EFFECT OF WORKING CAPITAL MANAGEMENT ON THE FINANCIAL PERFORMANCE OF RETAIL SUPERMARKETS IN NAIROBI COUNTY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

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DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed:  **Date: 17th November 2022**

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D63/36417/2020

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

Signed_____ **Date-** 17TH NOVEMBER 2022

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DEDICATION

The inscription of this project was made possible by family love, prayers, and mentorship. The countless support taught the new traits of giving. The inspiration fueled my mission to keep climbing the academic ladder.

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ABBREVIATIONS AND ACRONYMS

ANOVA:	Analysis of Variance
CA	Current Assets
CCC	Cash Conversion Cycle
CL	Current Liabilities
IT	Inventory Turnover
NSE	Nairobi Stock Exchange
OLS	Ordinary Least Square
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SPSS	Statistical Package of Social Science
WC	Working Capital
WCM	Working Capital Management

ABSTRACT

Moreover, working capital management affects performance linked to the finance of any company, this calls for good control to ensure a balance of performance and the risk of not achieving financial obligation. It is a major cornerstone of effectiveness and efficiency in finance. Hence, the objective of the study was to examine the impacts of working capital control on the financial performance of retail supermarkets in Nairobi County. Resource-based, Agency, and Cash Conversion Cycle theory anchored this study. The research adopted the correlation design of the study. This design intends to accurately and systematically describe a situation or population. The research focused on 13 supermarkets in Nairobi from 2016 to 2021. The information for the study was obtained from the Supermarket reports of finance from 2016-2021. In addition, data was analyzed through SPSS. During data examination, descriptive and inferential examinations were done. From the findings, the inventory turnover ratio has a negative correlation towards the predicted variable as depicted by (r=-0.017, p=0.885) while the account receivable average, account payable average, and liquidity ratio have a positive relation towards the Return on assets. The account receivable average has (r=0.002, p=0.989), account payable average (r=0.145, p=0.204), and liquidity ratio (r=0.435, p=0.000) towards the regressed variable. The diagnostic analysis posted that the dataset met the minimum threshold. Therefore, the enabling variables were free multicollinearity obstruction while autocorrelation and normal posted a normal range. The descriptive statistics gave a factual proposition of average and standard deviation. Moreover, the presentation of the greatest and lowest value explained the range. ROA recorded the lowest value of 0.0294 and the highest of 0.4912. The inventory turnover posted the least value of 2.6358 while a maximum of 8.9021. The account receivable had 3.0741 and 7.3116 for the lowest and highest figures respectively. The account payable recorded the least of 3.2765 and a maximum figure of 4.1925. The computation illustrates that all the chosen predictor variables correlated positively with ROA. It is imperative to present that when all factors remain unchanged, the ROA is negative at 11.3%. In addition, a positive change in the inventory turnover time translates to an increase in ROA by 0.1 when all factors are unchanged. Furthermore, the advancement in a single unit of average accounts receivable causes a positive increase of 0.3% in ROA whenever all factors are kept constant. Furthermore, the increment of a singular unit of average accounts payable translates to a 2.8% increase in ROA, all factors constant. Lastly, a unitary advancement on one unit of liquidity is fundamental for the positive increase in ROA by 62.7% all other determinants held constant. The correlation gave a prompt outlook of the association. The R-value was 0.445 and the R-Square was 19.8% thereby postulating that deviation in ROA was triggered by Liquidity, Inventory Turnover Period, Average Receivable Accounts, and Average Account Payable. The remnant 80.2% relates to varying changes correlated with enablers not factored in the study. The comprehensive inspection should be followed by a forensic accounting mechanism that gives a red alert to the supermarket for going beyond the threshold. This investigation proposes a replicate study that considers the working capital and financial sustainability of manufacturing firms.

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Working capital is a major cornerstone of the productivity of finance. It is crucial in promoting the efficiency and effectiveness of the firms. Moreover, working capital management (WCM) affects performance linked to the finance of any company, this calls for good control to ensure a balance of performance and the risk of not achieving financial obligation when it is due (Ochieng and Jagongo, 2020). The working capital is composed of receivable accounts, inventory, and cash conversion cycle. Pandey (2005) noted that a firm that neglects the importance of managing its inventories risks long-term profitability and may ultimately fail. This is critical to an entity's liquidity and profitability and this is interlinked with current assets and liabilities (Ismail & Adamu, 2020). The management of working capital is indispensable in the achievement of organizational objectives. The firms' productivity is lubricated by the efficiency as well as the effectiveness of working capital. Moreover, the maximization of resources relies on the quality operation of cash at the disposal to accomplish optimum productivity. Therefore, quality cash flow results from the efficiency of working capital (Nyoike, 2015).

The research was based on resource-based theory, agency theory, and cash conversion cycle theory. Resource-based theory (Pfeffer & Salancik, 1978) conceptualized the company's capability to manage its internal resources efficiently so that it can remain competitive in the market. Internal resources of a firm are considered the inputs that enable a firm to operationalize optimally. Agency theory was postulated by Meckling and Jensen (1976). It is based on how the administration of a company is structured on the

conflict of gain among the participants, managers, and providers of credit. The conversion cash theory was developed by Laughlin & Richards (1980) who suggested it as ever-changing liquidity of analysis indicator. According to Hutchison et al (2007), this theory has been adopted as a metric of working capital (WC). Cash conversion theory was conceptualized on the premise of sourcing crude materials, the task in progress, the sale of finished commodities, and payment for stock required for production.

Retail businesses allude to the selling of services and commodities directly to end-users. Therefore, these entities play a crucial role in contributing to the economy of Kenya and source of employment for many people. In 2019, retail entities and the wholesale business employed 518,500 Kenyans and reckoned for 8.4% GDP of Kenya's economy (Cytonn Report, 2018). Supermarket outlets in Kenya have been shrinking; there has been a decline in numbers from 314 branches to currently 189 branches among major supermarkets in the last decade (KNBS, 2020). The largest supermarkets in the country have not been spared; Uchumi, Nakumatt, and Tuskys Supermarkets scaled down their operations ranging from closing their retail outlets to retrenching workers and this has attracted protests from trade union organizations. According to Cytonn's report (2020), 127 supermarket branches closed down operations as compared to 16 that opened up new branches. Despite this decline, more players are expected to come in, and bridge the gap left behind by the big players, international players will come in, and local players deemed stable is likely to expand their operations (Sande, 2022).

1.1.1 Working Capital Management

Working capital (WC) is described as a formula where current liabilities are more than the current assets (Jeffrey (2009). Current inventories are those properties that turn into cash within 1 year according to Bingham et al (2005). According to Sierpi ´nska et al (2005), they are cash and cash equivalent, marketable securities, inventories, receivable accounts, and prepaid expenses. Moreover, it refers to balance sheet elements that are equivalent to all funds owed by the firm and mature within 1 year. Furthermore, it explains the current liabilities including payable accounts, dividends, short-term debt, as well as income taxes owed. Zhou (2011) opined that WC is the available funds for working expenses that are accrued from the operations of the firm. This explanation is limited to value, therefore defining WC as net current assets whereby it is obtained after the deduction of fixed inventory out of long-term funding from the recurrent expenditure of an enterprise.

The undertakings of working capital are salient to the financial fitness of the firm regardless of its stability. According to Haresh (2012), the aggregate funds allocated towards WC are greater than the aggregate assets utilized. Concisely, the efficiency and quality designed of WC possess a crucial driving force towards profitability. Additionally, it is a crucial pillar guiding the liquidity of the organization. It is imperative to pinpoint that the going concern of a firm is attached directly to WC. Therefore, WCM revolves around plans, controls, and prudent maximization of current liabilities and assets to reinforce the optimum activities and eliminate the availability of idle assets in the organization.

The main goal of every firm in business is profit making, WC is seen as the driver of making a profit and this is exhibited by the attitude of finance managers in managing inventories and proficiency in payable accounts and receivable accounts (Raheman and Nasr, 2007). Governance guides the organization to promote the optimum balance between CA and CL (Lazaridis & Tryfondis, 2006). This is supreme for the quality achievement of the objective. The operationalization of WC is done through the maximization of its cycle. This incorporates immense metrics such as the period of average collection and payable account turnover. Additionally, the cash conversion cycle is the chief determinant prioritized by innumerable studies. Three decisions in financing are critical to the progress of any firm; decision on the overall structure of capital, capital budgeting verdict, and decision about WC management (Tanveer *et al*, 2016).

1.1.2 Financial Performance

From a wider perspective, this is the level to which the financial goals of an enterprise have been achieved and is a critical component of risk associated with the governance of finance. It is a procedure of moderating policies of the company and operation in terms of monetary. This is an indicator of the situation of the finance of a company at a given time and can be applied to weigh the performance of the company within the inline industries or across various sectors (Velma, 2022) this can be moderated by solvency, capital adequacy, efficiency, profitability, and leverage. Besides anchoring going concerns, financial performance increases the stability, market share, and productivity of the business.

According to Fattihudin (2018), financial statements are records of finance entailing balance sheets, cash flow, profit-loss, and statements of shareholders' equity which gives a reflection of the firm's performance (Didin, 2017). Financial performance can also be measured using the following ratios in monetary terms; equity return, asset return, and earnings per share (ISA-1, 2007). A financial performance report gives an overview of an organization's budgetary well-being and how stakeholders make a decision based on the laid out facts in that report (Matayo & Muturi, 2018). Financial performance commands business continuity. In addition, it is very critical to the operations and sustainability of supermarkets (Wairimu et al, 2021).

According to Ramappa and Shivaprasad (2013), the performance of supermarkets is measured by ratios on solvency, ratios on liquidity, ratios on profitability, ratios on turnover, and sales volumes. Profitability ratios measure the aggregate effectiveness of a company. These ratios give an overview of the net earnings in comparison to assets, debt, fixed assets, and shareholders' equity. Profitability ratios combine a company's control, growth, and success in changing investments into profits. Shareholders and investors treasure profits and in this regard, this study will use the profitability ratio to measure the financial performance of supermarkets. Several profitability ratios may be applied to measure the efficiency of a company. In this research, ROA will be applied to the moderate financial performance of supermarkets. It is achieved by dividing income that is after the deduction of taxes and interests by the value of all available assets.

