

**THE EFFECT OF WORKING CAPITAL MANAGEMENT CYCLE ON PROFITABILITY OF RETAIL SUPERMARKETS IN MOMBASA, KENYA: A CASE STUDY OF BINATHMAN HOUSEHOLD SUPERMARKET IN MOMBASA CITY.**

**Abstract:** - Working capital management involves running of short-term assets and liabilities due to its direct effect on profitability of a business. The aim of this research was to scrutinize the effect of working capital management cycle on the profitability of retail supermarkets in Mombasa, Kenya. This research was guided by Operating Cycle Theory, Trade-off theory and Transaction cost economic theory. This study applied descriptive survey design. Target populace of this research was seventy-five workers of the supermarket. Secondary data was gathered from monetary reports of the supermarket for 9 years from year 2011 to 2019. Data was presented using tables. To test how *working capital management (WCM)* and the profitability of Binathman Household Supermarket are related, a linear multiple regression test was conducted and analysis was carried via coefficient of multiple regression. The descriptive outcomes indicate a modest level of receivables collection period, cash conversion cycle, payables deferral period and inventory conversion period. The study found a positive correlation amid working capital management cycle variables in addition to profitability of the supermarket. *However, the research indicated an inverse relationship between average payables period and return on assets; showing that longer payables periods had possibility of reducing a firm's earning if the cost of financing purchases was higher than the benefits. This research concludes that supermarket determine the cost of sales for their sales which was indicated by the mean of 3.81 and a Standard Deviation of 1.482. When supermarkets improve on their average collection days, their financial performance will be improved. The researcher recommends that it is imperative for companies to make an initial cost-benefit investigation of the numerous working capital management decisions prior to committing the companies' resources to a particular decision. It is also important for supermarkets in Kenya to integrate a proper risk management framework in their execution of the numerous working capital management policies. This research demonstrated that operative working capital management practices play a critical role in refining the general profit margins in lieu of supermarkets.*

**Key Words: Cash Conversion Cycle, Inventory Management, Payables Management, Receivables Management.**

## **1. INTRODUCTION**

Working capital **management** (WCM) involves managing of receivables, cash, payables and inventories. Managing receivables involves suitable guidelines that set credit sales levels, payment deadlines and penalties for late payment to customer that draw buyers, thus any influence on cash conversion cycle (CCC) and cash flow is compensated by better income and hence investment return. Managing cash pinpoints cash balance that allows a firm to meet day-to-day expenses, and on the other hand reduce expenses related to holding cash (Bringham & Ehrhardt, 2008). Current funding recognizes suitable sources of finance, given that inventory is preferably funded by credits obtained from suppliers, or alternatively a bank loan, bank overdraft or converting debtors to cash through factoring. Managing inventories involves identifying the level of inventory that does not interrupt operation but reduces investment and re-ordering costs hence increases cash flow, (Falope & Ajirole, 2009). This means that managers in retail supermarkets can greatly improve profits by applying an effective WCM system.

**Effective management of WCM is capable of ensuring that supermarket globally** operates with sufficient funds that will meet non-current debts and satisfy both current debts and forthcoming business expenses. **This means payments for debts and business expenses should be effected before due dates.** Linked together, decisions on the best level of each component of WC become repetitive and time consuming, (Artil, 2012). Hence, managers in firms spend substantial time on everyday problems that involve working capital decisions. This put a requirement for forecasting, analytical and controlling skills on personnel responsible to ensure improved profits and smooth running of the business at all times. Re-examining issues that define WCM leads to better practices of WC hence business success, (Kaleem, 2015)

**Therefore,** an effective and well-designed WCM has a significant input on profit and liquidity position **for all businesses.** Hence the ability of a business to continue in operation without insolvency threat is tightly linked to continued creditworthiness of the firm showing that WCM is important for increasing shareholders wealth, (Osundina, 2014). Efficiency in controlling and planning short term assets as well as liabilities reduces the threat of a business inability to meet due debts requirements and also to avoid unnecessary funding in current assets (CA), (Eljelly, 2004). Maintaining the best quantity of each element of WC in a supermarket has to become normal, recurrent and a continuous exercise. Thus earnings in a retail supermarket can be boosted by employing an efficient WCM arrangement.

**Thus,** WCM is a pedal for releasing cash from inventories, accounts receivables without underrating accounts payables. Supermarkets that efficiently manage these components can abruptly lessen their dependence on external funding and can invest on released funds. This mean more flexibility in finance, **improved profit,** creation of value and have an impact on the supermarkets enterprise value by plummeting capital employed and therefore improving asset efficiency. When too much funds is locked in inventories and receivables, high WC ratios result. Normally, the immediate, response to this problem is to speed-up receivable collection, ruthlessly slow down payments to suppliers but ensure good relationship and reducing inventories. This free

up cash significantly and reduce cost (Phuong & Su, 2011). **To attain growth and survival, retail supermarkets need to experience profitability.**

Retail sector include departmental stores, warehouse/wholesale clubs, merchandisers and factory outlets The sector is very dynamic with sole proprietorship and partnership supermarkets like Eastmatt, chandarama and limited liability companies like Naivas and Tuskys Ltd, (Wangari, 2012). Economic Survey in 2020 revealed that retail sector contributed to the economy in reducing poverty through creating employment for seventy five point five percent of working population in Kenya, (KNBS, 2020). This supports His Excellency President Uhuru Kenyatta's big four agenda development plan targeting an affordable and better life for all with an intention to accelerate the achievement of the vision 2030.

