WORKING CAPITAL MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF MANUFACTURING AND ALLIED FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE KENYA

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OCTOBER, 2024

DECLARATION

Declaration by Candidate

This research project is entirely unique to me and has never before been submitted to a university for a degree.

Signature……. date……

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Declaration by Supervisor

I confirm that the work in this research project was done under my supervision.

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DEDICATION

I dedicate this endavour to my parents, Samuel Duot Chol and Maketh Chol Manyuon for their moral and financial support and their desire to see my success.

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TABLE OF CONTENTS

DECLARATION ..... **II**

DEDICATION ..... **III**

ACKNOWLEDGEMENT ..... **IV**

TABLE OF CONTENTS ..... **V**

LIST OF TABLES ..... **X**

LIST OF FIGURES ..... **XI**

ABBREVIATIONS AND ACRONYMS ..... **XII**

OPERATIONAL DEFINITION OF TERMS ..... **XIII**

ABSTRACT ..... **XV**

CHAPTER ONE:INTRODUCTION **16**

1.1 BACKGROUND OF THE STUDY 16

1.1.1 Working Capital Management Practices 19

1.1.2 Financial Performance 21

1.1.3 Working Capital Management Practices And Financial Performance 23

1.1.4Manufacturing And Allied Firms 24

1.2 RESEARCH PROBLEM 25

1.3 RESEARCH OBJECTIVE 26

1.3.1 General Objective 26

1.3.2 Specific Objectives 26

1.4 RESEARCH HYPOTHESIS. 27

1.5 SIGNIFICANCE OF THE STUDY 27

1.6 SCOPE OF THE STUDY 28

1.7 LIMITATION OF THE STUDY 29
1.8 ORGANIZATION OF THE STUDY 29
CHAPTER TWO:LITERATURE REVIEW 30
2.1 INTRODUCTION 30
2.2 THEORETICAL REVIEW 30
2.2.1 Keynesian Liquidity Preference Theory 30
2.2.2 Financing Advantage Theory 31
2.2.3 Transactions Costs Theory 32
2.2.4 Net Trade Cycle Theory 32
2.2.5 Theory of Arbitrage Pricing 34
2.3 EMPIRICAL LITERATURE 35
2.3.1 Accounts Receivables Management practices and Financial Performance. 35
2.3.2 Inventory Management practices and Financial Performance 37
2.3.3 Accounts Payables Management practices and Financial Performance 39
2.3.4 Cash management practices and financial performance 41
2.4 SUMMARY OF LITERATURE REVIEW AND RESEARCH GAP 43
2.5 CONCEPTUAL FRAMEWORK. 45
CHAPTER THREE:RESEARCH METHODOLOGY 46
3.1 INTRODUCTION 46
3.2 RESEARCH PHILOSOPHY 46
3.3 RESEARCH DESIGN 47
3.4 EMPIRICAL MODEL 47
3.5 OPERATIONALIZATION OF VARIABLES 49

3.6 TARGET POPULATION 50
3.7 SAMPLING TECHNIQUE 50
3.8 DATA COLLECTION INSTRUMENT 50
3.9 DATA COLLECTION PROCEDURE 50
3.10 DATA ANALYSIS AND PRESENTATION 51
3.11 DIAGNOSTIC TESTS 51
3.11.1 Normality 52
3.11.2 Multicollinearity 52
3.11.3 Heteroskedasticity 53
3.11.4 Autocorrelation. 53
3.11.5 Stationarity Test 54
3.11.6 Test for Fixed or Random effect 54
3.12 ETHICAL CONSIDERATION 54
CHAPTER FOUR:DATA ANALYSIS, INTERPRETATION OF FINDINGS AND DISCUSSIONS 56
4.1 INTRODUCTION 56
4.2 DESCRIPTIVE STATISTICS 56
4.2.1 Descriptive Statistics for Account Receivables Management (X1). 57
4.2.2 Descriptive Statistics for Inventory management practices 58
4.2.3 Descriptive Statistics for accounts payable turnover period 59
4.2.4 Descriptive Statistics for cash management practices. 60
4.2.5 Descriptive Statistics for financial performance 61
4.2.6 Summary of Descriptive Results 62
4.3 DIAGNOSTIC TESTS 64

4.3.1 Normality Test 65
3.3.2 Multi collinearity Test 66
4.3.3 Heteroscedasticity Test 67
4.3.4 Autocorrelation test 68
4.3.5 Panel Unit Root Test 69
4.4 TESTING HYPOTHESIS 69
4.4.1 Results of Hypothesis Testing 70
SOURCE: RESEARCH DATA, (2023) 73
4.5 MULTIPLE REGRESSION RESULTS 73
TABLE 4.13: MULTIPLE REGRESSION RESULTS 74
SOURCE: AUTHOR 2023. 74
4.6 ANALYSIS OF VARIANCE (ANOVA) 74
4.7 REGRESSION COEFFICIENTS WITH GDP AS ADDITIONAL VARIABLE 75
CHAPTER FIVE:SUMMARY, CONCLUSION AND RECOMMENDATIONS 78
5.1 INTRODUCTION 78
5.1 SUMMARY OF THE STUDY FINDINGS 78
5.2 CONCLUSION 80
5.3 RECOMMENDATIONS 81
5.3.1 Recommendation for Policy 81
5.3.2 Recommendation for Practice 82
5.4 Limitations of the Study 83
5.5 SUGGESTIONS FOR FURTHER RESEARCH 83
REFERENCES 68

APPENDIX 1 LIST OF ACTIVITIES.....79

APPENDIX II: BUDGET.....80

APPENDIX III LIST OF MANUFACTURING AND ALLIED COMPANIES 80

DATA COLLECTION INSTRUMENT.....82

LIST OF TABLES

Table 2. 1 Summary of Literature Review and Research Gap 43

Table 3.1 Operationalization and Measurement of Study Variables 49

LIST OF FIGURES

Figure 2.1: Conceptual Framework. 45

ABBREVIATIONS AND ACRONYMS

ANOVA: Analysis of Variance.

APT: Arbitrage Pricing Theory

BLUE: Best Linear Unbiased Estimates

CBD: Central Business District

CCC: Cash Conversion Cycle

CLRM: Classical Linear Regression Model

GDP: Gross Domestic Product

KAM: Kenya Association of Manufacturers

KNBS: Kenya National Bureau of Statistics

NACOSTI: National Commission for Science, Technology and Innovation

NSE: Nairobi Security Exchange

NTC: Net Trade Cycle

PwC: Price Waterhouse and Coopers

RCP: Receivable Collection Period

ROA: Return on Assets

ROE: Return on Equity

ROI: Return on Investments

SME: Small and Medium Enterprises

TCA: Transaction Cost Analysis

UK: United Kingdom

USA: United States of America

WCM: Working Capital Management

OPERATIONAL DEFINITION OF TERMS

Account Receivable Management Practices	The act of managing a certain amount of receivables is aimed at achieving both financial and liquidity goals. This research employs the use of debt management policies, monitoring of accounts receivables, and debts collection policy as proxies.
Accounts Receivable management practices	Pertains to the comprehensive framework of rules, processes, and practises used by a company in order to effectively handle sales transactions conducted on credit. In this study it is indicated by accounts receivable period. In this study it is indicated by debt management policies, monitoring credit payments and reviewing credit policies.
Cash Management practices	The ideal cash balance is determined by weighing the opportunity cost of retaining excessive cash against the cost of maintaining insufficient cash. This research utilizes the proxy of cash budget preparation, cash budget review, and the establishment of an ideal cash balance.
Financial performance	The an assessment of a company's capacity to generate revenues and effectively utilize assets that are derived from its principal form of operation, as demonstrated by the metrics of return on investments and return on equity. The process of cash budget preparation, cash budget review, and the establishment of an ideal cash balance is indicative.
Inventory Management Practices	The implementation of a comprehensive system of controls and procedures is essential for effectively monitoring inventory levels, as well as determining the appropriate timing for replenishment, the optimal amount to order, and the desired levels to be maintained. In this study, it is indicated by inventory budget, inventory levels review and setting Economic order Quantities. In this study it is

	denoted by Inventory budget, Inventory levels review and setting EOO levels.
Inventory	Pertains to a comprehensive record of all available items or stock, including work in progress, raw materials, and completed commodities that are currently in possession..
Inventory Turnover	The metric that quantifies the frequency at which inventory is distributed or utilised within a certain time frame, often a year, as represented by the accounts payable cycle. It is denoted by cost of goods sold.
Manufacturing and Allied Firms	These are companies that manufacture and distribute products that are eaten on a daily basis. Examples of Manufacturing and allied firms traded at NSE are Unga group limited, East Africa Breweries and British America Tobacco Kenya Limited.
Working Capital Management Practice	The fundamental standards and concepts used by businesses to regulate and oversee their Working Capital include several procedures, such as cash management, inventory turnover management, accounts payable management, and accounts receivable management.

