

Working Capital Management and Profitability of Manufacturing Companies Listed at the Nairobi Securities Exchange, Kenya

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Abstract: *The study sought to examine the relationship between working capital management and financial performance of the manufacturing companies listed at the Nairobi Securities Exchange. There are a total of 9 firms; Flame Tree group Limited, East African Breweries Limited, Carbacid investments, Eveready East Africa, BOC Kenya, Mumias Sugar; Unga group, British American Tobacco and Kenya Orchads. Secondary data from the published reports and audited financial reports covering a span of five years from 2012-2016 of listed firms was used in conducting the study. The collected data was cleaned for consistency in preparation for analysis. The analysis was done using the Statistical Package for Social Sciences (SPSS). The study used both descriptive and inferential statistics in analyzing the data. Regression analysis and Pearson's correlation analysis was used to test the relationship between working capital management and the financial performance. The study established that there exists a strong relationship between working capital management and financial performance. The study further established that working capital management explains 31.9% of the changes in financial performance of the firms listed at the NSE. The study established that the management of listed firms can create value for their shareholders by reducing the average collection period of accounts receivable. The management can also create value for their shareholders by increasing the inventory turnover so as to buffer against unforeseen shortages and delays in the manufacturing process. The study also concludes that managers can create value for their shareholders by making prompt payments to creditors to increase their credit worthiness and reputation. The study also found out that firms are capable of gaining sustainable competitive advantage by means of effective and efficient utilization of resources of the organization through a careful reduction of the cash conversion cycle. In so doing, the profitability of firms is expected to increase.*

Key Words: *Working Capital Management, Average Collection Period, Average Age Inventory, Cash Conversion Cycle, Return on Assets, Average Payment Period, Manufacturing Firms, Average Age Inventory*

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I. Introduction

Working capital management is the ability to control effectively and efficiently the current assets and current liabilities in a manner that provides the firm with maximum return on its assets and minimizes payments for its liabilities. The goal of every firm is to maximize the firm's profits. Profitability refers to the potential of a venture to be financially successful (Eljelly, 2004). The concept of working capital management addresses companies' managing of their short-term capital and the goal of the management of working capital is to promote a satisfying liquidity, profitability and shareholders' value. The short-term capital refers to the capital that companies use in their daily operations and it consists of companies' current assets and current liabilities. A well-managed working capital promotes a company's well-being on the market in terms of liquidity and it also acts in favor for the growth of shareholders value (Jeng-Ren, Li & Han-Wen, 2006). Working capital is regarded as the result of the time lag between the expenditure for the purchase of raw material and the collection for the sale of the finished goods. The way of managing working capital can have a significant impact on both the liquidity and profitability of the company (Shin & Soenen, 1998). The trade-off theory implies that firms with high level of liquidity may potentially encounter low profitability problem. In other words, there is a plausibility of negative relationship between liquidity and profitability. In Kenya, the industrial sector is the fourth biggest sector after agriculture, transport and communication and wholesale and retail trade. The sector had 17 firms listed at Nairobi Securities Exchange (NSE) in 2010 but was split into four sectors in 2011 namely, the automobile and accessories, construction, energy and petroleum, and manufacturing sectors. It contributed about 10.1 per cent of Kenya's GDP serving both the local market and exports to the East African region. The sector, which is dominated by subsidiaries of multi-national corporations, contributed approximately 18% of the Gross Domestic Product (GDP) in 2009 (NSE Handbook, 2010, 2011). As an important sector in the overall economic

growth, manufacturing sector requires in depth analysis at industry as well as firm level.

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Working capital management is very important, hence many international researchers focused on analyzing relationship between working capital management and profitability relationship such as Maradi, Salehi and Arianpoor (2012); Gul, Khan, Rehman, Khan and Khan (2013); Almazari, (2013); Kumar (2011); Raheman, Afza, Qayyum and Bodla (2010); and Gill, Biger and Mathur (2010) among others. However, there are a few studies with reference to Kenya on working capital management and firm profitability, especially in the manufacturing and construction sectors. For example, Mathuva (2010) focused on the influence of working capital management on corporate profitability of firms listed at the Nairobi Securities Exchange. Gakure, Cheluget, Onyango and Keraro (2012) on the other hand, analyzed the relationship between working capital management and performance of 15 manufacturing firms listed at the Nairobi Securities Exchange for a period of five years from 2006 to 2010. Omesa, Maniagi, Musiega and Makori (2013) examined the relationships between Working Capital Management and Corporate Performance of 20 manufacturing firms listed on the Nairobi securities exchange for 5 years from 2007-2011 was selected.