Although retail supermarkets contribute to the country's economy, some mega supermarkets have suffered declined profits and closed down. WCM is recognized as one of the reasons for the failure. Nakumatt supermarket limited is a good example of the first dominant player that owned 65 stores in Africa as of 31<sup>st</sup> December.2015 and is no more. Declining income caused by cash flow difficulties and high cost of operation can lead to inability to pay suppliers, (Ogwang, 2016). Negative practices of WCM affect the businesses' profits negatively. Continuous drop of earnings always result to laying down workers end eventually closure of business. **Masio (2012) poor WCM practices reduce a firm's returns thus firms should manage their resources more efficiently to ensure better proceeds. Thus, maintaining best level of each component of WCM can automatically improve returns in a supermarket.**

**However, Effective management of working capital lead supermarkets in obtaining the suitable levels of WC that helps them to improve business returns. It guides the management on identifying the correct mix of debtors, creditors, cash and stock. This enables managers to check if the plans they put in place are suitable for maximizing the supermarket's profits or not. This mean supermarkets can remain profitable on the basis of ensuring WCM which assist in investment decisions making on policy and investment mix; matching investment mix to objectives and balancing risk against supermarkets profit, (Mathai, 2010). Sound management on a supermarket's short-term assets and liabilities produce noticeable growth of the business's profitability while poor management result to losses that can lead to its closure, (Ratemo, 2018).**

Binthman Supermarket is a private company operated in Mombasa city. It trades in groceries and household products at reasonable and affordable prices. The company directly interfaces with customers and has operated for over twenty years with two branches and has turnover of over fifty millions. **Ejelly (2004) employing an effective system of WCM is an outstanding way for the business to boost its returns.** However, the trend of large supermarkets collapsing accredited to deficient WCM and dropping income forms a concern for this work, (Mbuthia & Rotich, 2014).

Conclusively, Retail supermarkets should determine their optimal investment in their WC. Nevertheless, investing less in **current assets** means high solvency risk and also high proceeds and the reverse when much is invested. Returns, profits and value of a firm are affected by management of WC, (Deloof, 2003). **The efficiency on how an establishment uses its assets to create a return is evaluated by return on asset (ROA). The ratio is useful in comparing a company by its own prior years' performance, and is calculated by dividing net income by average total assets. Return on asset ratio was used in this research (Pandey, 2005).**

## 1.2 STATEMENT OF THE PROBLEM

Increase in profit is the aim of every retail supermarket. This can be hindered by inaccurate management of receivables, payables and inventory. The components of WC are intertwined and their accurate management plays a key part in defining the level of the supermarket's profit. WC is a key factor for sustaining profit and creditworthiness for a firm's nonstop survival, (Eljelly, 2004). Hence, supermarkets should strive to balance liquidity and profits.

Retail supermarkets in Mombasa City have faced obstacles like low profits and closure due to mismanagement of **working capital (WC)**. Uchumi supermarket and branches countrywide collapsed and closed down due to decreased profit caused by poor management of WCM, (Mbuthia & Rotich, 2014). Similarly, Nakumatt Limited, one of the largest supermarkets in Kenya, collapsed due to declined profits caused by poor management of WC, (Ogwang, 2016). Recently, Tusksys supermarket ltd encountered serious challenges that declined the business income, caused financial problems and eventual closure, (Anyanzwa & Njau, 2020). This happened in spite of the field of WCM and profitability being widely explored.

Relationship amid WCM as well as effectiveness of listed companies in Vietnam market was explored in lieu of the period of 2006 -2008 and revealed a strong link between gross operating profit and CCC proposing that managers can improve shareholders wealth by controlling CCC and keeping each different element to the best level, (Phuong & Su, 2011). In Nigeria, a strong positive as well as momentous link amid WCM and profitability was discovered in a study conducted on quoted manufacturing food and beverage firms: listed in Stock exchange of Nigeria and proposed that Profit can be improved by reducing collection period and shortening CCC, (Osinduna, 2014). Additionally, a study on WCM practices of selected supermarkets of Ghana identified the problem of low profit: increased funds tied in WC and inability to unlock capital to finance growth and directed that superstores introduce best ways to reduce these problems, (Kaleem, 2015).

In Kenya, an exploration on WCM and profitability in six retail chain supermarkets in Kenya disclosed that supermarket's profitability is significantly influenced by WCM and suggested that firms should ensure WCM that can assist in making decision concerning investment mix and balancing risk against profitability, (Mathai, 2010). In conclusion, findings by all these scholars are bedrock displaying that WCM is related to profitability and effective management in a supermarket's WC can improve returns.

Given that challenges in WCM declined proceeds that resulted to the downfall of mega limited liability companies like Nakumatt supermarket Ltd (Ogwang, 2016), the question on extent to which recommendations on WCM and firms profitability as explored by different scholars above are implemented arises. The problem of supermarkets closing closing branches and triggering workers demonstrations due to unpaid salaries inspired the researcher to concentrate on one retail supermarket to examine whether findings arrived on at previous studies on improving profit by maintaining the best level of each element of WC are applied in Binathman supermarket while most of earlier studies reviewed listed firms and retail supermarkets (Mathai, 2010). Secondly, the researcher examined the extent to which WCM influence profitability of Binathman Household Supermarket in Mombasa city using receivable collection period (RCP), CCC, payable deferral period (PDP) and inventory conversion period (ICP).

### **1.3. Objectives of the Study**

- i. To evaluate the effect of the receivables collection period on profitability of Binathman Household Supermarket in Mombasa city.
- ii. To analyze the effect of cash conversion cycle on profitability of Binathman Household Supermarket in Mombasa City.
- iii. To examine the influence of the payables deferral period on profitability of Binathman Household Supermarket in Mombasa city.
- iv. To analyze the effect inventory conversion period on profitability of Binathman Household Supermarket in Mombasa city.

## **2. LITERATURE REVIEW**

### **2.1 Theoretical Literature**

#### **Operating Cycle Theory**

A firm Operational time shows the pace and flow of its money flow acquisition which then increase the cost and benefit of internal cash holdings (Wang, Ji, yu, Chen, & Song, 2014). It refers to the period from procuring of stock to when cash is collected form customers. The concept excludes accounts payable in liquidity analysis that is contrary to (CCC) and therefore fail provide networking cycle. The theory seems to propose that that credits are not important in the process of operating a business. Payables are source of funding to a business that improves proceed. Considering this overlook in the operating theory, this research included payables to increase understanding in a supermarket environment.