1.1.3 Working Capital and Financial Performance

Working Capital and financial performance are intertwined through financial management. Financial management aid to make sure capital for firms is moderated to improve efficiency, operation as well as control of the business. Its components are long-term investment, financing decisions, and working capital among others (Le et al, 2018). Wambia and Jagongo (2020), Tanveer *et al.* (2016), and Kanji (2017) opined that profit maximization in a firm requires optimization of WC, which goes in hand with balancing liquidity. Balancing between adequate liquidity and profit-making is good for business sustainability and the smooth daily operations of a supermarket **(**Rahman & Nasr, 2007).

Proper management of adequate cash is critical to a commercial firm and optimal methods such as dynamic discounting should be a remedy (Wambia & Jogongo, 2020). Supermarkets pay and receive certain transactions in cash (Oden, 2020). Consequently, supermarkets need enough liquidity to meet some of their obligations through proper management of their cash inflows and cash outflows. Increased WC improves the efficiency of a firm and ultimately financial performance (Pine *et al.,* 2010).

1.1.4 Supermarkets in Nairobi County

Nairobi County hosts the headquarters of many Supermarkets in Kenya. Nairobi County is Kenya's capital city with a population of over 5 million and over 1.5 million households accounting for 9.15% of the country's population; several supermarkets have branches in the county. According to Delloite and Planet (2012), Nairobi represents the bulk of urban life and is recognized as the ideal location for investment in modern retailing. Subsequently, global retailers are likely to invest exclusively in Nairobi.

Supermarket branches have been shrinking; hence, there has been a decline in numbers from 314 branches to currently 189 branches among major supermarkets in the last decade (KNBS, 2020).

Chesula and Nkobe (2018) acknowledged mismanagement, unfavorable competition, inconsistency supply chain, and scrupulous employees as the reason for the decline in growth in the Kenyan retail sector. These challenges reduce WC whereas adequate inventory will be severely affected by theft caused by scrupulous employees. Wanyoike et al (2021) noted that supermarkets have been in turmoil recently because of improper management of cash. Further, the cash presence is very critical to the operations of any supermarket hence in times of economic decline or when a firm is in credit constraint such firms will be at liquidity risk.

1.2 Research Problem

Working capital is critical in enhancing the enterprise going concern (Osundina, 2014). It upgrades the management of liabilities and assets to realize maximum profits. The shareholders expect maximum optimization of the available resources to ease the accomplishment of their interests. The governance is mandated to undertake crucial duties on behalf of the principal. A stable business portrays quality management, efficient WCM, and smooth operation of the firm, Pandey (2011). Efficient control of current liabilities tends to safeguard the firm from the risk of liquidity. Extreme illiquidity can cause firm insolvency and naturally shuts down operations. Short-term liabilities and assets management are key to the profitability of a firm, risk mitigation, and maximization of the firm's value.

The retail sector registered a growth of 10.6% in 2020 (KNBS, 2021), however, supermarkets have been closing down. Additionally, 25 branches of the major supermarkets closed down in 2020 and only 7 new branches were opened. Therefore, on aggregate, supermarket growth has been declining (Cytonn, 2020). Moreover, 40% of supermarkets close down within their first year of operation, and 60% of the remaining shut down in the first three years of service (Nyamo, 2012). This decline in performance by supermarkets is attributed to the mismanagement of WC. Wanyoike *et al.* (2021) noted that supermarkets have been closing down because of inappropriate management of their cash assets. Cash is an essential component of the operations of retail shops and improper management alters day-to-day operations severely. Chesula and Nkobe (2018) pointed out corrupt employees as the major threat to the growth of supermarkets. Crafty staffs are capable of causing inventory theft, which reduces the WC and the profitability margin is negatively affected.

Mismanagement of WC, poor cash management, and dishonest employees are not only a threat to the growth of supermarkets but also the overall economy. Economies are structured in a way that growth in supermarkets creates more job opportunities for the unemployed graduates and resolves the unemployment crisis prevailing in Kenya and increase taxes remitted to the government because of its formality in nature. Shrink growth in supermarkets amounts to staff dissatisfaction and retrenchment Jeffrey (2009). All these have far-reaching implications for the aggregate economic growth of the country.

Masanja and Mtani (2018), assessed the impact of the management of working capital on the financial performance of Supermarkets in Arusha, Tanzania using a relational

research design. The study found that attributes of WC such as period of average collection, period of average payable, and conversion of cash cycle were not the best predictors of variation in Supermarkets' financial performance. Kabuye *et al.* (2019), studied the management of WC and internal control system on the financial performance of Supermarkets in Uganda using cross-correlational and sectional research design.

The research study concluded that WC control is a crucial indicator of the financial performance of any existing enterprise. Shuvita (2019), assessed the influence of the management of WC on cash holdings of small and large in Jordan via panel data methodology. The research concluded that cash flows are the strong predictors of cash holding of firms. Kabuye *et al.* (2019) and Shuvita (2019) both are in consensus that the management of WC is a significant predictor of financial performance. However, Mtani and Masanja (2018) concluded that working capital management is an insignificant predictor of capital management in a firm. This presents a mixed finding and hence no consensus on the effects of WC control on financial performance. The preceding assessment has portrayed contextual, empirical, and conceptual gaps. To viaduct the gap of knowledge, this research seeks to find answers for the quiz on; what is the power of working capital on the financial performance of retail supermarkets in Kenya?

1.3 Research Objective

To examine the impacts of WC control on the financial performance of retail supermarkets in Nairobi County.

1.4 Value of the Study

The results of this assessment will be of help to the governance of supermarkets. This study will provide an effective and efficient way of how working capital should be

structured to maximize profits and reduce risks of liquidity. Furthermore, understanding inventory turnover, accounts receivable, and accounts payable will ensure sound management of supermarkets' financial resources. The proper management of supermarkets is essential for enhancing operational sustainability of supermarkets.

This research will be of help to both decision and policymakers. Policymakers will be skilled enough to come up with policies that will guide competent and effective WC structures in line with the financial sustainability of supermarkets. Through the findings, the management of supermarkets will identify and set up appropriate WCM policies for their entities to boost financial performance.

Findings from this research will form the future background on working capital and financial performance studies. The results will act as a reference for future studies on working capital and the financial performance of supermarkets. Moreover, it will provide a reference for academicians. This is critical in resolving the research problems and bridging its gaps.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter accentuated the theories that anchored this research. Resource-based, Agency, and Cash Conversion Cycle theory demystified this study. This section will also examine the determinants of performance in a supermarket business. In addition, the section provides comprehensive empirical reviews spanning local, continental and global studies. Furthermore, the conceptual framework and gaps will also be assessed in this chapter concerning the research.

2.2 Theoretical Framework

The research employed these theories; resource-based theory (Pfeffer & Salancik, 1978), theory of agency (Jensen & Meckling, 1976), and conversion cash cycle theory (Laughlin & Richards 1980). The theories were essential pillars of the study since it posts the applicable presupposition, relevance, and weakness. Therefore, they are revelations towards a comprehensive outcome. Briefly, it elucidates the understanding, applicability, and getting in-depth knowledge of the research predicaments, gaps, and objectives.

2.2.1 Resource-Based Theory

This was conceptualized as the capacity of a company to manage and control its internal resources efficiently so that it can remain competitive in the market (Pfeffer & Salancik, 1978). Internal resources of a firm are considered inputs that enable a firm to operate optimally. The theory presupposes that resources are valuable to a firm, hence should be maximized. The theory also assumes that resources are unique and imperfect in nature making them hard to imitate. It also presumes that resources are not substituted.

This theory has been limited by its vagueness of terminology associated with resources-based value. The lack of commonality in terms of resource-based value has received criticism from various scholars such as Foss (1998), Williamson (1999) Rugman and Verbeke, (2002). Therefore, capabilities and internal resources always determine strategic choices a firm face before making a decision that has an impact on its operations and sustainability in the competitive market. A firm ability to put more emphasis on the customer value chain, developing new products, and expanding the market is very important for the performance of any organization engaging in commercial activities.

The importance of this theory to the study relates to the optimum usage of firms' resources. This is crucial in reinforcing business productivity, customer chain, and financial sustainability. The supermarket should utilize its internal resources ranging from accounts receivable, management of cash, and management of inventory and payable accounts to enhance the value of its products and increase customer needs. Supermarkets should adapt to ever-changing market conditions through processes such as integrating, reconfiguring, and gaining and releasing resources.

2.2.2 Agency Theory

Meckling and Jensen (1976) postulated the theory to highlight power and ownership. It is based on how the governance of a company is structured to reduce conflict of interest among the participants, managers, and providers of credit. Each of these groups has a different interest in the process of running company activities. Shareholders' critical interest is the long-term sustainability and efficient running of the company to earn dividends accruing from the profitability. Managers hired as gatekeepers of the company

are mandated to run the activities of the corporate entity. The owners of the company expect managers to run the entity and fully take care of the interest of the company as expected. In reality, this is not realized because managers have interests that tend to conflict with the company's interests.

Nevertheless, this theory received criticism over a wide spectrum of shortcomings from different scholars. One of the major weaknesses that have been identified is agency conflict. Agency conflict arises when there is a difference in the interest of both the company owners and employees. They arise in the form of moral hazard, effort level, earning retention, and risk aversion. This theory is based on the assumption that a manager runs company activities by honoring the contract with the owner perfectly.

This theory is critical in understanding the basics of how supermarkets are run by appointed management. The appointed managers shall remain answerable to the owners of supermarkets and they are expected to run the activities of the company with much accountability. The accountability of the management to the owners involves reporting all activities undertaken by the supermarket fully, giving a detailed report on the performance of the supermarket, and based on the performance, the management can be rewarded or punished by company owners.