II. Research Problem

The maximization of the shareholders wealth still remains the ultimate objective of any firm. However, in order to achieve this objective, a firm should also maximize its profits. Therefore, this study will focus on evaluating the relationship between working capital management and the financial performance in terms of profitability of Kenya's Manufacturing firms listed in NSE and to identify important variables that are influencing working capital management efficiency. The main purpose of any firm is to maximize profit, but maintaining liquidity of the firm also is an important objective. The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Thus, strategy of firm must maintain a balance between these two objectives of the firms. Dilemma in working capital management is to achieve desired tradeoff between liquidity and profitability (Smith, 1980; Raheman & Nasr, 2007). Referring to theory of risk and return, investment with more risk will result to more return. Thus, firms with high liquidity of working capital may have low risk and low profitability. Conversely, a firm that has low liquidity of working capital faces high risk which results to high profitability.

Research studies exclusively on the impact of working capital management on corporate profitability of the quoted companies are scanty, especially for the case of Kenya. Wanjohi (2011) studied the relationship between working capital management and profitability of insurance firms in Kenya. Mwangi (2010) conducted a study on the relationship between working capital management and the systematic risk (measured by beta) where he studied a sample of 22 companies quoted in NSE for a period of seven years from 2003 to 2009. The relationship, if any, between working capital management and profitability of manufacturing firms quoted in NSE, is altogether an ignored area of research. Keeping this in view and the wider recognition of the potential contribution of the Capital Markets sector to the economy of Kenya, this study will be a modest attempt to measure and analyze the trend of working capital investment and needs of listed firms in NSE. This study, therefore, proposed to close the knowledge gap on the impact of working capital management on profitability of listed companies and its results will be expected to contribute to the existing literature on working capital management policies and profitability.

III. Objectives of the Study

The study sought to achieve the following specific objectives:

- (i) To establish whether there is a significant relationship between Average Collection Period (ACP) and profitability of firm.
- (ii) To determine whether there is a significant relationship between Average Age of Inventory (AAI) and profitability of firm.
- (iii) To examine whether there is a significant relationship between Average Payment Period (APP) and profitability of firm.
- (iv) To assess whether there is a significant relationship between Cash Conversion Cycle (CCC) and profitability of firm.

***Null hypotheses were formulated (in view of each respective specific objective) and tested at a significance level of 0.05.**

IV. Review of Literature

1. Theoretical Review

Baumol (1952) developed an inventory model based on the Economic Order Quantity with an objective of determining the optimal cash balance. He made assumptions such as the firm's ability to forecast its cash requirements with certainty, receive specific amount at regular intervals, cash payments occur uniformly over a period of time, steady rate of cash outflow, opportunity cost of holding cash is known and does not change over

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time, cash holdings incur an opportunity cost in the form of opportunity foregone, the firm incur the same transaction costs whenever it converts securities to cash. However, Baumol model had limitations for instance assuming a constant disbursement rate, cash flows in reality occur at different times, different due dates; assumes no cash receipt during projected period, no safety stock is allowed for, reason being it only takes a short time to sell marketable securities. Most firms try to minimize the sum of the cost of holding cash and the cost of converting marketable securities to cash.

Miller and Orr (1966) came up with a cash management model which lets a company move its cash balance within two limits that is the upper and the lower limits. The company buys and sells the marketable securities if only the cash balance is equal to any of these. When the cash balance of a company touches the upper limit, it can purchase a number of saleable securities thus it returns to the desired level. If it however reaches the lower limit, the company trades its saleable securities and thus gathers enough cash to fix the problem. The assumptions are that in such cases, the average value of the distribution of the net cash flow is zero and the distribution of the net. Cash Management Model helps in determining a firm's optimum cash balance under certainty. Inventories are stocks of products a company is manufacturing for sale and components that make up the final product. Inventories constitute the most significant assets of a large majority of the companies in Kenya. According to Nyakundi (2003) average inventories constitute 60% of current assets in public companies listed at the Nairobi Securities Exchange. According to Ochieng (2007), large considerable amount of funds is required to maintain the large size of inventories. It's therefore absolutely imperative to manage inventories effectively and efficiently by adopting working capital management policies to avoid unnecessary investment in them. Neglecting working capital policies jeopardizes the long run profitability of a form which would result to a firm failing ultimately.