ABSTRACT

Manufacturing and allied firms in Kenya play a very important role in economic development. Nevertheless, the companies have seen fluctuations in their financial returns along with a downward trend in their overall performance. Various studies have been done but do not clearly indicate the extent to which the various components of working capital affect the performance of the firms. Further study is necessary to explore the diverse impacts of these factors on the financial performance of organisations. The objective of the study was to ascertain the relationship between working capital management practices and financial performance of manufacturing and allied firms listed in NSE. The specific objectives of the study was to; to determine the effect of inventory turnover management practices on financial performance, to ascertain the effect of accounts receivable management practices on financial performance and to determine the effect of accounts payable management practices on financial performance of firms listed in Nairobi Securities Exchange The key theory to anchor the study was be: Keynesian liquidity preference theory, financing advantage theory, Transactions costs theory, Net trade cycle theory and theory of Arbitrage Pricing. Explanatory research design, cluster random sampling was used in the study. The target population was 9 manufacturing and allied firms listed in the NSE. The research employed secondary data sourced from financial reports as published in the NSE manual and KNBS for the time frame spanning from 2010 to 2020. Panel regression analysis and Pearson's product moment correlation analysis was employed for inferential analysis while means and standard deviations were utilized for purposes of descriptive analysis. Various diagonistic tests shall be carried out including normality, Multicollinearity, heteroskedasticity, autocorrelation, stationary test and test for fixed or random effect. The first objective sought to ascertain the effect of account receivable management practices on financial performance of manufacturing and allied firms in Kenya listed at the Nairobi Securities Exchange, regression analysis results showed that account receivables was significantly positively related to financial performance as showed by P- value of 0.004. Inventory management practices showed statistically significant positive effect as indicated by P-value of 0.030 while Account payables management practices showed that there was a statistically significant positive effect with P- value of 0.365. Finally, cash management practices showed that cash management practices had a positive effect on financial performance as evidenced by a γ = 0.419 with a P-value =0.004 at 5% level of significance. The study concluded that Manufacturing firms should prioritize account receivables management to improve operations and finances, Kenya's listed manufacturing and allied firms may benefit from improved inventory management, Management considers accounts payable in financial performance, Kenyan listed manufacturing and allied firms may benefit from cash management and that Size affects working capital management and financial performance of listed manufacturing and allied firms in Kenya. The study therefore recommends that Manufacturing enterprises should have a system that flags early supplier payments and that Manufacturing enterprises should buy qualified raw materials and goods just-in-time.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The manufacturing industry is a crucial driver of economic advancement. Furthermore, only a limited number of countries have successfully developed without the manufacturing sector contributing to economic growth, employment, tax revenue, and poverty alleviation (Kenya National Bureau of Statistics [KNBS], 2020). The desire of manufacturing firms to manage working capital has heightened scholarly interest in identifying approaches to enhance profitability (Tarik, 2020). Manufacturing enterprises' profits will contribute to the worldwide recovery from the first economic shock induced by the pandemic.

Temtime (2016) asserts that social transformation encompasses the capacity to inform managers on WCM policies as a means of creating profits. Borin and Mancini (2019) asserted that the manufacturing sector in Australia accounts for half of the nation's GDP and 40 percent of employment growth, facilitated by effective working capital planning. Research by Hossain (2020) in Bangladesh indicated that manufacturing enterprises contributed to the nation's GDP and overall development. Croci et al. (2015) indicate that by 2011, working capital management investment in U.S. manufacturing firms amounted to 4.2 trillion dollars, constituting 18 percent of total assets and accounting for 24 percent of sales revenue. In Europe, effective working capital management enabled companies to achieve profitability during the crisis from 2006 to 2014 (Robles, 2016).

Manufacturing enterprises have enhanced industry GDP performance in East Africa; yet, they have not achieved their full potential due to inconsistent and insufficient profitability (Africa Development Bank Group ADBG, 2020). Africa's worldwide market share for manufactured products is 1.3 percent, which is below expectations (African Union AU, 2019). Braimah et al. (2021) indicated that enterprises in Ghana constitute 70 percent of GDP; nevertheless, inadequate working capital management adversely impacts earnings. Tanzania's manufacturing sector experienced an increase of 6.6 percent, up from 2.9 percent, however this growth was still below that of medium industrialized nations (Moyo et al., 2012). In Nigeria, 92.2 percent of the economy comprises manufacturing enterprises, which provide 50 percent of jobs and revenue (Agwu & Emeti, 2014).

In Kenya, poverty has decreased to 34.4 percent, attributed to manufacturing companies (World Bank WB, 2022). In contrast, local manufacturing has experienced a downturn since 2016 (Ochieng, 2020). Furthermore, the contribution of manufacturing firms to the Kenyan economy has remained stagnant at 10 percent of the overall GDP (Kenya Association of Manufacturers [KAM] 2018). Kenya has experienced external shocks and contractions due to the pandemic; nonetheless, the economy is robustly recovering, and manufacturing may serve as a pathway for this recovery (International Monetary Fund IMF, 2020). Manufacturing in Kenya ought to be highly competitive, despite the decreasing proportion of manufacturing output in GDP and exports (KNBS, 2020). The GDP contribution of Kenyan manufactured goods exports is projected to rise by 13.3 percent by 2025, contingent upon the consideration of profit-influencing factors (IMF, 2020).

Abor (2017) further asserted that components of working capital management, including current assets and current liabilities, encompass items such as inventory, payables, cash, and receivables, systematically arranged to enhance profitability. Mwangi et al. (2014) further illustrated that a company's profit is contingent upon the manager's proficiency in managing working capital. Muller (2019) defined total operating assets as the difference between short-term assets and liabilities. Grounded in agency theory, Gulia (2014) asserted that insufficient profits were associated with poor working capital management policies of firms. Research by Ajao and Nkenchinyere (2013) in Nigeria indicated that financial strategy elucidated a negative correlation between working capital management and earnings.

Bulle (2017) asserted that Working Capital Management (WCM) is an essential organizational instrument for attaining competitive profits, as current assets constitute over fifty percent of total industry assets, and increased production leads to heightened labor-related expenses. Additionally, Harris (2015) indicated that investment in inventories diminished profitability, however lower investment may result in an inability to settle short-term accounts payable. Moreover, Sadiq (2016) clarified that manufacturing firms may possess sufficient profits; yet, they will enter receivership if they fail to settle their accounts receivable. Similarly, Ong'era et al. (2017) illustrate that manufacturing enterprises previously had revenue issues, leading to their adoption, reorganization, and deregistration. The persistent volatility in manufacturing enterprises' earnings generated discrepancies that prompted an examination of the factors contributing to the instability of profits during the research period. This study addressed these gaps by analyzing working capital management and profitability.