2.2.3 Cash Conversion Cycle Theory

It was postulated by Laughlin & Richards (1980) suggesting it as a dynamic pointer of liquidity. This has formed a foundation for many scholarly activities related to working capital management in textbooks and financial management education. According to Hutchison et al (2007), this theory has been operationalized to understand WCM. This

theory conceptualizes the procedure of WC from inception to the end. This is summarized as; sourcing materials, work in progress, sales of ready goods, and payment for goods and services required for production.

Besides the significance of this theory, it has setbacks. The theory generalizes the presumption for companies whereby in reality; it is cumbersome to compare sectors and a wide spectrum of industries. Moreover, faster cash conversion and shorter periods are interpreted to mean a reputable company, which may not be the case especially when the organization is disposing of some products. Further, it presupposes that the companies with greater cash flow are not prone to liquidation. Hence, it is worthwhile illustrating its chief role in enhancing the liquidity of the business.

The theory is the lifeblood of business transactions and WC. It fast-tracks how the company promotes cash flow and WCM. The business can survive adverse conditions due to prudent measures in place and the conversion of investment to inventories and finally to cash. This was important to the research because it focuses on how WCM is undertaken by organizations. The WCM in supermarkets borrows heavily from the concept of weighted cash conversion. Many scholars are in consensus that proper management of liquidity is critical to the performance of WCM in any organization, thus proper management of liquidity in supermarkets is paramount to the efficiency of their WC

2.3 Determinants of Performance of Supermarkets

The supermarkets' performance is affected by numerous factors. These factors are associated with WCM. (Ogola, 2018) illustrated that leverage and liquidity are the

cornerstone determinants of the performance of supermarkets. This study expounds on the preceding analysis by examining; inventory control, receivable accounts, payable accounts, and liquidity.

2.3.1 Inventory Management

Bin Syed et al, (2016) noted that the management of inventory encompasses agreeing on resources to be purchased, the method of procurement, the necessary amount to be bought, the supplier, and the storage method. Economic order quantity is the best tool to control inventory, which uses the principle of minimizing the totalities of the enterprise's transiting and shortage costs. Inventory efficiency is determined by evaluating the inventory turnover period. According to Brigham and Houston (2011), the period of inventory turnover is an indicator of how businesses efficiently convert inventory into sales. Investing more in inventory turnover is likely to increase the worthiness of a firm.

2.3.2 Accounts Receivable

Working capital management attributes include accounts payable, accounts receivable, cash, and inventory management (Bagh et al, 2016). The aim of a company when managing working capital is to provide a balance between profit-making and hazardous associated with a higher value of a firm. Accounts receivable are crucial figures of current assets in a firm. Furthermore, account receivable is crucial in reinforcing liquidity thereby promoting the going concern of a firm.

As noted by Murthy (2015) accounts receivable refers to trade credit that entails the selling of goods and services in exchange for payment at a later date. As a result of this, a

time interval will be created, which ranges from the supply of goods and services by the vendor and when the remission is made Caballero et al (2010). An enterprise entity that accepts sales on credit invests in its customers through lending. Therefore, credit policy control is necessary to regulate this kind of transaction hence enhancing accounts receivable. Besides enhancing cash flow, a quality credit policy promotes accounts receivable management as well as avoiding bad debts.

2.3.3 Accounts Payable

Accounts payable are very important for the control of WC because it alters the size of the firm financial needs for operationalization. Accounts payable are financial obligations that a company is supposed to meet in a short term. Embracing full utilization of trade credit by an entity can reduce both the requirements of WC and the financing activities of the firm by debt. Moreover, a firm settling financial obligations timely can benefit from the discount offered for early payments. Johnson et al (2019) pointed out that trade payable is the core origin of short-term funding. Martinez-sola et al (2013) observed that enterprises are having optimal accounts payable because of market imperfections. Nonetheless, trade payables are both beneficial and costly to the firm. Concisely, it enhances operational efficiency as well as profitability by the minimization of the transaction cost.

2.3.4 Liquidity

Liquidity relates to the firm's capacity to meet its financial responsibilities in a timely manner (Demirgüneş, 2016). Guo & Wang (2019) liquidity elaborate on how fast an enterprise can pay off liabilities concerning its current assets. Liquidity risk must be

managed to ensure that it remains financially sustainable and stable. Optimum liquidity helps retail supermarkets to meet policyholders' obligations promptly. The proportion of current assets against current liabilities was maximized to expound on liquidity.

2.4 Empirical Literature Review

Masanja and Mtani (2018) assessed the influence of control of WC on the financial performance of Supermarkets in Arusha, Tanzania using a relational research design. The study found that components of WC such as the cycle of cash conversion and period of the average collection were not the best indicators of variation in financial performance in Supermarkets. WC has a weak link with the supermarkets' financial performance. However, productive management of cash needs to be adopted to run efficiently and effectively.

Wanyoike et al (2021) studied the practices of management of WC and linked it to the performance of chosen supermarkets in Kenya maximizing the descriptive research model. The study found that the management of assets and credit had a low effect on the operations of Supermarkets. Supermarkets are commonly faced with the problem of overstocking which is caused by management's lack of attentiveness when it comes to putting up mechanisms that are proper when it comes to the management of stock movement. Supermarkets are also not keen when it comes to maintaining an account payable solid policy.

Kabuye *et al.* (2019) examined the regulation of WC and internal control systems on FP of supermarkets in Uganda using correlational as well as cross-sectional research design. The study concluded that the control of WC is a remarkable indicator financial

performance of any company. An organization with efficient WCM is probable to have desirable financial performance.

Waweru and Atheru (2022) assessed the WCM and financial performance of selected Supermarkets in Nairobi County, Kenya using the descriptive research design. Furthermore, the research established that the quick ratio had a remarkable and useful impact on financial performance. In addition, credit turnover and inventory turnover had an insignificant effect on the financial performance of supermarkets. The quick ratio indicates the capacity of the supermarket in paying its current liabilities without getting extra financing through debt or selling current inventory. However, high inventory turnover depletes supermarket profits due to ballooning expenses.

Shuvita (2019) assessed the effect of the management of WC on the cash holding of small and large companies in Jordan via a panel approach. The research is driven by the fundamental role of WC among companies in Jordan. The research concluded that cash flows are the strong predictors of cash holding of firms. Additionally, WCM, firm growth, profitability, as well as leverage, are important in describing the growth of a firm cash level.

Ibrahim and Isiaka (2021) explored a research study on WC regulation and the financial performance of non-financial quoted firms. The study was undertaken in Nigeria using a panel study design. The study concluded that the period of stock turnover and the period of accounts receivable had an undesirable effect on financial performance. In addition, payable accounts had a useful connection with the profitability of non-financial firms.

Jabbouri et al (2022) assessed the management of WC and the performance of firms in emerging markets using a generalized method of moments. The study concluded that companies should use the combative WCM method to decrease investment, reduce costs of financing and enhance financial performance. Contrary, financially stable companies keep high levels of funding in WC to improve sales and enhance financial performance.

Onsongo and Onyiego (2018) study on the impacts of practices of WCM on the financial performance of firms producing edible oil in Kenya using a descriptive survey. The research concluded that the WCM on the financial performance of edible oil producers in Kenya is the epicenter for prosperity. The research maximized descriptive survey to elaborate on the association between working capital and performance. Moreover, it indicated that effective and appropriate management of accounts payable, receivable collection, stock turnover as well as cash ratio put in place by the organization enhances growth. Companies need to hire competent managers to effectively manage WC, which has a greater effect on the performance of oil companies financially in Kenya.

Kinuthia (2015) investigated the impacts of WCM on the performance of the finances of a supermarket using a descriptive survey research design. The study's findings show days of sales inventory had a useful and insignificant influence on financial performance. Further, the days of payable outstanding had a moderate negative and remarkable impact on financial performance. Additionally, efficient management of WCM must be enhanced by increasing payable accounts without exceeding the credit limit, which in the end may hurt the financial performance of the enterprise.

Ahmed and Mwangi (2022) studied the impact of the regulation of WC and the profitability of SMEs in Garissa, Kenya, using a descriptive study design. The research ultimately that accounts receivable had an insignificant influence on financial performance (FP) while management of cash and inventory has a detrimental effect on the financial performance of these organizations. Empirically, WCM efficiency can be enhanced by cutting the turnover of the inventory and increasing the payable duration of accounts.

Empirically, Ngari and Kamau (2021) conducted a study on the WC regulation cycle and household supermarkets' profitability in Kenya. The aims of the research study were to determine the duration for receivable conversion, the duration for deferral payable, and the time of stock conversion on the household supermarkets' profitability in Kenya. The study's findings show that entities that regulate WC efficiently enjoy the benefits of long sustainability in business. Additionally, shareholders' value can be generated by; reducing account receivable days, stock inflation, delay of suppliers' payment despite ensuring good terms and lowering the conversion cash cycle days.

Waweru and Atheru (2022) assessed the WCM and FP of selected supermarkets in Nairobi County. The particular goals were to assess the impacts of quick ratio, credit turnover, and inventory turnover on the financial performance of supermarkets in Nairobi. The study found that the quick ratio had a significant positive effect on Nairobi's supermarket's financial performance. In addition, credit turnover and inventory turnover had insignificant effects on Nairobi's financial performance.

2.5 Conceptual Framework

The framework concept elucidates the link between regressor and regressed factors. It is a schematic representation that exemplifies the association in a snapshot. The predictor factors in this study are inventory management, payable account, receivable account, and liquidity and on the other end, the regressed factor is financial performance.