2. Empirical Review

Many previous researches outside Kenya have indicated the relations between working capital management and profitability of a company in different environments. Gill et al. (2010) analyzed the relationship between working capital management and profitability of 88 American firms listed on New York Stock Exchange for a period of 3 years from 2005 to 2007 was selected. The data was analyzed using Pearson Bivariate Correlation Analysis and Weighted Least Squares (WLS) Regression techniques. They found statistically significant relationship between the cash conversion cycle and profitability, measured through gross operating profit. It followed that managers can create profits for their companies by handling correctly the cash conversion cycle and by keeping accounts receivables at an optimal level. Research conducted in New York cannot be assumed to give similar results with researches in Kenya since the two counties operate under different environments, laws and regulations. Moreover, New York has a stable economy than Kenya hence their firms are better placed.

Raheman et al. (2010) analyzed the impact of working capital management on firm's performance in Pakistan for the period 1998 to 2007. For this purpose, balanced panel data of 204 manufacturing firms was used which are listed on Karachi Stock Exchange. The results indicate that the cash conversion cycle, net trade cycle and inventory turnover in days are significantly affecting the performance of the firms. They concluded that manufacturing firms were in general facing problems with their collection and payment policies. Moreover, financial leverage, sales growth and firm size also had significant effect on the firm's profitability. Their study recommended that effective policies must be formulated for the individual components of working capital. However, studies in Pakistan cannot be assumed to give similar results with studies in Kenya since the two counties operate under different economic environments, laws and regulations.

A study by Kieschnick et al (2008) using data on a panel of U.S. corporations from 1990 through 2004, established the importance of working capital management to firm value. Their study used stock's excess return to represent the firm value and findings show that on average an additional dollar invested in net operating working capital reduces firm value and this indicates that their study is consistent with industry surveys suggesting that some firms over-invest in net operating working capital. However, this study was conducted in the US where firms are exposed to different economic, political and social environments with firms in Kenya and cannot therefore be relied on to give similar results.

Deloof (2003) investigated the relation between WCM and corporate profitability for a sample of 1,009

large Belgian non-financial firms for the 1992-1996 periods. Number of days' accounts receivable, inventories and accounts payable were used as measures of trade credit and inventory policies. The cash conversion cycle was used as a comprehensive measure of WCM. The results suggested that managers can increase corporate profitability by reducing the number of days' accounts receivable and inventories. Less profitable firms wait longer to pay their bills. However, this study conducted in Belgium focused on the corporate profitability of non-financial firms which is different from my case study on manufacturing firms.

Raheman and Nasr (2007) studied the relationship between working capital management and corporate profitability for 94 firms listed in Karachi Stock Exchange using static measure of liquidity and ongoing

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operating measure of working capital management during 1999-2004. In the study, the CCC, the average collection period, the Average Age of Inventory and the current ratio were examined. A negative relationship between these variables and firms net operating profitability was observed. This means when the CCC is increased, the firm's profitability will be decreased. The level of liquidity of the firm had a negative relationship with the profitability. Lyroudi and Lazaridis (2000) investigated the relationship of liquidity and cash conversion cycle for the food industry of Greece. They concluded that a considerable positive relationship exists among Cash Conversion Cycle and current ratio, average age of inventory and average collection period. Also they located an inverse relationship between CCC and average payment period. They concluded that there was no statistically significant relationship between variables used for liquidity measurement and that used for profitability measurement. Also they suggested that cash conversion cycle had no significant relationship with debt ratio. However, studies in Pakistan cannot be assumed to produce same results with Kenya. Pakistan firms operate under Sharia laws because the population is largely Islamic. Sharia law in Pakistan prohibits profit making unlike in Kenya. (Islamic Finance 2015).