1.1.1 Working Capital Management Practices

Working capital management practices involve the essential principles and guidelines that firms adhere to while overseeing their working capital. By implementing well planned working capital management methods, companies have the potential to mitigate financial risks and improve their overall performance (Nazir & Afza, 2019). Working capital management techniques were taken into consideration by Pandey, (2020) as a means of how businesses fund their current assets. A corporation can guarantee sufficient cashflow to pay its operating costs and short-term obligations by managing its working capital effectively (Waithaka, 2017). The implementation of an effective working capital management plan facilitates the enhancement of profitability for firms.

There are four management techniques that can be taken into account to make sure the appropriate level of working capital is attained; Cash management practices, inventory management practices, receivables management practices, and payables management practices. Determining the optimal cash balance necessitates considering the inherent trade-off between the expenses associated with insufficient cash holdings and the foregone opportunities resulting from excessive cash storage (Ross et al., 2020). Therefore, a company should keep track of and prepare for its cash flows in order to establish the ideal level of cash to sustain (Atrill, 2016). Keeping track of inventory levels and deciding on appropriate holding levels, replenishment schedules and order quantities are all part of inventory management practices (Chandra, 2018). Excess stock leads to supplementary expenditures in the form of probable spoiling, obsolescence, and storage costs. (Brooks, 2015).

Investing in receivable involves expenses as well as advantages, managing accounts receivable is essential for a business. Hence, it is essential for a firm to strive towards maintaining an optimal level of receivables that facilitates the achievement of its dual objectives of profitability and liquidity (Dunn, 2019). The decision to evaluate the benefits of trade credit in relation to the costs associated with credit is a component of payables management (Van-Horne & Wachowicz, 2016). Effective accounts payables management practices will maximize cash outflow, ensuring that the company's liquidity is not negatively impacted and ultimately, the firm's profitability is not impacted over the long term (Uremadu, Egbide &Enyi, 2018).

Accounts payables, accounts receivables and inventories are the three distinct parts of the cash conversion cycle and can be managed in various ways to increase profitability or expand business. Trade credit may occasionally be used to get more customers. In order to appeal to prospective clients and obtain substantial orders, several firms demonstrate a willingness to modify their customary credit terms. Moreover, the provision of credit may potentially enhance sales since it allows customers to assess the quality of a product before to making a payment (Deloof, 2017).

The techniques used for managing current assets and liabilities substantially influence the ideal level of working capital. Continuous monitoring is necessary to ensure the appropriate amount of working capital components, including receivables, inventory, and payables, is maintained (Afza & Nazir, 2015). Gitman (2015) posit that the objective of WCM is to minimize the amount of money that is tied up in a company's current assets. The primary goals of inventory investment management and accounts receivable control are to effectively manage and optimize inventory

levels and to ensure efficient administration of accounts receivable. The effective WCM is crucial for the survival, sustainability, and overall performance of any firm.

The management of trade payables has been thoroughly examined in a number of studies. According to the majority of studies (Garcia- Teruel and Martinez- Solano, 2017; Raheman& Nasr, 2018; Falope & Ajilore, 2016), the optimal practice for paying payables is to close the due date. These findings are supported by the notion that accelerating the collection of accounts improves corporate performance. Due to competitiveness, businesses may decide to extend the accounts collecting period. This is a result of the industry's fierce competition which forces businesses to give discounts to clients in order to promote early payments. Conversely, in the event that consumers possess substantial bargaining power, businesses may be compelled to discontinue their credit program by extending the duration required to collect payments from customers.

1.1.2 Financial Performance

The financial performance of organizations is crucial for their survival in a competitive and unpredictable business environment. Barnett and Salomon (2015) propose a conceptualization of financial performance that encompasses the degree to which a company enhances its sales, earnings, and return on equity. According to Kamnikar and Deal, (2016) financial performance of a firm is the ability to finance its services on a continuing basis. The capacity to fulfill its financial commitments in a timely manner; and ability to finance the services its constituents require. According to Soyemi et al, (2017) financial performance refers to the extent of business progress over a certain period of time shown using profits and losses.

The annual financial statements provide a comprehensive representation of the company's financial condition and performance. These statements serve as primary sources of information for conducting qualitative research on the utilization of resources in the value creation process. Alam et al. (2018) propose that firm performance encompasses four key components, namely customer-focused performance, which includes factors such as client satisfaction and product or service performance; Organizational effectiveness encompasses several dimensions, such as the capacity to swiftly enter the market, the extent of innovation, manufacturing capabilities, and flexibility of the supply chain. The evaluation of financial and market performance encompasses several indicators such as revenue, profitability, market position, cash-to-cash cycle time, and profits per share. Additionally, the assessment of human resource performance include factors such as employee happiness.

Financial performance refers to the evaluation of a company's ability to create value for its shareholders. The measurement of financial performance may be conducted using a range of indicators, including profit after tax, ROA, ROE, and profits per share. The evaluation of the financial performance of several companies often involves the use of various approaches, such as financial ratio analysis, bench marking, and comparing performance versus budget (Ahmed, et al., 2017). The financial statements of financial institutions often include a range of financial measures that are intended to provide insights into the performance and financial performance of these businesses. Manufacturing and allied firms traded in NSE have not been doing well over the past years since the sales have been decreasing over the years. The performance of the manufacturing and allied firms as shown roe has been on the decline for example the return declined by 3.6% in the first quarter of 2016 which was a drop from 4.1% growth rate was 1.9%

compared with 3.3% in the same quarter in 2015(KNBS, 2016). According to KNBS data the manufacturing sector slowed down in 2017 which was a marginal drop of GDP to 0.2% from 2.7% in 2016.

1.1.3 Working Capital Management Practices and Financial Performance

Working capital management procedures employed by a corporation may greatly influence its success or failure (Kwame, 2017). The rationale behind this is that allocating funds to working capital is comparable to allocating funds to plant and equipment, since both represent investments. For manufacturing organizations in particular, working capital constitutes a substantial component of their overall investment (Louderback & Dominic, 2020). Due to the fact that the money is frozen and cannot be utilized for other parts of the firm, increasing working capital expenses are seen as cash outflows (Autukaite & Molay, 2019). As a result, it is anticipated that investments in restricted lean and mean current assets will often yield the best predicted return (Brigham & Houston, 2017).

Poor working capital management methods, in particular are the main reason why businesses fail in the US and the UK (Bradley & Rubach, 2016). Some governmental and private businesses in Kenya have been managed by statute. These businesses include Pan Paper Mills, Uchumi Supermarket and Ngenye Kariuki Stockbrokers. Their inability to pay their present debts when they became due was the primary reason for these businesses' demise (Nairobi Securities Exchange 2018). Therefore, this study looked at the relationship between WCM practices and financial performance of manufacturing and allied firms listed in NSE.

1.1.4Manufacturing and Allied Firms

Manufacturing and allied firms pertain to the category of companies engaged in the production of consumer items that are commonly consumed on a daily basis. The items included under this category consist of things that need more frequent replacement compared to others that have a longer lifespan. The consumer products industry, albeit characterized by a consistent customer base, is highly competitive due to significant market saturation and the presence of low switching costs among consumers. In the field of economics, consumer goods pertain to physical commodities that are manufactured and afterwards purchased to satisfy the immediate desires and perceived necessities of a consumer. Consumer products may be classified into three distinct categories: non-durable items, durable goods, and services (Cheruiyot, 2016; KPMG, 2016).

Consumer durable products are often characterized by a substantial lifespan, often lasting three years or more. Nevertheless, there are some firms that categorize items with shorter lifespans, such as one year. Corresponding to capital goods, which typically encompass tangible assets like buildings and machinery that are commonly employed in the production of other goods or services, the utilization of durable products is distributed over their lifespan. This tendency often generates a demand for various maintenance services. The relationship between the utilization and conservation patterns of durable and capital assets often exhibits a distinct and negative demarcation.