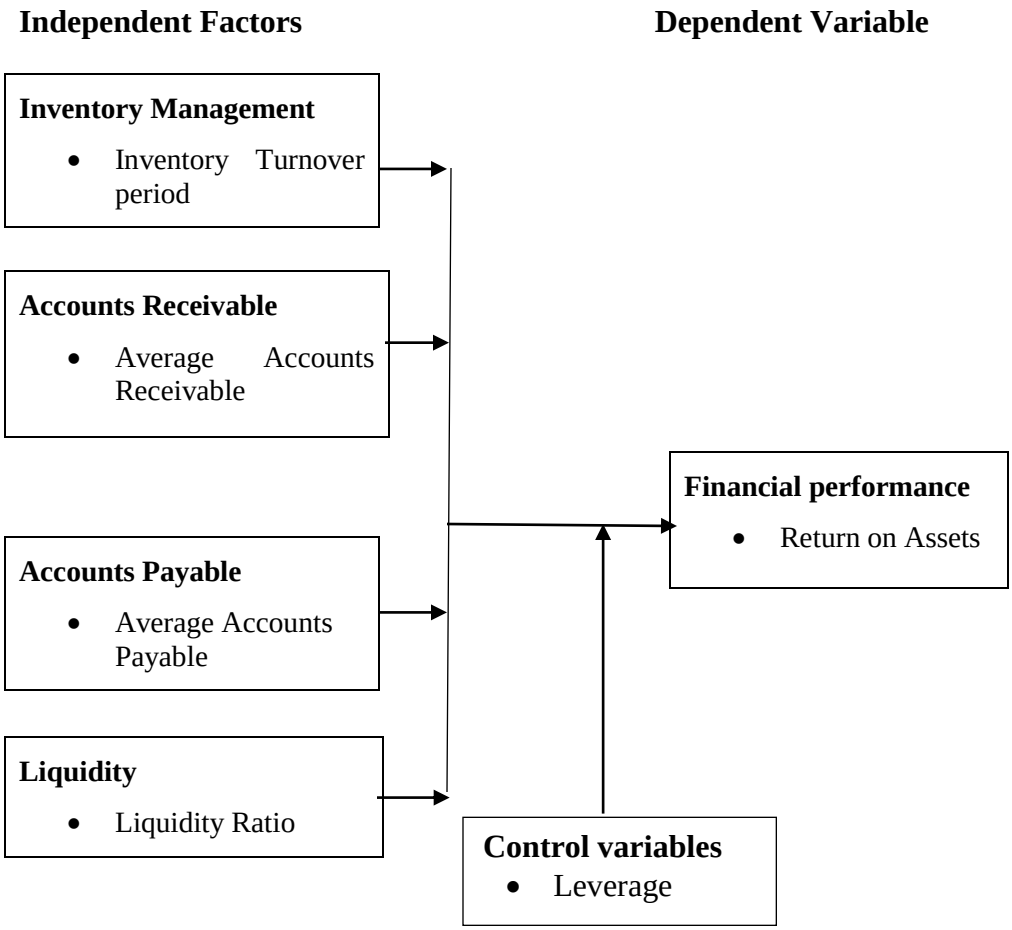


Figure 2.1: Conceptual Framework

Table 2.6 Summary of Gaps

Author &Year	The focus of the study	Research Gap	Focus on the current study
Kabuye et al (2019)	Internal control system and management of WC on the financial performance of supermarkets in Uganda	The study concluded that working capital regulation is a crucial indicator of FP contradicting findings by Wanyoike *et al.* (2021) and Waweru and Atheru (2022) who found that cash flow had a useful and remarkable impact on the financial performance while accounts payable and inventory turnover had a minimal or negative effect on the FP	The research will try to investigate the inconsistencies regarding this finding.
Mtani and Masanja (2018)	Effect of governance of WC on the FP of supermarkets in Arusha, Tanzania	The research gave a contradicting finding that the control of WC had no impact on the financial performance unlike Wanyoike et al (2021) and Kabuye et al (2019) who concluded that working capital had a remarkable effect on the performance of the finance	The research will show the influence of the governance of WC on the FP of Supermarkets
Onyiego (2018)	Impacts of practices of control of WC on the financial performance of firms producing edible oil in Kenya using descriptive.	The study failed to establish the association between cash flow governance, inventory turnover, accounts payable, and accounts receivable on the achievement of finance	This research will develop the connection between inventory turnover, accounts receivable, management of cash flow, and accounts payable financial performance using a panel regression model.
Kinuthia (2015)	Impact of control of working capital on the achievement of finance of supermarket.	The research failed to develop the effect of accounts payable on Supermarkets' financial achievement.	This research aims at establishing the link between inventory controls, governance of cash flow, accounts receivable and payable on the performance of Supermarkets financially.
Ahmed and Mwangi (2022)	Impact of management of working capital and achievement of both small and medium companies in Garissa, Kenya	The research failed to determine the impact of accounts payable on financial performance.	This research will be interested in establishing all causal factors of the working capital financial performance.
Shuvita (2019)	Effect of management of working capital on cash holdings of small and large enterprises in Jordan.	The assessment did not establish a connection between accounts receivable and payable as well as the management of inventory on the company's financial performance.	This study will establish the relationship between all determinants of working capital on performance linked to finance.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This part presented a technique that was applied to research the influence of WC on the FP of supermarkets in Nairobi. In particular, this part explained the design of the research, research population, sampling as well as techniques of sampling, data collection, and procedures of examination of data.

3.2 Research Design

This is a plan that allows the analyst to think of remedies to difficulties. Furthermore, it permits the navigation in the techniques of gathering the relevant data, examination, interpretation as well as recommendation (Bell, Bryman & Harley, 2018). The research adopted the Correlation design of the study. This design intends to accurately and systematically describe a situation or population. It can give answers to how, when, and where questions except why questions (Erickson et al, 2017).

Correlation research designs are appropriate when investigating the relationship among determinants. Dissimilar to experimental research, the analyst does not influence any of the determinants but only views carefully and moderates them. The correlation research design was also employed by Mtani and Masanja (2018) who assessed the influence of WC on performance linked to the finance of supermarkets in Arusha City-Tanzania. The correlation research design was also adopted by Hidaya (2014) in the study on the linkage between the WCM and the financial performance of supermarkets in Nairobi.

3.3 Target Population

The population is explained as a set of individuals, data, and even objects with similar traits (Mugenda, 2010). The research focused on 13 supermarkets in Nairobi from 2016 to 2021. In some cases, WCM has been on the decline in the last five years implicating the financial performance of supermarkets. Over a similar period, some supermarkets have closed down due to illiquidity, ranging from being unable to pay suppliers to empty stocks in the shop. The declining financial performance has been attributed to inefficient WCM by supermarkets across Nairobi.

3.4 Data Collection Procedures

The research collected secondary data. The information for the study was obtained from the Supermarket reports of finance from 2016-2021. The data to be collected include inventory turnover, accounts receivable average, account payable average, and liquidity ratio as the independent variables, and the financial performance of supermarkets epitomizing ROA as the predictor variable.

3.5 Data Analysis

Longnecker and Ott (2015), explain this as a method for compressing and examining the data to come up with results that need translation and explanation. In addition, data was analyzed through SPSS. During data examination, descriptive and inferential examinations were done. The descriptive tests involved the mean, minimum, maximum, and deviation standard. In addition, panel regression will be employed to determine the linkage between the WCM and the financial performance of supermarkets in Nairobi County.

3.5.1 Diagnostic Tests

Before estimating the panel model, the following diagnostic tests will be tested. They include the Hausman test, multicollinearity, serial autocorrelation, heteroscedasticity, and normality. Hausman's specification assessment (1978) maximized to determine if random or fixed effects should be utilized. In case of rejecting the null hypothesis, then the unsystematic influence is appropriate for estimation in other ways if denial of the null hypothesis is, fixed impact approximation will give a better or more appropriate approximation of betas. In the case of the Hausman, assessment denies the null hypothesis, consequently, a verdict is taken to utilize a set influence approach otherwise the random model is used.

Variance Inflation Factors (VIF) was used to check for multicollinearity. Severe multicollinearity is not desirable in data as it can distort the accuracy of parameter estimates. VIF values>5 imply the presence of severe multicollinearity while VIF values<5 imply the presence of multicollinearity.

The indication of autocorrelation shows that the factors in the approach violate the regression's assumptions (Wooldridge, 2002). Wooldridge assessment for autocorrelation was employed to examine serial correlation. The null hypothesis of this assessment is that information has no autocorrelation. If the autocorrelation is highlighted in the panel of data, then the Feasible Generalized Least Squares estimation is employed. The p-figure of > 0.05 indicates the absence of autocorrelation.

To examine heteroscedasticity, utilization of the Breusch-Pagan/Godfrey is required. The null hypothesis of this evaluation was homoskedastic. Where the null hypothesis is

denied then the summary is that heteroscedasticity is present in the panel of data, thereafter accounted for by using a Feasible Generalized Least Squares model. If the p-figure is <0.05, heteroscedasticity is present; if the p-figure is >0.05, heteroscedasticity absent.

3.5.2 Analytical Model

In case of missing data, an unbalanced panel model will be employed. The model to be estimated is;

$Yit= \alpha+ \beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\varepsilon$ …….……3.1

Where: Y = financial performance of retail supermarket i at time t (ROA)

X_1 = turnover Inventory of supermarkets i at time t (Cost of goods sold/Average Inventories)

X_2 = Accounts receivable average of supermarkets i at time t (Net credit sales/average account receivable)

X_3 = Accounts payable average of supermarkets i at time t (Total purchases/Average Payables)

X_4 = Liquidity of supermarkets institutions i at time t (Current Asset/Current Liabilities)

t = Time period (2016-2021)

i= Name of Supermarket

ε =error term

α =y intercept of the regression equation.

β_1, β_2, β_3, and β_4, = regression slope

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION OF RESULTS, AND DISCUSSION

4.1 Introduction

The chapter reviews the computed results after analyzing data comprehensively. The dataset is presented, concluded, and interpreted. The secondary data garnered was subjected to intensive quantification and calculation via SPSS to elucidate the meaningful and extensive answers to the research question. Therefore, descriptive and correlation analyses have been maximized to give in-depth detail. Additionally, the inferential outcome nails the assessment to give an understandable perspective. Finally, the study initiated a mathematical model useful in forecasting.

4.2 Descriptive Statistics

Researchers expedite the descriptive statistics that unveil the summary of the dataset. It disposes of the minimum, maximum, mean, and standard deviation. The resulting value portrayed that the least value collected on return on assets was 0.0194 while its highest value was 0.4912. The minimum value of the inventory turnover ratio recorded in the period was 2.6358 while the maximum value was 8.9021. Further, the descriptive computation posted the lowest and highest account receivable accounts of 3.0741 and 7.3116 respectively. In addition, the minimum average payable in the accounts was 3.2765, and the maximum of 4.1925. The liquidity ratio also posted a range running from 0.0569 and 0.2559. The condensed output has been tabulated in table 4.1.