#### **Trade - off Theory of Liquidity**

This theory discusses the capital construction decision of a business. The theory suggests that firm's make capital injection decision when the advantage of executing it exceeds the charges (Quresh, Sheikh, & Khan, 2015). Supermarkets may select to restrain from accessing outward financing caused by excessive charges incurred resulting from high leveraging ratio and adjusting cost. Business owners will receive tax benefit from attracting debts and incur cost though payment of interest charged (Ramadhan, 2015). Supermarkets as part of small business may bear the cost of financial distress through economic failure. Where the opportunities are decreasing supermarkets will scale back debts. This means superstores will buy debts when there is a decrease in risk and will issue equity when risk increases to boost turnover. This theory will gave guidance on how a supermarket can organize its working capital with efficacy to avoid bad debts. This minimizes the cost and increase relevant cash flows thus improving profit.

#### **Transaction Cost Economic Theory (TCET)**

This concept is built on the work of authors Olive Williamson (1975) and Ronald Coase (1937) who reasoned that a company can make more effectual allocation of resources than a market. The TCET states that the major role of a company is to reduce costs. This means understanding cost in this manner lead to the growth of the business and integrate other activities.

In a supermarket, determination of the highest level of inventory can be done considering related costs and benefits linked to the degree of stock held. The costs include Costs related to holding stock like costs of raising order and transportation. Raising order involves acquiring of stock in a supermarket which involves organizing stock requisition form, accepting, examining and keeping records for goods received. Transportation costs on the other hand consist of transporting stock and result from storage of goods. A supermarket can hold a high or low Stock level depending on the benefit linked. Emery and Marques (2011) held that cost motive based on transaction economic theory is the simplest and most extensive motive of managing stock. Binathman Supermarket can have competitive advantage by cutting down cost and this can be achieved by retaining their costs of stocking like storage costs to a realistic least level to warrant heightened proceeds. This theory gave Binathman supermarket a clear guidance on how to reduce cost through maintaining the cost of inventory at a reasonable low degree.

## **2.2 Empirical Literature**

### **Receivable Collection Period and Profitability**

Gitahi, Naibe, and Livingstone (2020) explored management of accounts receivable as well as recital of manufacturing establishment quoted at the NSE using 147 finance staffs and accountants of all manufacturing firms listed for 6 months from April to October 2016. The findings revealed that financing accounts receivable and receivable collection period (RCP) had a significant effect on the companies' fiscal performance'. High levels of receivables increases cost of holding and managing accounts receivable. This directly reduce the profit of a firm (Milchiski(2007). This study considered how management of CCC affects profitability in Binathman Household supermarket.

Mbula, Memba and Njeru, (2016) scrutinized the result of debtors administration had on monetary recital of locally based companies with start-up funds sourced from the government. The study findings revealed financial performance of these firms is positively related to debtors. In conclusion, the researchers determined that managers of these firms should fix better credit plans to improve effectual supervision of debtors' balances to improve profit and financial performance. Masio (2012) explored Uchumi supermarket and identified that incompetent management of WCM reduces a firms proceeds. He proposed reduction of inefficient practices.

### **Cash Conversion Cycle (CCC) and Profitability**

Phuong, et.al, (2011) inspected how WCM is related to CCC in firms listed in Vietnam stock market covering the period 2006-2008. The researcher used secondary data collected from the firms. Gross operating profit was used to measure the link profitability and CCC and its different elements. The work discovered a strong negative relationship and concluded that long CCC declines a firm's profitability. Recommendations of the study proposed that managers can lessen their CCC days to boost profit and to improve shareholder's value. This research examined how Binathman Household supermarket profitability is related to CCC and its various components.

Hossain (2020) studied Working Capital Management as well as effectiveness in manufacturing establishment of Bangladesh using a sample of 52 firms listed with Dhaka stock exchange for period of 6 years from 2012 to 2017. The results revealed a momentous negative affiliation amid ROA as well as CCC, ACP: and a momentous negative link amid return on equity and CCC and

average payment period of the manufacturing firms. This means that manufacturing firms can increase profit by reducing CCC, ACP and accounts payable period. Strategic management of working capital encompasses sound decision making, proactive control of current assets movements, effective Cash Conversion Cycle (Sogomi, Patrick, & Kamau, 2022). This research examined how CCC in Binathman Household supermarket affects ROA.

### **Payables Deferral Period (PDP) and Profitability**

Osundina (2014) explored WCM and profitability of cited food as well as beverages manufacturing establishments in Nigeria. Survey research design was employed using primary data and established relationship using regression analyses. The findings revealed a strong negative link amid accounts payable period as well as profitability. It was endorsed that PDP should be shortened to improve profitability. **In addition, Oladupopo and Okafor (2013) discovered that WCM seemed to be statistically insignificant on corporate profitability at 5% level of confidence on dividend payout ratio of Nigeria firms.** The current study tested the link between payables deferral period and the profit of Binathman Household supermarket in Mombasa city.

**Rotich and Achode (2016) studied accounts payable as a basis of financing on recital of publicly listed manufacturing companies at NSE, Kenya. Secondary data acquired from the establishments' statistics at NSE periodicals was used. Payables were observed to have a direct favorable link with profitability and liquidity in most listed manufacturing firms. Nyamal, et. al, (2012) revealed that a business financial performance is directly influenced by management of WCM. The researcher established a significant effect of WCM on corporate profitability on firms.**

### **Inventory Conversion Period (ICP) and Profitability**

Nowak et al. (2021) studied WCM and profitability in manufacturing SMEs in Czech Republic using questionnaires to collect data. The researchers studied 105 companies for 5 years from 2014 to 2018; they used determinants of working capital as independent variables and profit before interest and tax as dependent variable. The results from the variables showed a negative affiliation with the establishments' profits, suggesting that investing in inventories as well as attaining extensions from suppliers' results to superfluous costs that negatively affect effectiveness. **Milchiski, (2008) reasoned that firms should aim at holding stock at a minimal acceptable level in relation to cost. This limits the risk of having greater inventory that affects a firm's returns.** This research was conducted in Binathman Household supermarket in Mombasa City. Data was composed from the supermarkets' monetary declarations from the year 2011 to 2019. Regression was used for data analysis to understand association of the supermarket's ICP with profit.