Consumers sometimes delay spending on durable products due to their higher price and long-lasting nature. Consequently, the demand for durables is often variable and dependent on the overall level of consumption. Consumer durable items, such as furniture and home appliances,

are widely prevalent in many contexts (Argan & Van Weele, 2017; PwC, 2016). Consumer non-durable items are often acquired for immediate or rather urgent consumption, and possess a lifespan of three years or less. Prominent instances of such phenomena include several categories, including but not limited to sustenance, drinks, and apparel. On the contrary, consumer services pertain to intangible products or acts that are often generated and consumed simultaneously. Companies that are involved in the manufacture of consumer products are often known as consumer goods manufacturing businesses. Consumers are often led by the durability and often greater price of durable items.

1.2 Research Problem

Data from KNBS show that the manufacturing sector performed as follows: 2011 was 8.1%, 2012 was 8.2%, 2013 was 8.0%,2014 was 7.8%, 2015 was 7.9%, 2016 was 6.5% 2017 was 6.3%, 2018 was 5.6%, 2019 was 4.8% and 2020 was 4.2%. The sector was also affected by the collapse in the sugar sub sector which dropped its overall production by 40% due to the collapse of Mumias and Muhoroni sugar millers. The manufacturing and allied industries encounter several obstacles that impede the sector's ability to thrive. According to KAM (2014), the main challenges that affect manufacturing and allied firms is lack of adequate resources. He further added that, most of the manufacturing and allied firms in Kenya suffer because of inadequate resources which are a result of poor management that is; increased bankruptcy, poor liquidity levels and firms operating without good control of credit. For any firm to accomplish its objective, the financial administrators should supervise the payables, receivables and assets efficiently (Owolabi & Chituru, 2018).

Gulia, (2017) argued that the problem of inadequate resources within firms which is a result of poor working capital management decisions made by managers which ultimately leads to pitiable performance in the firms specially manufacturing and allied companies to have adequate working capital administration. This is mainly because insufficient working capital will result to liquidation, legal issues, possible bankruptcy, financial insolvency and inability to pay debts.

Various management practices, such as inventory, accounts receivable, cash, and accounts payable, can impact profitability in different ways. This is particularly true in Kenya's manufacturing sector, where nearly all companies have realized they need to boost their capabilities and gain traction in the fiercely competitive global market. By establishing the relationship between WCM and the financial state of manufacturing and allied firms listed on the NSE, the present research aims to close this gap.

1.3 Research Objective

1.3.1 General Objective

The general objective of the study was to determine the relationship between WCM practices and financial performance of manufacturing and allied firms listed in NSE.

1.3.2 Specific Objectives

i. To determine the effect of inventory turnover management practices on financial performance of manufacturing and allied firms listed at NSE.
ii. To examine the effect of accounts receivable management practices on financial performance of manufacturing and allied firms listed at NSE.

iii. To determine the effect of accounts payable management practices on financial performance of manufacturing and allied firms listed at NSE.

iv. To determine the effect of cash management practices on financial performance of manufacturing and allied firms listed at NSE.

1.4 Research Hypothesis.

The study tested the following research hypothesis:

i. **H_{01}**: Inventory turnover management practices do not significantly affect financial performance of manufacturing and allied firms listed in NSE.

ii. **H_{02}**: Accounts receivable management practices does not significantly affect financial performance of manufacturing and allied firms listed in NSE.

iii. **H_{03}**; Accounts payable management practices do not significantly affect financial performance of manufacturing and allied firms listed in NSE.

iv. **H_{04}**: Cash management practices do not significantly affect financial performance of manufacturing and allied firms listed in NSE.

1.5 Significance of the Study

The research findings were imperative in informing and contributing to the theories and practice, and policy in numerous ways; through the findings of the study, firms in Kenya will understand and design suitable working capital management practices in order to reduce theft, manufacturing excess products and reduce loss. The findings further informed companies on how prevailing technology helps in WCM practices and how it is likely to affect the firm's financial performance. This research has significance as it supports manufacturing and allied

industries in identifying potential cost reduction areas while simultaneously maintaining overall organizational efficiency. The study's findings have provided valuable insights for the management of public sector institutions in identifying crucial factors to bear in mind in inventory management, management of payables to creditors, management of receivables from debtors, and management of cash. These insights can contribute to the efficient and effective utilization of public funds and resources. Additionally, the study offers policymakers a perspective on how public WCM practices can be leveraged by the government to enhance productivity in the public sector. This is of utmost importance as it serves as a blueprint for economic growth and development in Kenya.

The study will also be helpful to academics hoping to expand their understanding of the notion of WCM practices and the financial performance of manufacturing and allied firms listed at NSE, as well as researchers hoping to expand the study further via future research. The study will also benefit researchers and other scholars as a background for reference in future studies and make a valuable contribution to the prevailing body of literary knowledge.

1.6 Scope of the Study

The study was confined to manufacturing and allied enterprises listed at NSE. This excluded companies whose financing structure is highly regulated including companies in the banking, insurance and investment sectors. The WCM decisions to be considered in the study will be capital structure, dividend, cash holding and corporate investment decisions. The study considered manufacturing and allied firms due to low profits earned during the period of the

study. The research utilized secondary data sourced from financial reports as published in the NSE manual and KNBS for the time frame spanning from 2010 to 2020.

1.7 Limitation of the Study

The study encountered some limitations which are worth noting. Initially, it was observed that several businesses exhibited incomplete data within the designated research time. This had a potential ability to affect panel data analysis. To overcome this, the study adopted unbalanced panel regression analyses which have the ability to produce credible results. Secondly, the selected firms considered under the study were manufacturing company listed at NSE making the study population small. This had the potential effect of lowering the quantity of data available for analysis to produce results sufficient to make meaningful statistical inferences. To overcome this, panel data was used in order to increase the quantity of data.

1.8 Organization of the Study

This research project comprises of five chapters. The first chapter comprises of background of the study, research problem, research objectives, research hypothesis, and importance of the study, scope of the study, limitations of the study and organization of the study. The second chapter encompasses review of literature and conceptual framework. The third chapter consists of the methodology of the research which includes population of the study, study design, sampling design, research instruments, sampling and data collection procedure and data analysis methods to be utilized. Chapter 4 explored the interpretation of actual analysis, and discussion. Lastly, chapter 5 explored the summary, conclusions and recommendation of the study

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter gives a review of the literature on WCM practices which enhances the efficiency of corporate financial performance. WCM practices relates to how a company or organization manages its liquid resources which entails cash and cash equivalents, accounts payable, inventories and accounts receivables with an intent to improve its WCM practices and financial performance.

2.2 Theoretical Review

The research was led by theories that have been invented in the past and those that have demonstrated relevance throughout time in the field. These theories included: Keynesian liquidity preference theory, financing advantage theory, transactions costs theory and net trade cycle theory.

2.2.1 Keynesian Liquidity Preference Theory

This theory was developed by Keynes (1936). The thesis elucidated three rationales for the criticality of implementing good cash management protocols inside a corporation. According to the theory, currency is necessary for transactional, speculative and precautionary measures. The requirement for a financial reserve and safety supply of cash is a precautionary reason. The speculative motivation refers to the need of maintaining a reserve in order to capitalize on investment prospects. The concept of transaction motivation relates to the need of maintaining a

sufficient amount of cash in order to fulfil financial obligations, including the payment of wages, dividends, trade debts, and taxes. This theory was reinforced by Pandey, (2010) who argued that a firm's daily operational needs for cash cannot be disregarded.

Therefore, for the success of their operations, entities should allocate a sufficient amount of their capital to current assets. The study can determine how various organizations have used these approaches and how their use has affected their financial performance because the theory explains why different approaches to managing cash are adopted. However, this theory does not provide a model that can be used to determine the ideal amount of cash to hold at any particular time.