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return on assets	78	.0194	.4912	.091467	.0718216
Inventory Turnover period	78	2.6358	8.9021	5.371135	1.9230581
Average receivable accounts	78	3.0741	7.3116	5.142660	1.2070871
Average of payable accounts	78	3.2765	4.1925	3.960803	.2024475
Liquidity Ratio	78	.0569	.2559	.109473	.0491993
Valid N (listwise)	78				

4.3 Correlation Analysis

The investigation executed the correlation analysis to present the association among variables. Therefore, it is fundamental in accentuating the price degree and direction of correlation. The computation is pivotal in detecting the movement pattern of the variable in explaining other variables. The rule of correlation ranges from a strong positive correlation to a strong negative correlation. It distinguishes the pattern and disparate thread thereby nailing the association which may not exhibit relation on their surface.

The correlation metrics create an in-depth insight into interdependencies. In that case, it assists the detection of abnormalities, filtering, and elimination of duplication. From the findings, the inventory turnover ratio has a negative correlation towards the predicted variable as depicted by ($r=-0.017$, $p=0.885$) while the account receivable average, account payable average, and liquidity ratio have a positive relation towards the Return

on assets. The account receivable average has (r=0.002, p=0.989), account payable average (r=0.145, p=0.204), and liquidity ratio (r=0.435, p=0.000) towards the regressed variable.

Table 4.2 Pearson Correlation

Correlations

		Return on assets	Inventory Turnover ratio	Account receivable average	account payable average	Liquidity Ratio
Return on assets	Pearson Correlation	1	-.017	.002	.145	.435**
	Sig. (2-tailed)		.885	.989	.204	.000
	N	78	78	78	78	78
Inventory Turnover ratio	Pearson Correlation	-.017	1	-.057	-.151	-.086
	Sig. (2-tailed)	.885		.619	.186	.454
	N	78	78	78	78	78
Account receivable average	Pearson Correlation	.002	-.057	1	-.083	-.104
	Sig. (2-tailed)	.989	.619		.473	.363
	N	78	78	78	78	78
account payable average	Pearson Correlation	.145	-.151	-.083	1	.176
	Sig. (2-tailed)	.204	.186	.473		.124
	N	78	78	78	78	78
Liquidity Ratio	Pearson Correlation	.435**	-.086	-.104	.176	1
	Sig. (2-tailed)	.000	.454	.363	.124	
	N	78	78	78	78	78

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

4.4 Diagnostic test

The diagnostic analysis comprises three major tests the Normality test, Multicollinearity, and autocorrelation. The proper analysis aids in the detection of problems that may impair the research findings. It is complex, procedural, far-reaching, and collaborative that encompasses the determination of exactitude, analytical reasoning, and assembling meaningful information. The failure to assess and detect any research error translates to inaccurate, misleading, and wrong inferences.

4.4.1 The Normality Test

In this research study, the researcher utilized the Q-Q plots to interpret the nature of the data on whether it was collected from a normal population or not.

4.4.1.1 Return on Assets

As seen from the table below, most of the data lie along a straight line. This implies that the return on assets data was obtained from a normal distribution.

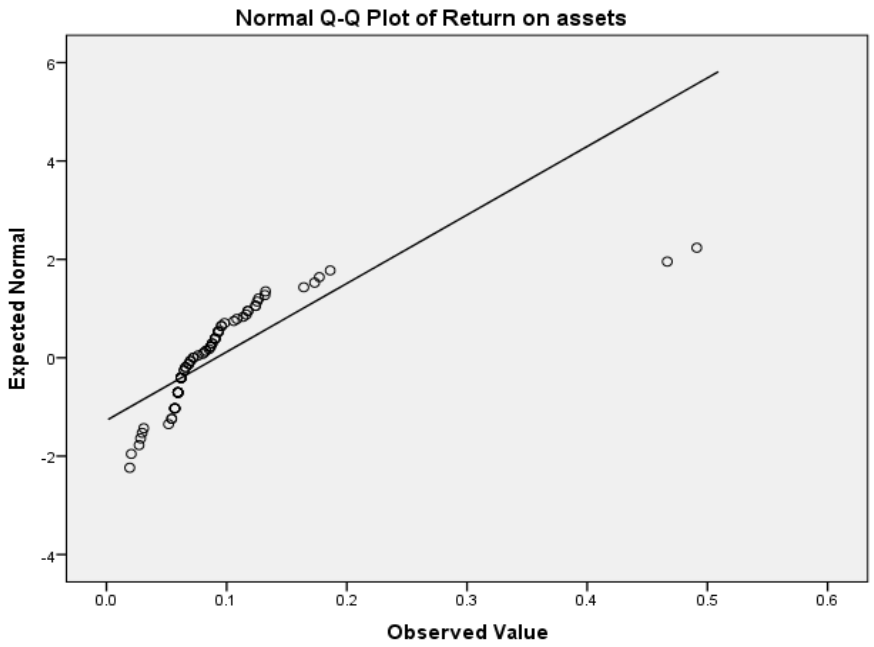


Figure 4.1 Return on Asset

4.4.1.2 Inventory Turnover Period

The inventory turnover period observation lies approximately on a straight line implying that the data was normally distributed.

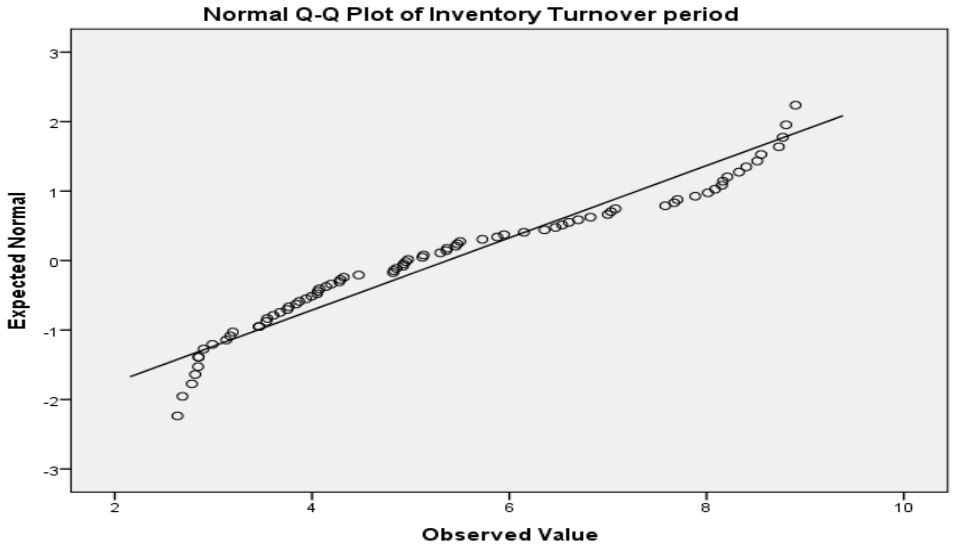


Figure 4.2 Inventory Turnover Period

4.4.1.3 Average Accounts Receivable

The observation is distributed along a straight line imposing that the data was normally distributed.

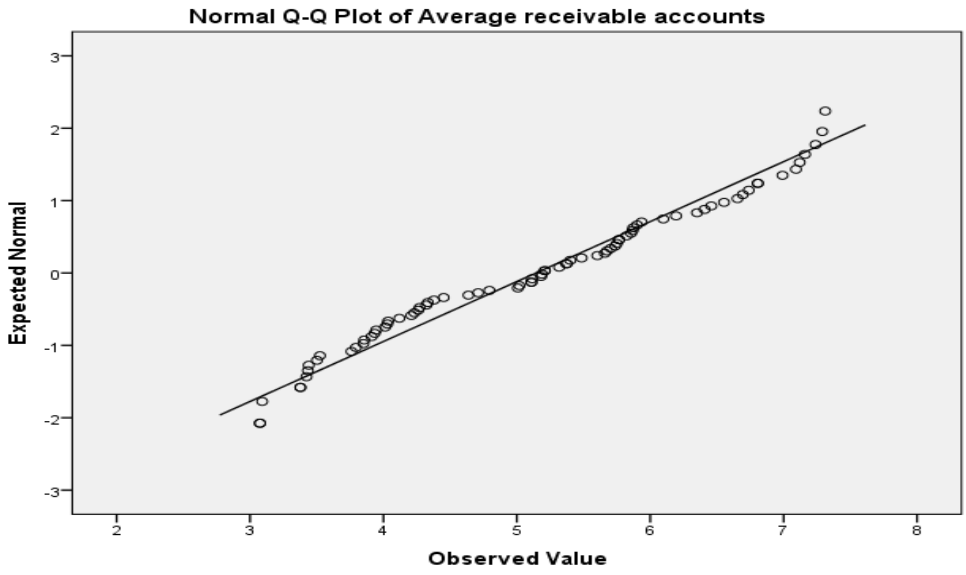


Figure 4.3 Average accounts receivable

4.4.1.4 Average of Payable Accounts

Most of the observations in this table lie within a straight line. This also implies that most of the data set was obtained from a normal distribution.