Mburu (2013) observed a declining trend on supermarkets inventory turnover for the period from 2008 to 2012 when he studied relationship inventory turnover has with financial recital of supermarkets in Kenya. He proposed that superstores should improve on average collection days as this will improve their financial performance. The dropping trend of supermarket's rate of inventory conversion to sales was a pointer that sales and profits were eventually affected.

**In Kenya, Mathuva (2010) revealed that time taken by a firm to change stock to sales and profits is related when he explored how components of WCM affect corporate profitability of listed companies in Kenya. He directed firms should keep reasonable stock levels to avoid losing business opportunities due costs related to shortage. Additionally Wanguu (2015) revealed a**

significant positive link amidst ICP and profitability. This research examined Binathman supermarket ICP ratios and profit.

### 3. RESEARCH METHODOLOGY

#### 3.1 Research Design.

This research employed descriptive research design. Mugenda and Mugenda, (2003) refers to descriptive design as a way employed in gathering information with a motive of testing the hypothesis or answering queries concerning the present status under investigation. The design includes survey as well as fact-finding inquiries of different kinds. The method allowed qualitative approach that allows description of subject by creating a group of items through gathering of data as well as formulation of the frequencies on study variables and their interactions. The descriptive study approach was used because it permitted analysis as well as relations of variables.

#### 3.2 Location of the Study

This investigation was done in Binathman Household Supermarket in Mombasa City County. This supermarket is operated within Mombasa Island and is located in old town on Luthuli lane off Mariakani Road with a branch in Mwembe kuku. The study covered financial reports for nine years from 2011 to 2019.

#### 3.3 Target Population

This is a total set of individuals, objects or items that a researcher wishes to examine. (Mugenda & Mugenda, 2003). The study targeted a population of 75 staffs of Binathman Household supermarket that included 4Managers, 6 accountants, 10 inventory clerks, 55 sales and marketing staffs. The study also extracted information from financial statements from the year 2011 to 2019

#### 3.4 Sampling Procedure and Technique

Sampling is the action of choosing a small group of respondents or items from a target population in research work to take part in a research, (Orodhe, 2004). The researcher applied stratified random sampling method in obtaining data from Binathm Household supermarket that was a cross section of the supermarket. Managers and accountants were given questionnaires due to their expert knowledge and that they process the required information in the business operation. Inventory clerks, sales and marketing staffs also participated. Each participant was expected to respond depending on their expert knowledge in their field of operation.

To get a representative sample the researcher used a stratified random sampling technique using Yamane, (1967) formula as shown under below to select sample size:-

$$n = \frac{N}{1+N(e^{-2})}$$

Where:

n is the sample size

N is the population 75

e is the level of precision ( $0.05^2$ )

Therefore:

$$n = 75 / 1 + 75 (0.05^2)$$

= 63 employees

Employees sample was randomly selected employees from each unit where each staff had a fair chance of being selected. Out of a target population of 75 workers of Binathman household supermarket, 63 employees comprising of 3 managers and 5 accountants 8 inventory clerks and 47 sales and marketing staffs were sampled based on their expert knowledge as shown in the table below:-

**Table: 1: Sample size**

<b>Supermarkets Employees</b>	<b>Number</b>	<b>Sample size</b>
Managers	4	3
Accountants	6	5
Inventory clerks	10	8
Assistant sales and marketing	55	47
<b>Employees sampled</b>	<b>75</b>	<b>63</b>

**Source; Researcher (2022)**

### **3.5 Research Instruments**

The research used both secondary and primary data. Primary data was collected using a questionnaire designed by the researcher. The tool contained questions in word format that were distributed to the respondents. A 5-point likert scale structural questionnaire was applied. Respondents' degree of agreement or disagreement to a particular statement was expressed and this enabled the researcher to scale attitude of respondents.

Secondary data was collected using data collection worksheet. Data was sourced from financial statements of Binathman Household Supermarket. To show the link between WCM and the supermarket's profit, monetary declarations for 9 years from year 2011 to 2019 were used. The supermarket's financial statement was considered as a representative of the sole proprietorship businesses under the retail sector that contribute to the economy of Kenya.

### **3.6 Reliability**

Level to which research instruments in a study gives reliable data on numerous repeated tests (Mugenda & Mugenda, 2003). It is the trend towards consistency found in repeated measurements. The researcher constructed questionnaires' that were given to managers and accountants of Bacchus supermarket Limited in Mombasa City who are not subjected to this study. The same questionnaires were managed to the same collection of subjects with a two weeks recess meaning a test re-testing method was used on the instruments. Cronbach's Alpha was calculated by

correlating the score for each scale item (variable) with the total score for each respondent to the test and comparing that to the variance of the total score. Construct testing for reliability was attained by calculating Cronbach's Alpha. The accepted reliability score level above 0.7 was expected in this study. The study instrument was assessed and found reliable. The result showed that inventory conversion period had an acceptable reliability of 0.904, Payables deferral period had an acceptable reliability of 0.757, receivables collection period had an acceptable reliability of 0.750, and cash conversion cycle had an acceptable reliability of 0.790. Lee Cronbach indicated that the acceptable reliability threshold is above 0.70. Table 2 presents the reliability results.