Gakure, Chelugot, Onyango and Keraro (2012) analyzed the relationship between working capital management and performance of 15 manufacturing firms listed at the NSE from 2006 to 2010 and for a total 75 firms year observations. They used secondary data from a sample of 18 companies at the NSE. A regression model was used to establish the relationship between the dependent variable and the independent variables. Pearson's correlation and regression analysis were used for the analysis. The results indicated that there is a strong negative relationship between firm's performance and liquidity of the firm. The study found that there is a negative coefficient relationship between accounts collection period, average payment period, inventory holding period and profitability while the cash conversion cycle was found to be positively correlated with profitability. However, the effects of the independent variables except the average payment period were no statistically significant though the overall model was statistically significant. However, a lot has changed since 2010 for example the political temperatures and interest rates capping which may lead to different results.

Wanjohi (2011) studied the relationship between working capital management and profitability of insurance firms in Kenya. The study covered a sample of 18 insurance companies covering a period of five years from 2005 to 2009. In his analysis, a positive relationship was drawn between conservative policies of WCM and profitability. The study showed that an aggressive policy in WCM increases risks which in turn lead to losses. This study however differs from my point of interest which is the manufacturing sector. Mwangi (2010) conducted a study on the relationship between working capital management and the systematic risk (measured by beta) where he studied a sample of 22 companies quoted in NSE for a period of seven years from 2003 to 2009. Current ratio, size of the firm (measured in terms of natural (logarithm of sales), fixed financial assets to total assets ratio and debt ratio were used as control variables. Carl Pearson's correlation and regression analysis (pooled least square) were used for analysis. The results showed that there was no statistical significant relationship between variables of working capital management and the beta of a firm. This means that the manager may not mitigate systematic risk of a firm by handling correctly the cash conversion cycle and keeping each different component of working capital management at an optimal level. However this study differs from my point of research which is the relationship between working capital management and profitability of manufacturing firms.

Mathuva (2009) examined the influence of working capital management components on corporate profitability on a sample of 30 firms listed on Nairobi Securities Exchange from 1993 to 2008 using Pearson and Spearman's correlations, the pooled ordinary least squares and regression models to conduct data analysis, found highly significant negative relationship between CCC and profitability, highly significant positive relationship between the period taken to convert inventory (minimizing ICP) and profitability and highly significant positive relationship between PCP and profitability. However this study was conducted way in the past and a lot has changed since 1993 from economic to political issues. This current study will therefore confirm the findings of this past study.

Mogaka and Jagongo (2012) analyzed the effect of working capital management on profitability of 5 manufacturing and 5 construction firms listed on Nairobi Securities Exchange from 2003 to 2012 using Pearson's

correlation and Ordinary Least Square regression models. The study found a negative relationship between profitability and number of day's accounts receivable and cash conversion cycle, but a positive relationship between profitability and number of days of inventory and number of day's payable. Moreover, the financial leverage, sales growth, current ratio and firm size also have significant effects on the firm's profitability. However this study was conducted way in the past and a lot has changed since 2012 ranging from economic to political issues and a current study may reveal different results.

3. Conceptual Framework

Independent variable Dependent variable

Working Capital

- Average Collection Period
- Average Age of Inventory
- Average Payment Period
- Cash Conversion Cycle

Profitability

- Return on Assets

Figure 1: Conceptual framework

Control Variables

- Sales Growth
- Firm Leverage
- Current Ratio

Source: Author, 2018

V. Methodology

This study used correlation design to assess the relationship between working capital management and profitability on manufacturing companies listed on the NSE. The researcher targeted a population made up of all the 9 listed manufacturing companies listed on the NSE as at 31st December 2016. Secondary data was collected from published and audited financial statements from these companies' respective websites. The study utilized time series data. The data collected relates to the period January 2012-December 2016. To determine the relationship between working capital management and profitability of the manufacturing firms listed in the NSE, the data was analyzed through the use of regression and correlation analysis. Statistical package (SPSS) will be used for data analysis.