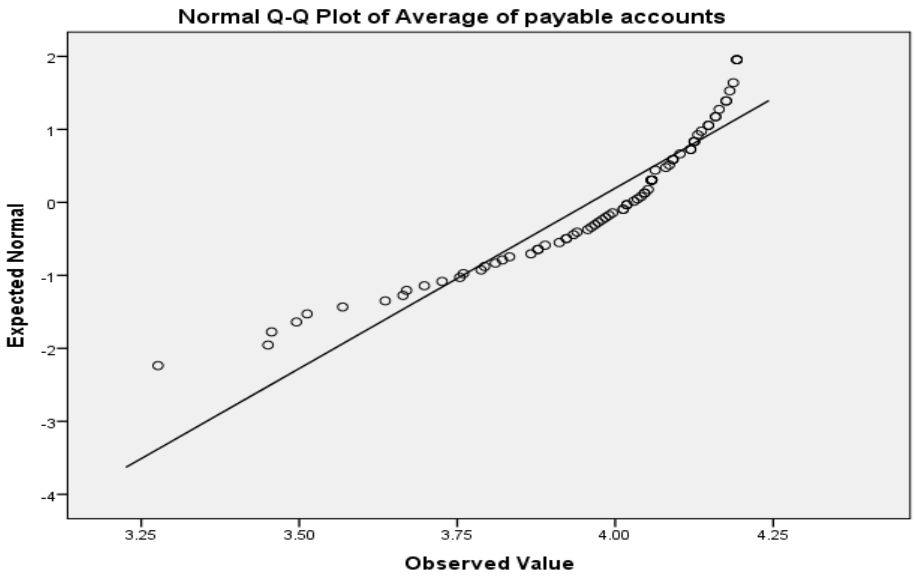
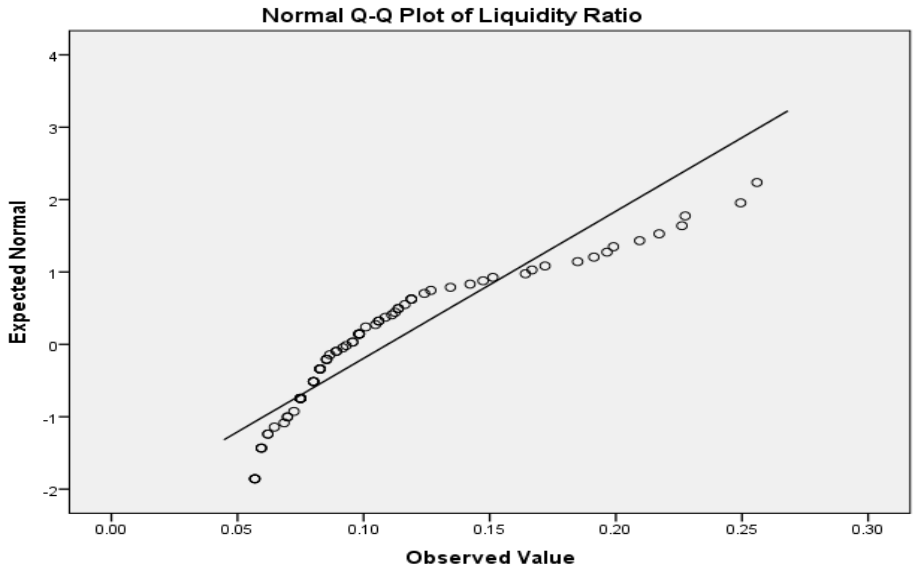


Figure 4.4 Average Account Payable

Figure 4.5: Liquidity Ratio



The observations are distributed along a straight line. This indicates that the data was normally distributed.

4.4.2 Multicollinearity

The multicollinearity test was carried out to investigate if the regressor variables in this research study had multicollinearity biasness. The VIF and the Tolerance values were maximized in this section. If the Tolerance values are greater than 0.2 and VIF values are less than 10, then there is no existence of a multicollinearity problem. In cases of tolerance figure recording less than 2 and the VIF figures beyond 10, then the explanatory variables proclaimed manifest a multicollinearity obstruction. In the outcome below, Inventory Turnover Period, Average Account Receivable, Average of Payable Accounts, and Liquidity Ratio presents Tolerance values greater than 0.2 and VIF values less than 10, implying that the predictor variable does not express existing association. Simply put, the results were posted to reveal the absence of multicollinearity.

Table 4.3: Multicollinearity Analysis

Model		**Collinearity Statistics**	
		Tolerance	**VIF**
	(Constant)		
	Inventory Turnover period	.968	1.033
1	Average receivable accounts	.979	1.021
	Average of payable accounts	.945	1.058
	Liquidity Ratio	.957	1.045

4.4.3 Autocorrelation

The autocorrelation test instantiates the magnitude of the closeness of variables in the varying timeframe. Hence, it is necessary for the specification of non-randomness in the dataset. Its chief latitude on the identification of the degree of oscillation between -1 to

+1. It was executed in this undertaking to find out how the preceding subsequent data in the dataset relates to the original data. The Durbin-Watson value obtained under the model summary is a test of autocorrelation. From tabulation 4.4 below, the Durbin-Watson value is 2.058. This value lies within the required range of the Durbin-Watson values it indicates a negative autocorrelation.

Table 4.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.445[a]	.198	.154	.0660694	2.058

a. Predictors: (Constant), Liquidity Ratio, Inventory Turnover period, Average receivable accounts, Average of payable accounts

b. Dependent Variable: Return on assets

4.5 Regression Analysis

The regression analysis is the area addressing the core aim of the study. It strives immensely to elaborate sensitivity stemming from predicted and predictor variables. The regression computation process permits the study to confidently analyze the factors. The regression method is vital for yielding valuable, actionable, and credible insight. It is a recipe for informed decision-making, allocation of resources, and efficiency.

4.5.1 Model Summary

The summary is pivotal in the determination of factors having influence. Hence decisions on factors that matter most are critically analysed via powerful statistical techniques posting the correlation. The chief mandates of the model summary are manifold. From the tabulation generated, it articulated an R (correlation coefficient) of 0.445. This proclaims that there was a 44.5% correlation among the study variables. The coefficient

of determination from the table was 0.198. This posted that 19.8% of changes in the variation of the Return on assets was caused by Liquidity Ratio, Inventory Turnover period, Average receivable account, and Average payable accounts. The remaining 80.2% of the variation in return on assets was caused by other factors not captured in this study.

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.445[a]	.198	.154	.0660694	2.058

a. Predictors: (Constant), Liquidity Ratio, Inventory Turnover period, Average receivable accounts, Average of payable accounts

b. Dependent Variable: Return on assets

4.5.2. ANOVA

The ANOVA was substantial for a multidimensional perspective. Besides being meaningful in the different groupings, it is an important tool for comparing the population. Grounded on this investigation, the sum of squares for regression is 0.079 and mean squares of 0.020 with 4 degrees of freedom. The sum of squares for residual is 0.319 with the mean square of 0.004 under 73 degrees of freedom. The significance level is 0.003 with an F statistic of 4.498. This significance level is less than the p-value of 0.05 implying that the model generated was statistically significant.

Table 4.6 ANOVA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.079	4	.020	4.498	.003[b]
	Residual	.319	73	.004		
	Total	.397	77			

a. Dependent Variable: Return on assets

b. Predictors: (Constant), Liquidity Ratio, Inventory Turnover period, Average accounts receivable, Average accounts payable

4.5.3 Coefficient of Determination

From Column B computation, if all the other enablers are held unchanged, the return on asset is negative 0.113 predicting that the ROA stands at 11.3%. More so, a single unit and positive adjustment of the inventory turnover period results in an increment in ROA by 0.1% if other enablers are kept unchanged. In addition, the advancement in a singular unit of average accounts receivable causes a minimal positive impact of 0.3% on ROA whenever other factors are held unchanged. Further, the addition of just one unit of average accounts payable triggers an increment in ROA by 2.8% if other variables are maintained unchanged. Finally, a unitary increment of liquidity causes substantial positive advancement in ROA by 62.7% only if remnant factors are kept constant. The precision is well articulated in table 4.7 below.

Table 4.7 Coefficient of Determination

Coefficients									
Model	**Unstandardized Coefficients**		**Standardized Coefficients**		**Sig.**	**95.0% Confidence Interval for B**		**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**	**Tolerance**	VIF
				T					
(Constant)	-.113	.161		-.704	.0048	-.434	.208		
Inventory Turnover period	.001	.004	.036	.333	.00740	-.007	.009	.968	1.033
1 Average Account Receivable	.003	.006	.055	.520	.0065	-.009	.016	.979	1.021
Average of Account Payable	.028	.038	.080	.741	.0046	-.048	.105	.945	1.058
Liquidity Ratio	.627	.156	.429	4.006	.000	.315	.939	.957	1.045

a. Dependent Variable: Return on assets

With these findings, researchers came up with a mathematical formula;

$\mathbf{Y= -0.113+ 0.001X_1+0.003X_2+0.028X_3 + 0.627X_4+\varepsilon}$

Where by:

Y = financial performance of retail supermarket i at time t (ROA)

$\mathbf{X_1}$ = turnover Inventory of supermarkets i at time t (Cost of goods sold/Average Inventories)

$\mathbf{X_2}$ = Accounts receivable average of supermarkets i at time t (Net credit sales/average account receivable)

$\mathbf{X_3}$ = Accounts payable average of supermarkets i at time t (Total purchases/Average Payables)

$\mathbf{X_4}$ = Liquidity of supermarkets institutions i at time t (Current Asset/Current Liabilities)

ε =error term

4.6 Discussion

From the descriptive statistics, the dependent variable ROA exhibited a mean of 0.091467 and a standard deviation of 0.0718216. The inventory Turnover period recorded a mean of 5.371135 and a standard deviation of 1.9230581 over the 2016-2021 period. The findings further showed that average accounts receivable and average accounts payable in that study period posted means of 5.142660 and 3.960803 with a standard deviation of 1.2070871 and 0.2024475 respectively. The liquidity ratio registered a mean of 0.109473 and 0.0491993 standard deviations. According to Bell, Bryman, and Harley (2018) descriptive and inferential are chief pointers of the research. The maximization enhances the conclusive outcome.

The diagnostic analysis was prompted to avoid biases and inaccurate and misleading by-product. The normality test on the data showed that the observations were obtained from a normally distributed population. Additionally, the independent variables in this research study had no multicollinearity issue as shown by the greater than 0.2 tolerance values and less than 10 for VIF values. The Durbin-Watson value of 2.058 indicated a negative correlation among the dataset. This value also lay within the required range of the Durbin Watson. The study concurred with Ibrahim and Isiaka (2021) postulation that quality findings should be free from abnormalities and multicollinearity obstruction. Ngari and Kamau (2021) advocated for comprehensive scrutiny of the nature of data.