**Table 2 Reliability**

<b>Variable</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>	<b>Decision</b>
Receivables collection period	4	.750	Acceptable
Cash conversion cycle	5	.790	Acceptable
Payables deferral period	4	.757	Acceptable
Inventory conversion period	3	.904	Acceptable

**Research Data (2022)**

**3.7 Data Analysis and Presentation.**

To test how WCM and the profitability of Binathman Household Supermarket are related, a linear multiple regression test was conducted. Coefficient of multiple regressions was calculated to establish the proportion of variation in return on assets clarified by selected ratios. After data gathering, the data was cleaned as well as coded. Statistical package in lieu of social sciences (SPSS) was applied as an aid data analysis. This is because the software permits a wide range of analysis for most statistical as well as graphical data and its analysis. Content analysis was applied to analyze qualitative data. This analysis allowed grouping of data into codes, summarizing these into categories and even tabulate certain data to calculate frequency of certain objectives.

From the study, profitability ROA was the dependent variable while RCP, CCC, PDP as well as ICP were the independent variables. This research rotated around the affiliation amid working capital management cycle as well as effectiveness of Binathman Household supermarket.

Data was subjected to multiple linear regression models in order to understand the effect of WCM cycle on profitability on the supermarket. To establish the variation in return on asset explained in different ratios, coefficient of multiple regressions was computed. The regression model was-

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

**Where:-**

**Y** = Profitability of the firm (ROA)

**X<sub>1</sub>** = Receivable Conversion Period of the firm

**X<sub>2</sub>** = Cash Conversion Cycle of the firm

**X<sub>3</sub>** = Payables Deferral Period of the firm

**X<sub>4</sub>** = Inventory Conversion Period of the firm

**e** = Error term

**β<sub>1</sub> β<sub>2</sub> β<sub>3</sub> β<sub>4</sub>** = Are the regression coefficient.

## **4. RESULT AND DISCUSSION**

### **4.1 Response Rate**

The response rate is the number of respondents who attended the questionnaires divided by the number of individuals in the sample and it is always articulated in the percentage form. The research targeted 63 respondents of which 60 of the questionnaires were attended to with accurate level of 95%. Mugenda and Mugenda (2008) indicated that a response rate of 50% is acceptable, 60% is good and beyond 70% is tremendous. Consequently, the response rate of 95% was considered outstanding to analyse the effect of WCM cycle on effectiveness of Binathman Household Supermarket in Mombasa City.

### **4.2 Descriptive statistics.**

#### **4.2.1 Effect of receivables collection period on profitability**

The first objective investigated the effect of receivables collection period on profitability of Binathman Household Supermarket in Mombasa city. Data was collected and analyzed as shown below. The mean as well as standard deviations of the data amassed on receivables collection period items was calculated and findings were presented in table 2. From the result, the employees agreed that the company give discounts to avoid bad debts with a mean of (mean=3.52, SD=1.712). The respondents indicated that charging interest for customers who delay payment enhances receivables collection period with a mean of (mean=3.81, SD=1.363). Regarding a company evaluating the time customers take to pay for credit sales, the respondents had a mean of (mean=3.17, SD=1.202) and also the respondents indicated that the company send invoices and debt collectors to customers to enhance receivables collection period (mean==3.66, SD=1.175). **This indicated that receivables collection period varied throughout the measurement period. The results are in agreement with Masio (2012) that supermarkets need to be informed on the effects of working capital management on the profitability of their firms and the need to strike a balance between how much cash to keep, what level of inventory to maintain or how much payables to transact.**

Therefore, the overall results indicate that the respondents were in agreement regarding the effects of receivables collection period. The result is an indication that the management of the company takes a very serious attention when it comes to receivables collection period. The findings concur with the findings of Mbula, Memba and Njeru, (2016) who indicated that financial performance of firms is positively related to debtors. Mbula, Memba and Njeru, (2016) indicated that managers should fix better credit plans to improve effectual supervision of debtors' balances to improve profit and monetary recital. The outcome was presented in table 3

**Table 3: Effect of receivables collection period**

Variables	N	Mean	Std. Deviation
To avoid bad debts we give discounts	60	3.52	1.712
Charging interest for customers who delay payment	60	3.81	1.363
We evaluate the time customers take to pay for credit sales	60	3.17	1.202
Send invoices and sending debt collectors to customers	60	3.66	1.175

**Research Data (2022)**

#### **Correlation of receivables collection period on profitability**

From Pearson correlation analysis to establish the relationship between receivables collection period and profitability, it revealed a positive relationship ( $r=0.033$ ,  $p \leq 0.050$ ) as indicated in table 4. This implies that an increase in receivables collection period leads to an increase in profitability

**Table 4: Correlation of receivables collection period on profitability**

		Profitability
Receivables collection period	Pearson Correlation	.033
	Sig. (2-tailed)	.050
	N	60

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

#### **4.2.2 Effect of cash conversion cycle on profitability of Binathman Household Supermarket**

The second variable in this study is about the effect of cash conversion cycle on profitability of Binathman Household Supermarket. Just like in the previous variable, data was collected and analyzed using the mean and standard deviation. The data collected on cash conversion cycle items was computed and findings are presented in table below. Based on the mean and SD, the participants agreed that in management cash conversion cycle and the management ensure the soonest collection of receivables with a mean of (mean=2.89, SD=0.345), others indicated that they manage the monies of their supermarket to enhance cash conversion management with a mean of (mean=3.81, SD=.782). The respondents also agreed with the statements that, the company delay payment to suppliers but maintaining credit terms and good relationship with a mean of (mean=3.52, SD=1.072) and others were of the opinion that the company hasten cash collection and manage payment so as to maximize cash available in our supermarket with a mean of (mean=3.73, SD=1.184). This indicated that cash conversion cycle varied throughout the measurement period. The results are in agreement with Mathai, (2010) who did a study on the relationship between working capital management and retail supermarkets in Kenya and established that reducing the credit standards set will make demand to rise, which finally contributes, to realization of more sales and profits. The result suggests that cash and cash

conversion cycle management plays a critical role in managing working capital because delaying bill payments is one of the tools for management to have access to an inexpensive source of financing. However, the opportunity cost of keeping high account payables may hurt the business if an early payment discount is offered. The findings concur with the findings of Phuong, et.al, (2011) who indicated that there is a strong relationship between cash conversion cycle and a firm's profitability.