The following analytical model will be used in regression analysis:

$$A_{it} = \beta_0 + \beta_1 ACP_{it} + \beta_2 AAI_{it} + \beta_3 APP_{it} + \beta_4 CCC_{it} + \beta_5 (\text{size}) + \beta_6 (\text{growth}) + \beta_7 (QR) + \beta_8 (CR) + \beta_9 ROA_{it}$$

$\beta_0, \beta_1, \dots, \beta_9$: Constants of the model

ACP_{it}: Average Collection Period

APP_{it}: Average Payment Period

AAI_{it}: Average Age of Inventory

CCP_{it}: Cash Conversion Cycle

CR: Current Ratio

QR: Quick Ratio

VI. Analysis

A. Descriptive Analysis

Table 1: Descriptive Statistics of variables of manufacturing companies

WCM Components	2012	2013	2014	2015	2016	STDEV
Average Age of Inventory	98.54	93.98	91.35	94.24	108.65	6.82
Average Collection Period	65.33	67.51	67.43	63.26	61.24	2.71
Average Payment Period	109.56	116.73	119.76	115.58	139.47	11.38
Operating Cycle	163.86	161.49	158.78	157.51	169.89	4.90
Cash Conversion Cycle	38.89	29.98	39.02	41.93	30.42	5.48
Current Ratio	1.72	2.54	2.01	2.88	2.90	0.53
Quick ratio	1.03	1.71	1.15	1.49	0.82	0.36

Source: Research Findings, 2018

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The operating cycle recorded the highest number of days (169.89 days, SD = 4.90) in 2016. This implies that it took 169.89 days for raw materials to be converted into finished products and value from the products realized through sales with a cash conversion cycle of (30.42 days, SD= 5.48) and average collection period of (61.24 days, SD= 2.71). The study recorded the longest number of days of payment to creditors in 2016 (137.49, SD= 11. 39). This implies that the managers took a long period of time to honor their obligations to suppliers so as to make more cash available for their use in business. The shortest number of payment period days was recorded in 2012 (109.56 days). Managers should make prompt payments to suppliers to increase their credit worthiness and maintain their reputation. The highest AAI was recorded in 2016 (108.65 days, SD=6.82). This means that the managers kept high levels of inventory to buffer against future shortages and to ensure a continuous manufacturing process. This however comes with high holding costs. The lowest number of inventory days was recorded in 2014 (91.35 days).

B. Correlation Analysis

The results of the correlation analysis are presented in table 2 below

Table 2: Correlation

						ROA APP
QR	CR	OC	CCC	AAI	ACP	

						1.000
						ROA .044-.005 -.275 .176 .120 .109 .192
						QR .044 1.000 .258 -.148 .160 -.165 .083 -.139
						CR -.005 .258 1.000 -.374 -.334 -.527 .210 -.037
						OC -.275 -.148 -.374 1.000 .363 .602 .052 .143 CCC .176
						.160 -.334 .363 1.000 .609 -.131 -.192 AAI .120 -.165 -.527
						.602 .609 1.000 -.234 .042 ACP .109 .083 .210 .052 -.131
						-.234 1.000 .570 APP .192 -.139 -.037 .143 -.192 .042 .570
						1.000 ROA .388 .488 .035 .127 .218 .240 .106 QR .388 .
						.046 .168 .150 .142 .295 .184 CR .488 .046 .006 .013 .000
						.085 .406 OC .035 .168 .006 .008 .000 .368 .178 CCC
						.127 .150 .013 .008 .000 .197 .106 AAI .218 .142 .000
						.000 .000 .064 .394 ACP .240 .295 .085 .368 .197 .064 .

Pearson Correlation Sig. (1-tailed)

Source: Research Findings, 2018

A correlation coefficient, denoted by r , enables one to quantify the strength of the linear relationship between ranked or numerical variables. This coefficient takes the values between -1 and +1 (Saunders *et al.*, Lewis & Thornhill, 2009). There was a statistically significant correlation between the Financial Performance and Operating Cycle ($r = -0.275$, $p = 0.035$), Financial Performance and Current Ratio ($r = -0.005$, $p = 0.488$), Financial Performance and Quick Ratio ($r = 0.044$, $p = 0.388$), Financial Performance and cash conversion cycle ($r = 0.176$, $p = 0.127$), Financial Performance and Average Age of Inventory ($r = 0.120$, $p = 0.218$), Financial Performance and Average Collection Period ($r = 0.109$, $p = 0.240$) and Financial Performance and Average Payment Period ($r = 0.044$, $p = 0.388$). The correlation between Financial Performance and Operating Cycle was found to be significant with $p < 0.05$.

