (b)	435,321	439,697	441,446
		17,021,245	10,826,037	13,670,007
Net current liabilities		(15,160,954)	(8,869,575)	(11,101,912)
		7,069,850	15,975,099	6,902,510

The financial statements on pages 36 to 86 were authorised for issue by the board of directors on 29th November, 2017 and were signed on its behalf by:



Director



Director