The computation illustrates that all the chosen predictor variables correlated positively with ROA. It is imperative to present that when all factors remain unchanged, the ROA is negative at 11.3%. In addition, a positive change in the inventory turnover time translates to an increase in ROA by 0.1 when all factors are unchanged. Furthermore, the

advancement in a single unit of average accounts receivable causes a positive increase of 0.3% in ROA whenever all factors are kept constant. Furthermore, the increment of a singular unit of average accounts payable translates to a 2.8% increase in ROA, all factors constant. Lastly, a unitary advancement on one unit of liquidity is fundamental for the positive increase in ROA by 62.7% all other determinants held constant. The precision is summarized as;

$$\mathbf{Y= -0.113+ 0.001X_1+0.003X_2+0.028X_3 + 0.627X_4+\varepsilon}$$

The outcome is inconsistent with Waweru and Atheru (2022) postulation that working capital impacts financial performance positively yet insignificantly. Nonetheless, it demystified the movement in the opposite direction for both credit turnover and inventory turnover verse profitability though insignificant. Ngari and Kamau (2021) on the other side, illustrated the benefits of prudential working capital for longevity sustainability. Kinuthia (2015) advocated for increasing the payable account period to the optimum to enhance performance. More so, Onsongo and Oyiego (2018) summarized that cash ratio, stock turnover, receivable accounts, and accounts payable enhance profitability hence concurring with these findings.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter is fundamental in epitomizing the results, summarizing the epigrammatic discussion, recommending the pivotal mechanisms, and pinpointing the section for widening the assessment. Arbitrarily, it accentuates critical knowledge grounded on the outcome. Additionally, it adds up the resolution process and addresses the issues adequately and substantially. It seeks to highlight, aggravate and broaden the outcome through expeditious problem-solving.

5.2 Summary of the Research

The study delves into WCM and the financial performance of supermarkets. The dataset was assembled from individual supermarket records. The compacted findings aid the discussion and suggestions. The descriptive statistics presented a factual proposition of mean and standard deviation. In addition to that, the presentation of the greatest and lowest value explained the range. ROA recorded the lowest value of 0.0294 and the highest of 0.4912. The inventory turnover posted the least value of 2.6358 while a maximum of 8.9021. The account receivable had 3.0741 and 7.3116 for the lowest and highest figures respectively. The account payable recorded the least of 3.2765 and a maximum figure of 4.1925.

The diagnostic analysis cleared the assessment for the continuation of more calculations. This is because the dataset computation exempted it from multicollinearity distractions while freeing it from the autocorrelation problem and portraying the normal distribution. Additionally, the study adhered to the normal distribution stipulation. Bell, Bryman, and

Harley (2018) conclude that the absence of diagnostic problems creates an avenue for quality and exhaustive outcomes.

The correlation gave a prompt outlook of the association. The R-value was 0.445 and the R-Square was 19.8% thereby postulating that deviation in ROA was triggered by Liquidity, Inventory Turnover Period, Average Receivable Accounts, and Average Account Payable. The remnant 80.2% relates to varying changes correlated with enablers not factored in the study. The findings offer crucial pointers on the determinants of ROA. Waweru and Atheru (2022) posit that quality research exhibit a joint association between the predictor and predicted variable. This is consistent with Onsongo and Oyiego (2018) opinion that the enabling variable is the cause of deviation in the regressed variable.

5.3 Conclusion

The conclusion is a cardinal discourse for the summation of the outcome. Therefore, the calculated deduction and inference are ratified to inform sound judgment. Empirically, the Pearson correlation posts the degree of interdependencies and nature of correlation. From the outcome, the inventory turnover ratio impacted ROA insignificantly though negatively as depicted by (r=-0.017, p=0.885). Additionally, account receivable average, account payable average, and liquidity ratio have a positive relation towards ROA. The account receivable average possesses (r=0.002, p=0.989), account payable average (r=0.145, p=0.204), and liquidity ratio (r=0.435, p=0.000) towards the predicted variable. The study agrees with Ibrahim and Isiaka (2020) that ROA is correlated with working capital management.

The four predictor variable considered for this exploration is the lifeblood of ROA. From the in-depth overview, an adjustment in each variable translated to changes in ROA. It is imperative to note that supermarket autonomous value is negative 11.3% hence coining that when all things are unchanged, the supermarkets are making losses. Hence, liquidity, inventory turnover, accounts payable, and accounts receivable are the game-changers. This concurs with Onsongo and Oyiego (2018) as well as Ngari and Kamau (2021) position that working capital management enhances business profitability, sustainability, and longevity of operation.

In general, the coefficient of determination is distinct that whenever all factors are maintained unchanged, the ROA is negative 0.113 hence portraying a loss-making scenario. The unitary increase in the inventory turnover period is pivotal for the advancement of ROA by 0.1%. Moreover, the change by one unit of average account receivable translates to the positive escalation of ROA by 0.3% all factors constant. A single advancement of accounts payable by one unit is replicated through a change in ROA by 2.8% when other enablers are kept unchanged. Lastly, the positive adjustment of liquidity is vital for the positive advancement of ROA by 62.7% if all determinants are held stable and constant.

$$\mathbf{Y= -0.113+ 0.001X_1+0.003X_2+0.028X_3 + 0.627X_4+\varepsilon}$$

Where by:

Y = financial performance of retail supermarket i at time t (ROA)

$\mathbf{X_1}$ = turnover Inventory of supermarkets i at time t (Cost of goods sold/Average Inventories)

$\mathbf{X_2}$ = Accounts receivable average of supermarkets i at time t (Net credit sales/average account receivable)

$\mathbf{X_3}$ = Accounts payable average of supermarkets i at time t (Total purchases/Average Payables)

$\mathbf{X_4}$ = Liquidity of supermarkets institutions i at time t (Current Asset/Current Liabilities)

ε =error term

5.4 Recommendation

The findings postulated that the entire predictor variable affected the ROA of the supermarkets in Kenya positively. Subsequently, the supermarkets should incorporate a monitoring system that guides the organization on the payment plan, and period and alert the supplier and supermarket. The business financial analyst can pinpoint the adequate liquidity level and advise the business to maximize that. This will ensure that assets, investments, and equity are optimized wholly and fully. Sufficient liquidity control mechanisms are the roadmap for the going concern of the supermarket without major calamities. The comprehensive inspection should be followed by a forensic accounting mechanism that gives a red alert to the supermarket for going beyond the threshold.

Besides engaging assets, the liabilities should be managed to increase the productivity of the business. The supermarket should promote creativity and promote aggressive working capital that is commensurate to the ROA. The risk mitigation strategies should be

enhanced to counter any emanating challenge that drives the supermarket to business oblivion.

Liquidity can be promoted through cost-cutting and eliminating costly sections that are not beneficial both in the short and long run. The prudent management of inventory ensures availability on time and swiftly. This protects the supermarket from shortages and unanticipated negative changes. The quality framework can be designed to aid purchases and sourcing of inventory just when required. This assessment proposes for managerial framework guiding the account receivable, accounts payable, liquidity, and inventories. The supermarket faces unique opportunities and predicaments and there is demand for policies that enhance profit making. The supermarket should have uniform reporting standards to promote the comparison and monitoring of performance.

Supermarkets are critical in economic prosperity, investment, purchasing of raw materials, and utilization. The staff should be well-compensated for surpassing the targeted days set by the credit control section and affirmed by the senior manager. The quality policy for collecting credit enhances adherence to business practices. The study recommends for series of techniques that are applied concurrently to lessen the firm losses, and bad debts but create the ideal and optimum average collection. The policies that boost sales, aid the account receivable, and fuel the beneficial liquidity can be initiated. The just-in-time, avoidance of too much stocking, striking a balance on beneficial collection and payment period. Moreover, bargaining for a longer account repayment period while advancing for a short period of receiving cash is highly beneficial to the supermarket.

5.5 Limitations

The study restricted the data sourcing to the secondary method. The pivotal metrics that met the research threshold and validity were considered and incorporated. Hence, the study did not factor in the primary sourcing of the dataset which can be cardinal for the research. Further study can incorporate both quantitative and qualitative data to upgrade extensive findings. Most crucial, the utilization of content analysis and quantitative computation can be factored in to absorb both dimensions of methodology.

Moreover, the study concentrated on the supermarket and did not pursue other commercial and non-commercial sectors of the economy. Cross-checking all sectors of the economy can deepen and widen the insight. The generalization applies to the supermarket therefore an extensive analysis of all the sectors. This is essential for making critical decisions and advancing comprehension.

5.6 Suggestion for Further Study

This investigation proposes a replicated study for commercial banks. The study will be cardinal in defining the nature and variation of working capital. Further investigation can consider the working capital and financial sustainability of manufacturing firms. The study will highlight critical areas to exemplify the knowledge. Consequently, the study of working capital management and ROE of SMEs can enhance the understanding.

The study advocates for the assessment of the effect of the working capital technique on the financial sustainability of businesses. The study will be crucial in scrutinizing the effectiveness and efficiency aided by adequate balance-check of working capital. Importantly, the analysis of the effect of specific control techniques on profitability is the nerve center for improving structures, policies, strategies, and core values.

REFERENCES

Ahmed, A. Y., & Mwangi, L. W. (2022). Working Capital Management and Financial Performance of Small and Medium Enterprises in Garissa County, Kenya. *International Journal of Current Aspects in Finance, Banking, and Accounting*, *4*(1), 56-71.

Angadi, P. V., Hemani, S., Prabhu, S., & Acharya, A. B. (2013). Analyses of optometric sexual dimorphism and sex assessment accuracy on a large sample. *Journal of Forensic and Legal Medicine*, *20*(6), 673-677.

Bagh, T., Nazir, M. I., Khan, M. A., Khan, M. A., & Razzaq, S. (2016). The impact of working capital management on firms' financial performance: evidence from Pakistan. International Journal of Economics and Financial Issues, 6(3), 1097-1105.https://www.econjournals.com/index.php/ijefi/article/view/2234

Baños Caballero, S., García Teruel, P. J., & Martínez Solano, P. (2010). Working Capital management in SMEs. Accounting & Finance, 50(3), 511-527.https://doi.org/10.1111/j.1467-629X.2009.00331.x

Bell, E., Bryman, A. and Harley, B., 2018. Business research methods. Oxford university press.