**Table 5: Effect of cash conversion cycle management**

Variable	N	Mean	Std. Deviation
We ensure the soonest collection of receivables	60	2.89	0.345
We manage the monies of our supermarket	60	3.81	0.782
We Delay payment to suppliers but maintaining credit terms and good relationship	60	3.52	1.072
We hasten cash collection and manage payment	60	3.73	1.184

Source: Research Data (2022)

**Correlation of cash conversion cycle on profitability of Binathman Household Supermarket**

Pearson correlation analysis revealed a positive correlation ( $r=0.605$ ,  $p \leq 0.010$ ) between cash conversion cycle and profitability of Binathman Household Supermarket as indicated in table 6. This implies that, an increase in cash conversion cycle leads to an increase in profitability of Binathman Household Supermarket.

**Table 6: Correlation of cash conversion cycle on profitability of Binathman Household Supermarket**

		Profitability
<b>Cash conversion cycle</b>	Pearson Correlation	.203*
	Sig. (2-tailed)	.591
	N	60

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

**4.2.3 Influence of the payables deferral period on profitability of Binathman Household Supermarket**

The influence of the payables deferral period on profitability Binathman Household Supermarket formed the third independent variable in this research. Data was amassed via means as well as standard deviation. The mean as well as standard deviations of the data amassed was calculated and results were presented and are as shown in the table below. As the mean results indicate, the company stretch payments to suppliers to the end of due period with a mean of (mean=2.77, SD=1.245), other respondents indicated that the company shorten the discount date and time of payments with a mean of (mean=2.81, SD=1.182). The participants also indicated that the company do take advantage of credit financing with a mean of (mean=2.52, SD=1.272) while other respondents indicated that the company do calculate average credit purchases to measure efficiency in the organization with a mean of (mean=2.29, SD=1.078). This indicated that payables deferral period varied throughout the measurement period. The results agree with Nyamao, et. al, (2012 that working capital management practices influences directly financial performance of firms. However, the results do not agree with Oladipupo and Okafor (2013) who have established that working capital management has a statistically insignificant effect on corporate profitability. The results revealed that inventory turnover and profitability of supermarkets are positively and significantly associated ( $r=0.3606$ ,  $p=000$ ) level of significance.

The results suggest that the policies are ranged from conservative to aggressive dogmas. With respect to the circumstances and the anticipated solutions of the establishment, the suitable policy is selected. The findings of this study is as the same as those of Rotich and Achode (2016) who indicated that Payables deferral period have a direct favorable link with profitability of firms.

**Table 7: Influence of the payables deferral period**

Payables deferral period	N	Mean	Std.Deviation
Stretch payments to suppliers to the end of due period	60	2.77	1.245
Shortening the discount date and time of payments	60	2.81	1.182
We take advantage of credit financing	60	2.52	1.272
We calculate average credit purchases to measure efficiency	60	2.29	1.078

**Research Data (2022)**

**Correlation of payables deferral period on profitability of Binathman Household Supermarket**

A Pearson correlation analysis was done to establish the relationship between payables deferral period and profitability of Binathman Household Supermarket. The finding revealed a positive relationship ( $r=0.075$ ,  $p > 0.001$ ) although not significant as indicated in table 8. This implies that there is a positive relationship though not significant.

**Table 8: Correlation of payables deferral period**

		Profitability
<b>Payables deferral period</b>	Pearson Correlation	.075
	Sig. (2-tailed)	.001
	N	60

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

**4.2.4 Effect of inventory conversion period on profitability of Binathman Household Supermarket**

The effect inventory conversion period on profitability of Binathman Household Supermarket, formed the third independent variable in this study. Just like in other variables, data was collected through mean and standard deviation. The mean as well as standard deviations of the data amassed on inventory conversion period items was calculated and results were presented in table 8. As the mean results indicate, the company ensure safety stock owing to fluctuation in demand with a mean of (mean=3.77, SD=1.445), other respondents indicated that the company determine the cost sales for their sales with a mean of (mean=3.81, SD=1.482). The respondents also indicated that the company do take stock frequently and keep accurate stock records so as to identify dead and slow moving stock with a mean of (mean=3.52, SD=1.173). Indicating that profitability varied throughout the measurement period. The results are in agreement with Michalski (2007) in his study, found that when there is high levels of accounts receivables, will result to working capital to increase and also holding and management costs of inventory increase resulting to decline of value and profits of the firm. However, the results contrast that of Wanguu (2015) who established that there is an insignificant negative relationship between inventory conversion period and profitability.

This shows that managers should strive to ensure that inventories moves very first while minimising its related costs like ordering and holding costs. When supermarkets improve on their average collection days, their financial performance will be improved. Dropping trend in any supermarket’s rate of inventory conversion to sales is a pointer that sales and profits are eventually affected. The results of the research coincide with those of Mathuva (2010) who indicated that time taken by a firm to change stock to sales and profits are related. Mathuva (2010) posited out that firms should keep reasonable stock levels to avoid losing business opportunities due costs related to shortage.

**Table 9: Effect of inventory conversion period**

<b>Inventory conversion period</b>	N	Mean	Std. Deviation
We ensure safety stock owing to fluctuation in demand	60	3.77	1.445
We determine the cost sales for our sales	60	3.81	1.482
We take stock frequently and keep accurate stock records so as to identify dead and slow moving stock	60	3.52	1.173

**Research Data (2022)**

**Correlation of inventory conversion period on profitability of Binathman Household Supermarket**

A Pearson correlation analysis was done to establish the relationship between inventory conversion period and profitability of Binathman Household Supermarket. The finding revealed a positive relationship ( $r=0.230^{**}$ ,  $p > 0.224$ ) although not significant as indicated in table 10. This implies that there is a positive relationship though not significant.