2.2.2 Financing Advantage Theory

The theory, postulated by Schwartz in 1974, provides guidance to managers in establishing a proficient practice for managing receivables. The hypothesis posits that a supplier might potentially gain an edge over conventional lenders by doing a thorough assessment of the creditworthiness of their customers, closely monitoring repayment activities, and taking proactive measures to ensure credit is repaid in the event of default. According to Joana, Vitorino, and Moreira (2011), there are certain cost advantages associated with lending to clients that non-financial entities may provide compared to traditional financial institutions. These benefits include the ability to extract value from existing assets, the acquisition of information, and the ability to exert control over the buyer. Hence, it is essential for a company to have a robust creditor's management system to effectively facilitate the retrieval of extended credit. The theory elucidates many methodologies that might be used in the management of receivables. This

research aims to examine the strategies used by different organizations in managing their receivables and analyze the impact of these strategies on their financial performance.

2.2.3 Transactions Costs Theory

Transactions costs theory was postulated by Ferris in 1981. The theory claims that managing payables helps reduce the transaction costs associated with paying bills. Instead of paying commitments each time items are delivered. A company may prefer to accumulate them and pay them on a monthly or quarterly basis. This makes it possible for a business to isolate the payment cycle from the delivery timeline (Williamson, 2013). Additionally, in order to maintain a continuous product cycle, the company might need to use credit to accumulate huge inventories. However, doing so increases the cost of financing the inventory as well as the cost of warehousing it. Therefore, managers ought to devise a plan that will save expenses and boost revenue. The theory facilitates the examination of the methodologies used by different organizations in the management of their payables and inventories, as well as their impact on the financial performance of these firms.

2.2.4 Net Trade Cycle Theory

The Net Trade Cycle theory holds that apart from receivables, inventory and payables that are covered under the CCC Theory, the trade cycle of a firm can be an easier measure to compute by comparing cash conversion cycle and the weighted cash conversion cycle. The theory was first advanced by Soenen, (1993) who researched on the contribution of the trade cycle on the financial returns of a firm. The findings demonstrate a negative correlation between the duration of the trade cycle and the firm's return on assets. The study also showed that there exists an inverse relationship within diverse industries. In line with current study, The Net Trade Cycle

theory provides a framework for companies to get insights on the frequency of cycles they undergo during a given year, as well as the overall monetary value associated with each cycle. The Net Trade Cycle really shows how many days' worth of sales the business needs to fund working capital under Ceteris Paribus circumstances (Soenen, 1993). The justification for this proposition is that the Net Trade Cycle (NTC) may be considered analogous to the Cash Conversion Cycle (CCC), whereby all three constituents are portrayed as a ratio of sales.

Soenen (1993) aver that it was further contended that there exists a positive relationship between the length of the NTC and the present value of the net cash flow produced by the company's assets. Consequently, this leads to an increase in the firm's value for its shareholders. Therefore, companies endeavor to maintain an ideal amount of working capital that optimizes their overall worth. In application, the Net Trade Cycle theory is of relevance of the study in identifying how long cash balances take to go through the normal business trade cycle within firms. It is essential to businesses as a means of managing cash flows. The theory also supports accounts payable by assisting on how to examine its relative importance to the cash flow balance and revenue generation of the firm which is predictors of a firm’s better level of financial performance.

This theory is significance to the study supports receivable management, inventory turnover management and payable management. It explains the negative association between the trade cycle length and the return on assets of a firm and its inverse relationship within diverse industries. In line with the current study, the net trade cycle theory help a company to understand how many cycles it goes through in a year and the amount of money that is tied up in each cycle.

2.2.5 Theory of Arbitrage Pricing

Stephen Ross developed the theory of Arbitrage pricing theory (APT) which is a theory of pricing asset that explains the return anticipated from commercial asset or an investment. Modeling it as a linear relationship between a number of macroeconomic factors with the level of correlation changing for all variables as indicated by a beta coefficient is possible .To accurately determine the price or asset value, the rate of return from the generated model will be used and asset's value should match expectations on average.

While numerous dispute specific causes may have an impact on a stocks or bond's performance, APT agrees that this impact may be mitigated in well-defined portfolios. Therefore, the diversification principle that affects corporate bonds is this one and one of the original authors who used macroeconomic elements to replace all of the indeterminate parts in A.P.T was Chen, Roll and Ross, (1986). These studies attempted to define equity as a crucial macroeconomic variable. This is due to financial issues including treasury bills, interest rates and the rebate rate which have an impact on predicted surpluses.

According to Roll and Ross, (1995) the underlying premise of the Arbitrage Price Theory is that only a smaller number of systematic factors have an impact on the long-term aggregate returns of financial assets contrary to the presumption that prices of stocks are systematically influenced by economic factors like interest rates and exchange rates. APT ignores the multiple elements that affect the daily price volatility of stocks and bonds and instead places emphasis on the important variables that drive aggregates in massive portfolios. An intuitive understanding of these forces'

impact on portfolio results is attained through their identification. Asset return is heavily influenced by anticipated and unanticipated occurrences.

2.3 Empirical Literature

2.3.1 Accounts Receivables Management practices and Financial Performance.

Siele (2018) conducted research on the financial stability and accounts receivable management strategies of Kerich Water and Sanitation Company Ltd. in Kericho, Kenya. In order to determine the average collection duration and accounts receivable turnover, the research gathered secondary data from the Kenya National Audit Office and publicly available financial records from Kericho Water and Sanitation Company between 2010 and 2014. To determine if there is a link between financial performance and the collected data, regression and correlation analyses were used. The findings demonstrated that the size of the territory had a substantial impact on the financial performance variable ROE of the Kericho Water and Sanitation Company. Financial performance was impacted by the average collecting period and the region's size. The research suggested that in order to enhance the organization's financial performance, it should raise the average collection duration, inventory period, accounts receivable turnover, and debt levels.

Mukhoma (2014) conducted research on the financial performance and accounts receivable management procedures of manufacturing firms in Nakuru County, Kenya. The study aims to investigate the strategies utilized by accounts receivable management to minimize the amount of funds tied up in accounts receivables and restore the company to its original objectives. The target demographic in this research, which consists of all the manufacturing businesses in the

Nakuru municipality, is under 30. Focusing on this industry is necessary since it contributes a significant portion of Kenya's gross domestic product. The research was conducted between 2008 and 2013. Utilizing measures, such as the turnover ratio, which is a financial indicator of how well a corporation extends credit and collects debts, the accounts receivable will be assessed. This ratio, known as an activity ratio, gauges how well a company utilizes its resources. In order to assist in the management of the accounts receivable, measures like days sales outstanding (DSO), which is a ascertained of the typical number of days a firm takes to collect money after a sale has been completed, were also investigated. accounts receivable at year's end divided by total sales as a percentage is calculated using the fiscal year. The management of the accounts receivables benefited from the usage of accounts receivable balances by fiscal year net sales and the accounts receivable ageing schedule, a periodic report used to establish the priority of collection actions. By dividing year-end bad debt expenditures by net sales, the ratio of bad debt expenses to total sales is calculated. The research was based on ideas like pecking order theory and trade-off theory. The study design used was a descriptive survey. As a result, the research used a purposive sample technique, making the sampling judgment specific.

Moyer, McGuigan, and Kretlow (2015) provide an in-depth analysis of the influence of accounts receivables on the performance of SMEs. The non-monetary Belgian micro firms were subjected to analysis throughout the period of 2006-2009. The researchers deduced that SMEs that increased their accounts receivables during the 2008 financial crisis, in comparison to the pre-crisis period, exhibited higher levels of profitability throughout the crisis years. In their study, Baños-Caballero, García-Teruel, and Martinez-Solano (2016) examined the relationship between

profitability and accounts receivables in a sample of more than 71,000 SMEs in Spain over the period of 2000-2007. A favorable direct link was found between investment in accounts receivables and SME output. Likewise, since the heightened competition within the market, SMEs are required to provide accounts receivables. Accounts receivable plays a crucial role in assisting merchants, particularly SMEs, in their pursuit of market entry throughout the developmental phase.