Bin Syed, S. J. A. N., Mohamad, N. N. S., Rahman, N. A. A., & Suhaimi, R. D. S. R. (2016). A study on the relationship between inventory management and company performance: A case study of the textile chain store. Journal of Advanced Management Science, 4(4), 299-304.https://doi.org/10.12720/joams.4.4.299-304

Brigham, E. F., & Houston, J. F. (2011). Study Guide for Brigham/Houston's Fundamentals of Financial Management, (7thEd.). Boston, United States: Cengage Learning.

Chesula, O. W., & Nkobe, K. D. (2018). Analyzing the Course of Turmoil in Kenya's Retail Sector.

Cytonn (2020) Kenya retail sector. Available at https://cytonn.com/topicals/kenya-retail-sector-report-2020 accessed on 06/05/2022

Deloitte and Planet Retail (2012). Hidden Cities: The next generation of Retail Markets. It was accessed on 11/05/ 2022 at WWW2.deloitte.com.

Demirgüneş, K. (2016). The effect of liquidity on financial performance: Evidence from Turkish retail industry. *International journal of economics and finance*, *8*(4), 63-79.

Erickson, J. S., Shriver-Lake, L. C., Zabetakis, D., Stenger, D. A., & Trammell, S. A. (2017). A simple and inexpensive electrochemical assay for the identification of nitrogen-containing explosives in the field. *Sensors*, *17*(8), 1769

Fatihudin, D. (2018). How measuring financial performance. *International Journal of Civil Engineering and Technology (IJCIET)*, *9*(6), 553-557.

Foong, S. Y., & Idris, R. (2012). Leverage, product diversity, and performance of general insurers in Malaysia. *The Journal of Risk Finance.* Vol. 13 No. 4, pp. 347-361

Gajjar, D. (2013). Ethical consideration in research. *Education*, *2*(7), 8-15.

Gentry, James A., R. Vaidyanathan, and Hei Wee Lee, "A Weighted Cash Conversion Cycle," Financial Management, spring 1990, pp 90-99.

Guo, L., & Wang, Z. (2019). Ratio analysis of J Sainsbury plc financial performance between 2015 and 2018 in comparison with Tesco and Morrisons. *American Journal of Industrial and Business Management*, *9*(2), 325-341.

Ibrahim, U. A., & Isiaka, A. (2021). Working Capital management and financial performance of non-financial quoted companies in Nigeria. *International Journal of Research in Business and Social Science (2147-4478)*, *10*(3), 241-258.

Jabbouri, I., Satt, H., El Azzouzi, O., & Naili, M. (2022). Working Capital management and firm performance nexus in emerging markets: do financial constraints matter? *Journal of Economic and Administrative Sciences*.

Johnson Jr, J., Haueter, E. S., & McLaughlin, J. (2019). Corporate finance and the securities laws. New York, United States: Aspen Publishers.https://www.freewritings.law/wp-content/uploads/sites/24/2020/12/Corporate-Finance-and-the-Securities-Law-Overview.pdf

Kabuye, F., Kato, J., Akugizibwe, I., & Bugambiro, N. (2019). Internal control systems, working capital management and financial performance of supermarkets. *Cogent Business & Management*.

Kanji, J. M. (2017). *Effect of Working Capital On Financial Performance of Service Firms Listed at The Nairobi Securities Exchange* (Doctoral dissertation, University of Nairobi).

KEPSA (2021) available at https://kepsa.or.ke/accelerating-circular-economy-for-the-retail-chain-in-kenya/ accessed on 07/05/2022

Kinuthia, J. N. (2015). *The effects of working capital management on the financial performance of retail supermarkets in Nairobi County, Kenya* (Doctoral dissertation, University of Nairobi).

KNBS (2020) Economic survey. Available at https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf accessed on 06/05/2022

Le, H. L., Vu, K. T., Du, N. K., & Tran, M. D. (2018). Impact of working capital management on financial performance: The case of Vietnam. *International Journal of Applied Economics, Finance, and Accounting*, *3*(1), 15-20.

Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Corporate cash holding and firm value. Applied Economics, 45(2), 161-170. https://doi.org/10.1080/00036846.2011.595696.

Matayo, W., & Muturi, W. (2018). Effect of Financial Risk on Financial Performance of Large Scale Supermarkets in Nairobi County, Kenya. *International Journal of Social Sciences and Information Technology*, *4*(10), 574-591.

Matsa, D. (2010). Running on Empty? Financial Leverage and Product Quality in the Supermarket Industry. *American Economic Journal: Microeconomics.* 3. 137-73. 10.1257/mic.3.1.137.

Mtani, B. P., & Masanja, N. M. (2018). The Impact of Working Capital Management on Financial Performance of Supermarkets in Arusha City-Tanzania.

Murthy, S. R. (2015). Working Capital, financing constraints and firm financial performance in GCC Countries. Information Management and Business Review, 7(3), 59-64. Ngari, A., R., Kamau, C., G. (2021). Working Capital Management Cycle and Profitability of Household Supermarkets in Kenya: A Literature Review. *International Journal of Research and Innovation in Social Science*, 5(8), 711-714.

Oden, C., (2020) a cash management in a supermarket store. Available at https://www.projecttopics.org/a-cash-management-in-a-supermarket-store-pdf.html accessed on 07/05/2022.

Ogola, B., L. (2018). Effects of Financial Leverage on Financial Performance of Supermarket Chains in Kenya: A Case Study of Tusky's Supermarkets in Coast Region. *Business & Management Journal*, 1(1), 1-15.

Onsongo, G. N., & Onyiego, G. (2018). Effects of Working Capital Management Practices on Financial Performance of Edible Oil Producing Companies in Kenya. *Strategic Journal of Business & Change Management*, *5*(2), 335-354.

Ott, R. L., & Longnecker, M. T. (2015). *An introduction to statistical methods and data analysis*. Cengage Learning.

Pandey, I.M. (2005). Financial Management, 9 Ed. New Delhi, Vikas Publishing House

Pine, P. J., Pepper, D., & Rogers, M. (2010). Do you want to keep your customers forever? Harvard Business Review, 5, 110-118.

Raheman, A., Nasr, M. (2007), Working Capital Management and profitability–case of Pakistani firms. International Review of Business Research Papers, 3(1), 279-300

Rajesh, M. and N.R.V. Ramana Reddy, (2011). Impact of working capital management on firms' profitability.

Ramappa, K. B., & Shivaprasad, G. (2013). Financial Performance of Supermarkets in Karnataka. *Global Journal of Management and business research*.

Ross, S., Westerfield, R., & Jordan, P. (2013). Loose leaf for essential corporate finance. New Jersey: McGraw Hill

Sande, N., (2022) List of Supermarkets in Kenya; available on; https://www.nyongesasande.com/list-of-supermarket-chains-in-kenya;acessed on 06/05/2022

Shubita, M. F. (2019). The impact of working capital management on cash holdings of large and small firms: Evidence from Jordan. *Investment Management and Financial Innovations*, *16*(3), 76-86.

Tanveer, B. A. G. H., Nazir, M. I., Khan, M. A., Khan, M. A., & Razzaq, S. (2016). The impact of working capital management on firms' financial performance: evidence from Pakistan. *International Journal of Economics and Financial Issues*, *6*(3), 1097-1105.

Verma, E., (2022) financial performance: understanding the concepts and its areas; available at https://www.simplilearn.com/financial-performance-rar21-article. Accessed on 5/6/2022

Wairimu, K. K. (2021). Impact of capital structure on financial performance: a case study of Naivas supermarkets in Nairobi region. (Master's thesis at Strathmore University).

Wambia, W. O., & Jagongo, A. (2020). The effects of Working Capital Management practices on the financial performance of insurance companies in Kenya. *International Academic Journal of Economics and Finance*, *3*(5), 103-120.

Wanyoike, H. W., Onyuma, S. O., & Kung'u, J. N. (2021). Working Capital Management practices and operational performance of selected supermarkets with the national network: Evidence from Kenya. *International Journal of Research in Business and Social Science (2147-4478), 10*(2), 72-85.

Waweru, F. G., & Atheru, G. (2022). Working Capital Management and Financial Performance of Selected Supermarkets in Nairobi County, Kenya. *Asian Journal of Economics, Finance, and Management*, 13-21.

Waweru, F. G., & Atheru, G. (2022). Working Capital Management and Financial Performance of Selected Supermarkets in Nairobi County, Kenya. *Asian Journal of Economics, Finance, and Management*, 13-21.

Wooldridge, J. M. (2002). Econometric analysis of cross section and panel data MIT press. Cambridge, MA, 108.

Zhou, Q. (2011). Applied economics, business, and development. International Symposium Proceedings held in Dalian, China. Jiangsu, China: Springer.

APPENDICES

Appendix I: Secondary Data Collection Sheet

Supermarket	Year	**Financial performance of supermarkets**	**Inventory management**	**Account receivable**	**Accounts payable**	**Liquidity**
		Return on assets	Inventory turnover ratio	Account receivable average	Account payable average	Current Ratio
	2016					
	2017					
	2018					
	2019					
	2020					
	2021					
	2016					
	2017					
	2018					
	2019					
	2020					
	2021					
	2016					
	2017					
	2018					
	2019					
	2020					
	2021					
	2016					
	2017					
	2018					
	2019					
	2020					
	2021					
	2016					
	2017					
	2018					
	2019					
	2020					
	2021					
	2021					

Appendix II: List of Supermarkets in Nairobi

1. Chandarana supermarket.
2. Budget supermarket.
3. Eastmatt supermarket.
4. Mathai supermarket.
5. Quickmatt supermarket.
6. Khetia's supermarket.
7. Naivas supermarket.
8. Society stores supermarket.
9. Cleanshelf supermarket.
10. Tumaini supermarket.
11. Choppies supermarket.
12. Kipchimatt supermarket.
13. Carrefour Supermarket

Operational in Kenya as of 2021 KNBS