**Table 10: Correlation of inventory conversion period on profitability of Binathman Household Supermarket**

		<b>Profitability</b>
<b>Inventory conversion period</b>	Pearson Correlation	.230 <sup>**</sup>
	Sig. (2-tailed)	.224
	N	60

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

**4.2.5 Profitability of Binathman Household Supermarket**

The study set to establish the profitability of Binathman Household Supermarket from 2011- 2019. ROA was calculated as a measure of profitability of the supermarket. The findings are presented below in table 11.

**Table 11: Profitability of Binathman Household Supermarket**

<b>Year</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>ROA Mean</b>	0.071	0.2008	0.086	0.0696	0.058	0.0452	0.051	0.0666	0.020
<b>Standard D</b>	0.0814	0.012	0.1249	0.019	0.0520	0.038	0.0928	0.053	0.1420

The research recognized that there is variation of the profitability of Binathman Household Supermarket over the research period. This can be determined by a look at the standard deviation attained. The Binathman Household Supermarket recorded the uppermost recital in 2012 with an ROA of 0.2008 while the lowest recital was recorded in the year 2019 with a ROA of 0.020.

### 4.3 Correlation Results

Correlation analysis is a technique used to determine how variables are connected with one another. Correlation matrix was created to express connotation amid independent as well as dependent variables. Table 12 shows the outcomes of the correlation analysis.

**Table 12: Correlation Matrix**

Variables		Profitability	RCP	COC	PDP	ICP
Profitability	Pearson Correlation	1				
	Sig. (2-tailed)					
RCP	Pearson Correlation	.033	1			
	Sig. (2-tailed)					
COC	Pearson Correlation	.591 .203**	-.067	1		
	Sig. (2-tailed)					
PDP	Pearson Correlation	.001 .075	.277 -.025	.330**	1	
	Sig. (2-tailed)					
ICP	Pearson Correlation	.224 .230**	.685 .144*	.000 .689**	.278**	1
	Sig. (2-tailed)					
		.000	.019	.000	.000	

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

#### Research Data (2022)

The result shows that there is a positive correlation between each pair of independent variable. The correlation between the pairs is moderate and significant at .05 significant levels. This indicates that the independent variables measure the same construct that is of working capital management. This forms other strength of this study.

From table 10, the correlation results revealed that receivables collection period and profitability of supermarkets are positively and significantly associated (( $r=.033$ ,  $p<.05$ )) level of significance. The results agree with Nyamao, et. al, (2012 that working capital management practices influences directly financial performance of firms. However, the results do not agree with Oladipupo and Okafor (2013) who have established that working capital management has a statistically insignificant effect on corporate profitability. The results revealed that cash conversion cycle and

profitability of supermarkets are positively and significantly associated ( $r=.203$ ,  $p<.05$ ) level of significance. The results are in agreement with Michalski (2007) in his study, found that when there is high levels of accounts receivables, will result to working capital to increase and also holding and management costs of inventory increase resulting to decline of value and profits of the firm. In addition, the results of Wanguu (2015) also established that there is a significant positive relationship between inventory conversion period and profitability. The results also revealed that payables deferral period and profitability of supermarkets are positively and significantly associated ( $r=.075$ ,  $p<.05$ ). The results are in agreement with Cote and Latham (1999) who argued that effective management of accounts payable positively impacted on cash flow and thus profitability. Desai, (2011) observed that in the process of delaying disbursements to suppliers can act as a source of finance since the inventory bought is sourced for cash inflows before the cash is released to suppliers. Finally, inventory conversion period ( $r=.230$ ,  $p<.05$ ) are positively and significantly correlated with profitability of a firm. A regression model was assessed that links working capital management cycle as well as profitability. In the table above, there are some figures (with no stars) whose relationship with profitability of Binathman Household Supermarkets is not significant. The regression result is presented in the next section.

#### 4.4 Regression analysis results

**Table 13: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518 <sup>a</sup>	.268	.260	.747

a. Predictors: (Constant), receivables collection period, cash conversion cycle, payables deferral period and inventory conversion period

#### Research Data (2022)

The model summary results in table 9 indicate that the unadjusted R square values of .518. This is the coefficient of determination, which implies that the set of independent variables in this study accounts for 51.8% of variations in the profitability of supermarkets. The remaining percentage (48.2%) is accounted for other variables outside the model. The result indicates that knowledge and information regarding the independent variables provides a great proportion of information regarding profitability at Binathman Household Supermarket in Mombasa city. ANOVA results in table 14 assessed the model fitness.

**Table 14: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.221	3	17.892	32.048	.000 <sup>b</sup>
	Residual	6.864	57	.430		
	Total	20.085	60			

a. Dependent Variable: Profitability

b. Predictors: (Constant), Receivables, Cash Conversion, Payable deferral P, Inventory Conversion P

#### Research Data (2022)

The ANOVA result shows that the  $F_{-}$  ratio is 32.048 with a corresponding p-value of .000. This designates that the model is fit. The predicted model connecting the working capital management

(receivables collection period, cash conversion cycle, payables deferral period as well as inventory conversion period) to profitability of the supermarket is a good model. The regression coefficients of the variables in the model are as shown in table 15