2.3.2 Inventory Management practices and Financial Performance

The concept of inventory turnover in days pertains to the usual duration that corporations need to transform raw resources into completed items. The calculation involves dividing the inventory by the cost of items and then multiplying the result by 365. Firms that have a higher inventory turnover ratio are anticipated to achieve more profitability due to their enhanced efficiency in managing inventory. A low inventory turnover ratio indicates that a company is experiencing a time of decreased sales or has an excessive quantity of inventory (Ruichao, 2013). Mansoor and Muhammad (2012) noted that managers have the potential to enhance profitability via the reduction of the inventory collecting period. In a study conducted by Dong (2010), the primary objective was to examine the interplay between variables such as profitability, cash conversion cycle, and other associated factors. The results of the study indicated a significant inverse relationship between the variables under investigation, indicating that an increase in the cash conversion cycle is linked to a decrease in revenue.

Nyaga (2018) researched on inventory management practices and financial performance of SMEs in Laikipia County. The study period was between 2013- 2016. Performance was assessed

by examining profitability metrics, namely return on investment (ROI) and net profit margin in proportion to turnover. A sample size was obtained by applying a variety of proportional random sampling techniques. The research employed both primary and secondary data sources. The acquisition of primary data was eased by the delivery of questionnaires employing the drop and pick approach. The researchers collected secondary data from the small and medium enterprises' books of accounts, management reports, and other accessible resources. The findings revealed that the financial well-being of small and medium enterprises (SMEs), as shown by profitability indicators such as return on assets (ROA) and net profit margins, was significantly deficient.

Nur, (2017) did a study on inventory controls and financial performance of Garissa County government. The specific objectives were to ascertain the effect of inventory recording on financial performance of Garissa County government to determine the effect of stock audit on financial performance to evaluate the effect of e- procurement on financial performance, to examine the effect of inventory management training on financial performance. The research design utilized in this study was descriptive in nature. The primary data was obtained via administering questionnaires. The research discovered that taking stock had a favorable and substantial impact on financial sustainability. A favorable and considerable impact on financial sustainability is had by inventory tracking. Financial sustainability is positively and significantly impacted by inventory management training. The study utilized primary data while this study used secondary data.

Tungo (2014) examined the impact of inventory management practices on the financial performance of the national MFB headquarters in Dar es Salaam. The negative consequences of

poor inventory management encompass significant disparities between stock records and physical stock, insufficient record-keeping practices, the presence of obsolete and obsolete stores, increased customer complaints resulting from unmet orders, disarrayed storage facilities, damaged inventory, and financial resource depletion. The study conducted a survey of the national micro finance Bank at the national microfinance bank Headquarters. The questionnaire was administered to a specific subset of employees from the National microfinance bank. The research addressed the following particular objectives: (1) identifying the elements that influence inventory management practices on return on equity, and (2) examining the effect of inventory management strategies on return on sales. The research revealed that several key factors have a significant impact on inventory management in National Microfinance banks. These factors include the proficiency and expertise of the staff, the active participation of management in procurement planning, and the presence of well-defined procurement policies that are followed by staff during the execution of inventory management procedures.

2.3.3 Accounts Payables Management practices and Financial Performance

Mutai (2019) examined the impact of accounts payable management practices on the liquidity of public technical training institutions in the Rift Valley Region. The research was conducted based on the principles of transaction cost theory, which is in accordance with the research objectives. The research used a census survey methodology due to the limited number of participants. The study used primary data collection methods, namely using a questionnaire. The determination of the validity of the data collecting instrument was achieved by engaging in a comprehensive discussion with the research supervisor on the research instrument. The study's results revealed that the management practices of accounts payable had a substantial impact on

the liquidity of public Technical Training institutes in the Rift Valley Region. The research suggests that principals and stakeholders of technical training institutes should engage in negotiations with their suppliers to get more favorable credit terms, hence extending the duration of accounts payable.

The average payment period refers to the mean duration between the acquisition of commodities, labor, and the subsequent disbursement of cash. The calculation is derived by dividing payables by the purchase amount and then multiplying the result by 365. The practice of managers deferring bill payments has emerged as a prominent means of securing financial resources for several firms. Providing an early payment discount may pose potential risks for the firm (Ruichao, 2013). The duration of this time is extended for nations with inadequate and little capital markets. Businesses that rely on working capital management must postpone paying their debtors. Managers may utilize this additional income stream for other initiatives. Mathuva (2010) noted a positive correlation between average payment period and profitability, meaning that a one-day delay in accounts payable will increase the likelihood of realizing profits.

Uyar (2009) posits that a negative association exists between accounts payable and profitability, aligning with the notion that less prosperous organizations tend to defer payment of their bills for longer durations. This is also consistent with other academics who contend that the average collection period, average payment period and cash conversion all have a sizable adverse impact on net operating profitability. These findings imply that managers can add value and boost profitability for their companies by keeping inventories and the number of days' worth of accounts receivable at a manageable level.

2.3.4 Cash management practices and financial performance

Chebon, (2019) did a study on cash management practices and profitability of star-rated hotels in Nairobi city County Kenya. The study precise aims were to ascertain the effect of cash budgeting, cash forecasting, liquidity control and centralized banking on profitability of hotels. The study reviewed three cash theories adopted descriptive research design, stratified random sampling procedure was adopted where hotels were stratified based on their star level that is 2,3,4 and 5 stars. The study used purposive sampling to identify the research respondents including accountants, finance manager, credit managers and internal auditors. Multiple regression analysis was utilized to examine the link between and independent variables. The study also suggested that liquidity control had a major positive effect on profitability of star rated hotels. It was also determined that cash budgeting had a positive but minor effect on profitability of star rated hotels. The study recommended that top management should continue preparing cash budgets, setting in place strong liquidity control measures to ensure the respective hotels have adequate liquid cash to take care of maturing obligations and make short term investments and implementing centralized banking to ensure centralized revenue collection.

A research on cash management procedures and the financial standing of Kenyan private institutions was conducted by Waiganjo (2017). The purpose of the research was to ascertain the impact of cash policies, cash budgeting, accounting procedures, and investing excess cash on the financial performance of private colleges on the African continent. The research utilized a census approach to gather data, giving questionnaires to the intended audience. The results showed that variance analysis and cash forecasting are made easier with the help of cash budgeting. enhances none of the following: accounting procedures improved the tracking of business transactions and

the preparation of financial statements, but they did not keep track of daily cash receipts and payments; investing surplus cash did not demonstrate improved liquidity, profitability, and returns commensurate with risk undertaken; cash documentation did not ensure security and tracking of university funds and that financial controls were strictly followed. The study suggested that the university administration create guidelines for the cash budgeting process, involving all departments; create and strictly enforce cash policies; commission university education to ensure compliance with accounting standards; and carry out an annual audit and investment after the university governing body has approved the due diligence report.

Turgut, (2022) did a study on effect of cash management practices on financial sustainability of SMEs in Kericho CBD, Kenya. The study specifically intended to ascertain the effect of cash flow forecasting, liquidity management practices on financial sustainability of SMEs in Kericho CBD. The research was underpinned on cash conversion cycle model and cash management models. The researchers utilized a simple random sampling technique to choose the participants. The researchers obtained primary data by administering standardized questionnaires to the participants. The research demonstrated that SME operators had the ability to forecast the timing and magnitude of cash inflows and outflows. It is suggested that the provision of business mentoring for SME operators should be undertaken by appropriate government departments. This initiative aims to bolster their ability to develop basic company budgets. The study focused on SMEs in Kericho central Business District while this study focused on manufacturing and allied firms listed in NSE, Kenya.