C. Regression Analysis

In order to establish the relationship between working capital management and financial performance of firms listed at the NSE, multiple regression analysis was conducted as shown in table 3. Average Age of Inventory (AAI), Average Collection Period (ACP) and Average Payment Period (APP) were used as the determinant variables for the years 2012 – 2016. Return on Asset was used as the proxy for the financial performance of the listed firms.

Table 3: Model Summary^b

Model R Std. Error of the Estimate	
R Square	Adjusted R Square

1 .565*.319 .187 2.06073306
 a. Predictors: (Constant), APP, CR, QR, OC, CCC, ACP, AAI
 b. Dependent Variable: ROA

Source: Research Findings, 2018

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The results of the study indicated that there was overall strong and positive relationship ($R = 0.565$) between working capital management components and the financial performance of the listed firms. The result of the study further indicates that the value of the R-squared was 0.319. This implies that the working capital management components (Average Age of Inventory, Average Collection Period and Average Payment Period) can account for 31.9% of the variance in the financial performance of the listed firms.

Table 4: ANOVA^a

D. Anova Interpretations

Model Sum of Squares Sig.

Df	Mean Square	F
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Regression 71.723 7 10.246 2.413 .039^b
 1 Residual 152.878 36 4.247 Total 224.602 43
 a. Dependent Variable: ROA
 b. Predictors: (Constant), APP, CR, QR, OC, CCC, ACP, AAI

Source: Research Findings, 2018

The study sought to verify the findings of the suitability of the regression model through the ANOVA statistics. From the ANOVA statistics, the study established that the regression model had a significance level of 0.39% which is an indication that the regression model was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated F ratio of the dependent variable was greater than the critical value ($2.413 > 0.39$); this indicates that the model was fit for data. The

findings are as shown in Table 4.

VII. Findings and Discussions

The study established that there was a positive relationship between Average Collection Period and profitability of firms listed at the NSE. This implies that the firms can improve their profitability by reducing the number of days of collecting accounts receivable. The result also imply that the less the time it takes for customers to pay their debts, the more cash is available to replenish inventory hence the higher the sales realized leading to increased profitability of the firm. This finding implies that managers can improve profitability by reducing the credit period granted to their customers. The results are contrary to my expectations and findings in the previous studies. Deloof (2003) found out that the average collection period has a negative impact on firm performance.

The study also established a positive relationship was established between Average Payment Period and profitability of the listed firms in NSE. This suggests that an increase in the number of days accounts payable by 1 day leads to a decrease in financial performance by 0.192. This implies that managers should make their payment to suppliers as soon as they are due to enhance their reputation and credit worthiness. This finding negates the WCM rule according to Waithaka (2002) and Mogaka and Jagongo (2012) that firms should strive to lag their payments to creditors as much as possible, taking care not to spoil their business relationships with them.

The study further established a positive relationship was established between Average Age of Inventory and firm profitability. This implies that that maintaining high inventory levels has a positive impact on the financial performance of the firms as it reduces the cost of possible interruptions in the manufacturing process and the loss of business due to scarcity of products. This however is associated with high holding costs that is why most firms are moving towards a just in time production technique. This finding is however consistent with that of Mathuva (2009).

Finally, the study established a positive relationship between Cash Conversion Cycle and firm profitability. This means that if you decrease the CCC, the profitability of the firms will be increased. Finished goods should quickly be turned into cash to enable continuous production. Mangers should therefore reduce the cash conversion cycle to create value for the shareholders of the firms. This finding is in line with Raheman et al. (2010) and Gill et al. (2010) and Mathuva (2010)

VIII. Conclusions and Recommendations

The study concludes that there exists a relatively strong relationship between working capital management components and financial performance of the firms listed at the NSE. Working capital management accounts for 31.9% of the variance in the financial performance of the listed firms. The study also concludes that managers can create value for their shareholders reducing the average collection period, credit ratio, and cash conversion cycle and operating cycle to a reasonable minimum. The inventory turnover should be kept high to buffer against unforeseen shortages and delays in the manufacturing process. The managers

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should maintain a high liquidity ratio to ensure the firm is conveniently able to meet its short term liabilities. The study also concludes that managers can create value for their shareholders by making prompt payments to creditors to increase their credit worthiness and reputation. According to Miller and Orr cash management model, when the cash balance reaches the lower limit, the company can sell securities to gather enough cash. The researcher found out that for firms to have enough cash to finance their current and future liabilities, the cash conversion cycle should be reduced to a reasonable minimum to ensure continuous production process by quickly converting finished goods into cash.