**Table 15: Regression Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	2.374	.373		6.368	.000
RCP	.444	.067	.375	6.586	.000
Cash CC	.101	.044	.129	2.324	.021
PDP	.612	.181	.182	3.389	.001
CPP	.104	.036	.153	2.906	.004

a. Dependent Variable: Profitability

### Research Data (2022)

The result in table 10 designated the regression coefficients of the independent variables (and the constant). The result shows that RCP has a positive momentous influence on the profitability ( $\beta=.444$ ,  $p=.000$ ), cash conversion cycle have a momentous positive influence on profitability of supermarkets ( $\beta=.101$ ,  $p=.021$ ), payables deferral period positively and significantly influence the profitability of supermarket, ( $\beta=.612$ ,  $p=.001$ ). The ICP has a significant impact on profitability of supermarkets ( $\beta=.104$ ,  $p=.004$ ). The regression equation was:

The regression model of:  $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$  Where:  $Y$  = Profitability of the firm  $\alpha$  = Constant;  $\beta_1, \beta_2, \beta_3, \beta_4$ , = Coefficients of determination;  $X_1$  = Receivable Conversion Period of the firm;  $X_2$  = Cash Conversion Cycle of the firm;  $X_3$  = Payables Deferral Period of the firm;  $X_4$ = Inventory Conversion Period of the firm;  $\varepsilon$  = Error term

$$Y = 2.374 + 0.444X_1 + 0.101X_2 + 0.612X_3 + 0.104X_4$$

## 5. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Given that multivariate regression model explained a small section of the variation in the return on assets, the study concludes that there are other variables which have not been included in this study that might provide a better explanation for the movement in the return on asset or otherwise the overall effectiveness of the supermarkets in Kenya. The fact that the co-efficient of the component working capital management variables were negative indicates that for profitability within the supermarkets, stringent working capital management measures are needed. Most of the respondents indicated that charging interest for customers who delay payment enhances receivables collection period with a mean of 3.81 and a Standard Deviation of 1.363). The result is an indication that the management of the company takes a very serious attention when it comes to receivables collection period.

From the results of the research, the investigator can conclude that supermarket manage the monies of their supermarket to enhance cash conversion management with a mean of 3.81 and a Standard Deviation of 0.782). A higher number of the respondents showed that supermarkets shorten the discount date and time of payments with a mean of 2.81 which was the highest and a Standard Deviation =1.182. **The results revealed that cash conversion cycle and profitability of supermarkets are positively and significantly associated ( $r=.203$ ,  $p<.05$ ) level of significance.** This can be attributed to WCM in supermarkets in Kenya, which has proved that effective working capital management practice will play a crucial role in improving the overall profit margins for supermarkets. **The researcher concluded that there is a positive correlation between each pair of independent variable. The correlation between the pairs is moderate and significant at .05 significant levels. This indicates that the independent variables measure the same construct that is of working capital management. This forms other strength of this study.**

The inverse affiliation amid Accounts Collection Period and Return on Assets designates that working capital management strategies that endorse shorter receivables collection period will ultimately lead firms to increased effectiveness. The research has indicated an inverse affiliation amid average payables period as well as return on asset, this observation could be taken to explain that longer payables periods had possibility of reducing a firm's earning if the cost of financing purchases was higher than the benefits. The researcher can conclude that the supermarket determine the cost of sales for their sales which was indicated by the mean of 3.81 and a Standard Deviation of 1.482. When supermarkets improve on their average collection days, their financial performance will be improved.

### **Recommendations**

From the findings, it is imperative for supermarkets that implement the working capital management policies to balance amid effectiveness of the supermarket as well as the supermarket's fluidity. This is due to the implicit trade-off amid liquidity as well as effectiveness. Operative working capital management will warrant that companies do hold surplus inventory that may prove expensive in the short term owing to the cost of capital investment as well as company's incapability to meet its short term fiscal objectives due ensuing illiquidity but it will benefit the firm in the long term. Some of the respondents indicated that a company evaluates the time customers take to pay for credit sales, with a mean of 3.17 which was the least and a Standard Deviation 1.202. As per the findings, the management of the company should take a very serious attention when it comes to receivables collection period.

The researcher recommends that it is imperative for companies to make an initial cost-benefit investigation of the numerous working capital management decisions prior to committing the companies' resources to a particular decision. This is because, some of the respondents indicated that the supermarket ensure the soonest collection of receivables from their clients with a mean of 2.89 and a Standard Deviation of 0.345. The researcher recommends that suitable working capital management practices will permit an establishment to successfully manage its capital budgeting purpose particularly with supermarkets whose enormous portion of capital requirements are channeled to their operation events. Operative capital management strategies will consequently permit companies to prudently assess their financing requirements whether long term or short term.

The respondents indicated that the company do calculate average credit purchases to measure efficiency in the organization with a mean of 2.29 which was the least and a Standard Deviation of 1.078. The researcher recommends that a weak non - significant negative link between average collection days, average payment period and net operating profit affect the performance of the firm. This indicated that a weak significant link was observed between CCC and supermarkets. She recommended that supermarkets should have WCM which will guide them in making judgments on investment mix and plan.

Supermarkets in Kenya ought to integrate a proper risk management framework in their execution of the numerous working capital management policies. The respondents indicated that the supermarket do take stock frequently and keep accurate stock records so as to identify dead and slow moving stock with a mean of 3.52 which was the least and a Standard Deviation of 1.173. The researcher recommends that it is imperative for the Supermarket to take a broader perspective of the implication of a particular decision. Trade strategies that might encompass rigorous receivables collections mechanisms might infuriate loyal clientele revealing the firm to plausible risk of losing future business. It is therefore imperative for firms to be cautious when dealing with their clients even as they attempt to reduce their receivables collection period.

Given the scope as well as confines of this research, the investigator proposes a number of areas in lieu of further research. The scope of this research ought to be extended to comprise other variables not acknowledged in this research as captured by the error term. To get an improved viewpoint of the affiliation amid working capital management decisions as well as the effectiveness, this research must be carried out in a different industry/sector. The research can also be enhanced by using a diverse benchmark to measure monetary recital. Instead of using the return on asset as a gauge in lieu of effectiveness of an establishment, return on equity may be used instead.

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