2.4 Summary of Literature Review and Research Gap

Table 2.1: Summary of Literature Review and Research Gap

Author & Year	Focus of the Study	Key Findings	Research gaps	Focus of the current study
Nyaga, (2018)	Inventory management practices and financial performance of SMEs in Laikipia County.	The findings of the study revealed that the financial performance of SMEs, as measured by profitability indicators such as ROA and net profit margins, exhibited a significant level of underperformance.	The study used primary data and focused on SMEs. ROA and net profit margins were used as a measure of financial performance.	The study focused on manufacturing and allied firms and use secondary data. The study used Return on equity.
Nur, (2017)	Inventory controls and financial performance of Garissa County government.	Investing in stocks has a favorable and substantial impact on long-term financial viability. A favorable and considerable impact on financial sustainability is had by inventory tracking. Financial sustainability is positively and significantly impacted by inventory management training.	The study used primary data.	This study used secondary data.
Tungo, (2014)	Influence of inventory management practices on organizational financial performance of national MFB headquarters Dar es Salaam.	The management practices seen at National Microfinance institutions included the cultivation of skills and knowledge among the staff, active participation of management in procurement planning, and the establishment of procurement rules that were diligently followed by the staff throughout the execution of inventory management procedures.	The study focused on one company that is banking institution.	The study focused on many institutions that is manufacturing and allied firms

Mutai, (2019)	The Impact of Accounts Payable Management Practices on the Liquidity of Public Technical Training Institutions in Rift Valley Region.	The research results revealed that the management practices related to accounts payable had a key role in influencing the liquidity of public Technical Training colleges in the Rift Valley Region.	The study focused on public technical training colleges in Rift Valley Region.	The study focused on manufacturing and allied firms in Kenya.
Chebon, (2019)	Cash management practices and profitability of star-rated hotels in Nairobi city County Kenya	The study findings show that liquidity control had a major positive effect on profitability of star rated hotels. It was also concluded that cash budgeting had a positive but minor effect on profitability of star rated hotels.	The study focused on the hotel industry.	The study focused on manufacturing and Allied firms.
Waiganjo, (2017)	Cash management practices and the financial performance of private universities in Kenya	The results of the study indicated that the use of cash budgeting contributes to the facilitation of cash forecasting and variance analysis. The budgetary control was not improved, resulting in deviations from intended cash spending and inadequate control over institution spending habits across all departments. The documentation of cash transactions did not effectively ensure the security and tracking of university funds, and the adherence to financial controls was not strictly enforced. While the accounting practices enhanced the tracking of business transactions and the preparation of financial statements, they did not adequately add	The research centered on Private universities in Kenya. The study also used	
Turgut, (2022)	The Impact of Cash Management Practices on the Financial Sustainability of SMEs in the Kericho CBD, Kenya.	The research demonstrated that SME operators had the ability to forecast the timing and magnitude of cash inflows and outflows. It recommended that business mentorship should be carried out by relevant government ministries to enhance SME operators' capacity to draw simple business budget	The study focused on SMEs in Kericho central Business	This study focused on manufacturing and allied firms listed in NSE, Kenya.

2.5 Conceptual Framework.

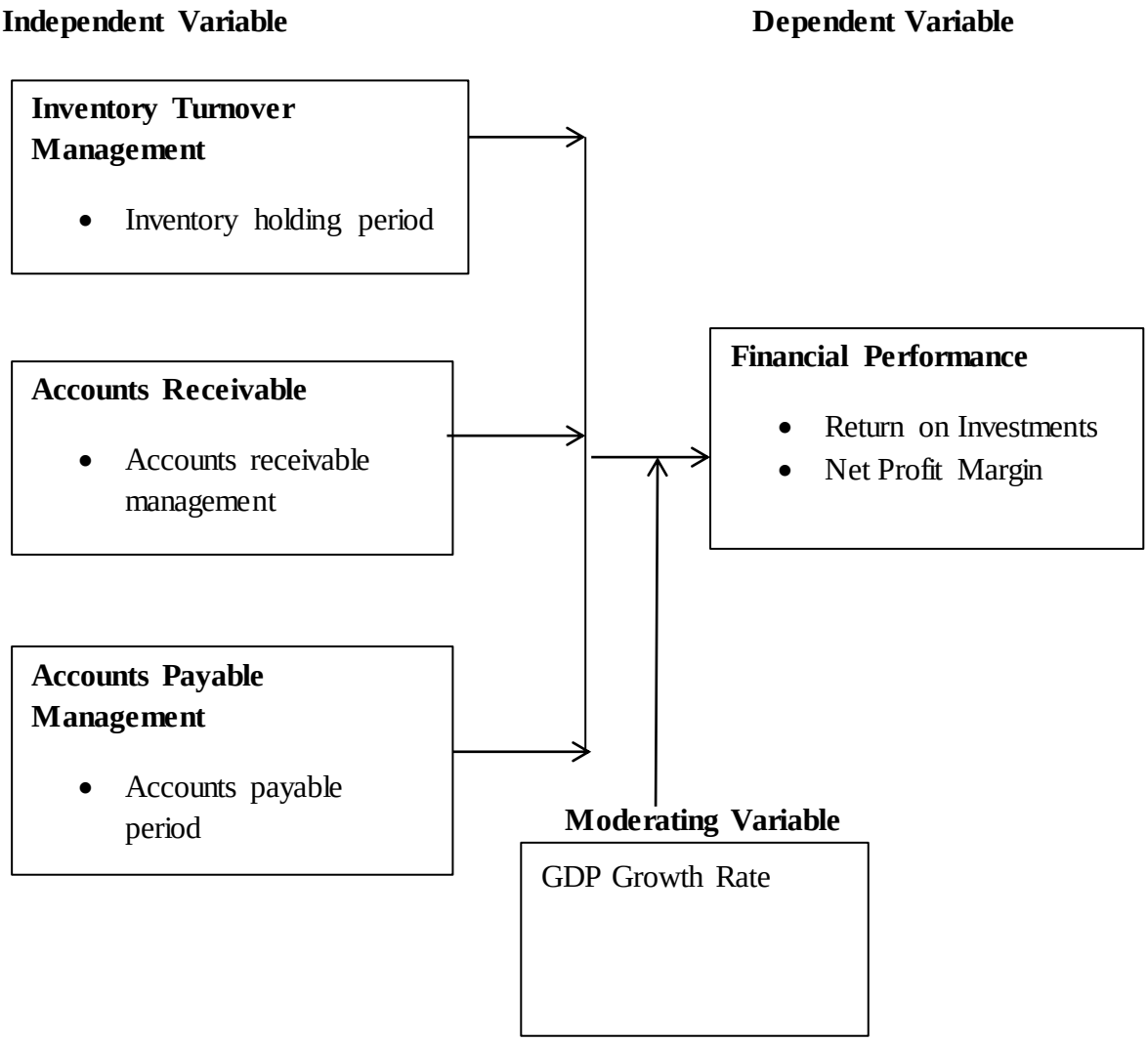

Figure 2.1: Conceptual Framework.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter looks at the research methodology that was utilized to achieve the aim of the study. It describes the research philosophy that will be utilized and research design. Empirical Model specification that was used and operationalization and measurement of variables, the target population and sample size determination, sampling method that was applied in the study, Data collection method utilized and data analysis technique that was applied in the study.

3.2 Research Philosophy

Research philosophy encompasses the exploration and comprehension of knowledge acquisition and the fundamental characteristics of knowledge (Saunders et al., 2009). According to Crossman, (2003) a researcher should have enough knowledge on philosophical issues before collecting data. Research philosophy also helps to define and clarify the research methodology and gather enough evidence to answer the hypothesis. The research helped the researcher with diverse methodologies such as circumventing unnecessary and unrelated work (Easterby-Smith, et al., 2002). The research philosophy helps in identifying the research paradigm and research method. Research paradigm reflects the nature and approach taken when conducting research while research method are techniques used to gather and analyze data in the study (Saunders et al., 2007: 2009). Views of the researcher were not affected by value judgments. The research was based on hypothesis derived from theories of finance and was tested to either support or reject the hypothesis.