The study found out that managers cannot create value for their shareholders by lagging their payments to creditors as much as possible because this may spoil business relationships. The researcher therefore recommended that the managers of the manufacturing firms should pay their suppliers as soon as the bills are due to enhance their reputation and credit worthiness. A firm with good reputation will attract more creditors to finance its projects and customers hence increased sales leading to increased profits. The study findings established that managers can create value for their shareholders by reducing the average collection period and operating cycle to a reasonable minimum. The researcher recommended that managers of the manufacturing firms should also reasonably increase average age of inventory to ensure a continuous production process so as to buffer against unforeseen shortages. An effective management of the components of current assets, especially the accounts receivables and inventory, is also recommended as it will have a positive effect on the profitability of firms listed in the NSE. Additional independent variables have to be incorporated in future studies to strengthen the findings and bring a clearer understanding by delivering further explanation on the relationship.

Hence, future studies are encouraged to explore other variables that are not incorporated in this research such as debt ratio, inventory conversion could impact the effectiveness of working capital components and firm performance of manufacturing firms listed in NSE. The study recommends that for manufacturing companies to remain profitable they should have a good working capital management which will help in making decisions about investment mix and policy, matching investments to objectives, asset allocation for institutions and balancing risks against profitability.

IX. Contribution to Knowledge

The study findings are of utmost importance to potential and existing investors. The existing investors will use these study findings to analyze the potential risk that might affect the firm's operations. Potential investors will use the study results to determine the financial returns of the company so as to make a decision on whether to invest or not. In general the investors will be able to understand the manufacturing sector, how to manage working capital and in turn increase shareholders wealth. The study will sensitize investors on the determinants of profitability and how best maximization of shareholders wealth can be achieved. Also, the findings are of importance to creditors or lenders. Firms stay in business by acquiring loans, overdrafts, assets financing services and trade financing from creditors. The evaluation of risks takes into consideration the ability of the enterprise being financed to pay back the loan. The lenders will be in a position to predict the profitability of an enterprise by assessing the way it manages its working capital. Moreover, the results of this study are of importance to the government because the government involves itself in helping to uplift the manufacturing sector. By having a clear link between working capital management and profitability of the manufacturing firms, the government agencies will make informed decisions on the kind of financial help they can extend to these firms in various parts of the country. Fourthly, the findings are of importance to the management of firms. The interest of the owners and managers of a business enterprise is to increase on the value of the resources invested. Empirical results that explain the relationship between the WCM and the profitability of the firms will help the owners and managers of the firms when they are making management decisions that involve working capital. Finally, this study is expected to increase body of knowledge to the scholars of manufacturing industry especially on matters of maintaining optimal working capital and their influence on the performance of these firms. It may also encourage further research on other factors influencing working capital position of the firms and the material will form a source of reference by other scholars in the area of the impact of working capital management on the profitability of firms. Researchers who wish to do further research on the relationship between WCM and profitability will find the results of this study useful.

X. Limitations of study

The study mainly depended on financial data provided by NSE, audited financial statements of companies and CMA library. In as much as there are general guiding principle for the preparation and reporting of financial statements which are Generally Accepted Accounting Principle (GAAP), these companies use different accounting policies and therefore reliability and quality of data was not 100%. The study was limited to one factor that affects the financial performance of a firm that is the working capital components. There are many other factors that affect the profitability of firms e.g. Management, size of the company, exchange rates among others. Time constraint was also a major concern. The time taken to carry out this study was in no means

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sufficient for the amount of detail and analysis involved. With more time, detailed tests could be conducted to determine whether the same conclusion could be derived when more variables are in question. The study also only used one measure of performance i.e. ROA. There are other ratios that are used to measure the performance of a company e.g. return on equity, return on investment and gross profit margin. Therefore any attempts to generalize findings should be reviewed with care. Finally, the study also had a scope limitation because it only concentrated on publicly listed firms and ignored the private firms. This may limit fair findings that could have been gotten if a bigger number of observations could have been analyzed. Since the data used is mainly from financial statements of public firms, it's therefore not comfortable to conclude the case is the same as for all private firms and partnerships.

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