3.3 Research Design

According to Kothari (2004), research design is overall plan that guides research work. It shows how the research is arranged. It guides the researcher on how to answer research questions. It holds together the important aspects of the research in order to derive meaning (Maxwell, 2012). The researcher adopted explanatory research design. Kerlinger and Lee (2000) argue that the approach utilised in this study is particularly well-suited for identifying the elements that contribute to changes in the financial performance of manufacturing and allied firms in Kenya.

Saunders et al., (2009) contends that non experimental research is systematic empirical inquiry in which the researcher cannot control the independent variables once they have occurred. The research design adopted because the materialization of the independent variables not to be manipulated. According to Sekaran and Bougie, (2011) explanatory research intends causal link between WCM practices and financial performance of manufacturing and allied firms listed in NSE, Kenya.

3.4 Empirical Model

The data collected underwent a process of revision, coding, and subsequent input into a computer for processing, through the SPSS. The data collected from participants will be subjected to analysis employing both descriptive and inferential statistical methods (Mugenda &Mugenda 2003). Linear regression analysis was done for Inventory holding period, credit collection period and accounts payable period to investigate further, the association between WCM practices and financial performance. Multiple regression models show how WCM components are related (account receivables management practices, Inventory management practices, account payable management practices and cash management practices). For listed

manufacturing and related enterprises at NSE, Kenya, GDP is taken into account as a moderating variable and financial performance as the dependent variable.

Direct Relationship $Y = \beta 0_i + \beta_i X_i + \varepsilon,$

Where,

$\beta 0_i$ = the overall effect of the independent variable on Y;

β_i = the intercept for the linear equation

ε = the corresponding residuals in the equation

(Fairchild &Mackinnon2009).

The overall regression is as shown below;

i. **$Yit = +\beta 1X1it+\beta 2X2it+\beta 3X3it +\beta 4X4it +\varepsilon$**

Where;

Y = Financial Performance of manufacturing and allied firms listed at NSE

β_0 = Intercept, which is the value of Y when X values are zero

X_1 = Accounts payable management practices

X_2 = Inventory turnover management practices

β_3 = Accounts receivable management practices

X_4 = Cash management practices

$\beta_1, \beta_2, \beta_3$ andβ_4 = Regression model coefficients

ε = Error term

3.5 Operationalization of Variables

Table 3.1 below displays a list of variables with their operationalization and measurements that was used in order to estimate variables. These measures were adopted in the study as supported by other researchers as shown by the literature.

Table 3.1: Operationalization and Measurement of Study Variables

Category	Variable	Indicator	Scale
Independent variables	Working capital elements	Operationalization	Ratio
X1	Accounts receivables management practices	Credit sales/ average accounts receivable * Days in period	Ratio
X2	Inventory Management practices	Cost of goods sold/average inventory *Days in period	Ratio
X3	Accounts payable management practices	Average accounts payable/ (Total credit purchases * days in period)	Ratio
X4	Cash management practices	Days inventory outstanding + day sales outstanding- day's payable outstanding	Ratio
Moderating variable	GDP	GDP growth rate	Ratio
Dependent variable	Financial performance	Net income/ Average Total Assets	Ratio

Source: Author, 2022

3.6 Target Population

Mugenda & Mugenda, (2003) posit that a population consists of a group of objects with similar observable characteristics. Population is any complete group conforming to a set of specifications (Creswell & Creswell, 2017). The study adopted a census where 9 Manufacturing and allied companies listed in NSE were considered census provides a good representation of the population and also more accurate results consistent with Hakim (2012).

3.7 Sampling Technique

Cluster random sampling is a method of sampling in which the population is first divided into several groups, and the final sample is composed of all members from a selected subset of these groups (Mugenda & Mugenda, 2003). The research focused on the category of manufacturing and allied firms listed at the NSE. All nine companies within this sector were included in the study. The unit of observation for the research will be 9 manufacturing and allied firms listed at the NSE.

3.8 Data Collection Instrument

The study utilized secondary data since it can be used for comparison purposes, requires less resources and it easily allows for panel data analysis (Saunders et al., 2009). The data acquired from the financial reports of the firm, as reported in the NSE handbook and KNBS, covers the time frame from 2011 to 2020.

3.9 Data Collection Procedure

The researcher got a research authorization letter from Kenyatta University. The letter was transmitted to NACOSTI. The data to be considered under the study was panel data comprising

of a cross-section of 9 selected listed companies and time series data of each of the company between 2011 and 2020. The data was extracted using data extraction sheet.

3.10 Data Analysis and Presentation

The research utilised a combination of descriptive and inferential statistics in order to analyse the collected data. Panel multiple regressions were employed in this study due to the presence of both temporal and cross-sectional dimensions in the dataset. The study employed Pearson's Product Moment Correlation analysis to examine the link between choices about WCM practises and financial performance. Measures of central tendency including mean, median, mode, skewness, kurtosis, maximum and standard deviation will be used for purpose of descriptive analysis as supported by Jackson, (2009) Velnampy et al., (2014) and Paminto, (2015).

The research employed panel data due to its inherent benefits compared to time series and cross-sectional data. Panel data allows for the isolation of theoretical effects and facilitates the contrast of industries across a certain time period (Kothari, 2004). The data was presented in a visual format, including tables and graphs. The data analysis was conducted using E-Views 8.0, which is widely regarded as optimal software due to its efficacy in data management, econometric modelling, and statistical analysis. This software facilitated the generation of descriptive statistics and estimation of statistical parameters.

3.11 Diagnostic Tests

In estimating the Empirical Model, it was necessary to ensure non-violation of the Classical Linear Regression Model (CLRM) assumptions. Violation of CLRM assumptions may cause the estimates produced not to be Best Linear Unbiased Estimates (BLUE). To ensure non violation

the study carried out the tests for normality, Multicollinearity, autocorrelation, Heteroskedasticity and Panel Unit root test as supported by Fadhili et al., (2011).

3.11.1 Normality

Normality was presumed in the study considering that multiple regression analysis was used as a principle data analysis method. Normality was tested using Shapiro Wilk test, Kolmogorov Smirnov Test, Normal Q-Q plot and Jarque-Bera test. The study adopted Shapiro-Wilk test since is more comprehensive compared to others as supported by Field, (2009); Gujarati & Porter, (2004) and Razali &Wah, (2011).

Sample scores were compared to normally distributed scores with similar measures of deviation. Where the coefficient is non-significant ($p > 0.05$), it means that the distribution of the sample is not significantly different from a normal distribution hence would be normally distributed. Conversely, where the test is significant ($p < 0.05$), then the distribution in question is considered non-normal (Jackson, 2009). Where data fails normality test, non-parametric statistics are run since they don't require normality of the data.

3.11.2 Multicollinearity

Multicollinearity is a condition where one or more independent variables are highly correlated such that one can be used to predict the other. Multicollinearity affects almost all aspects of multiple regression analysis and has a negative effect on such analysis especially if the correlation among independent variables is high (Aczel & Sounderpandian, 2009). Failure of this classical assumption causes the regression coefficients to be indeterminate and the resulting standard errors to be infinite hence affecting precision on rejection or failure of rejection of the null hypothesis. Correlation matrix was used in the study to detect Multicollinearity where

threshold of Multicollinearity will be 0.8 (Blumberg, Cooper & Schindler, 2008). Where Multicollinearity was be detected, the variables were centered in order to standardize the predictors. This strategy will help to eliminate the Multicollinearity occasioned by interaction and higher-order terms without altering interpretation of the coefficients (William et al., 2013).

3.11.3 Heteroskedasticity

According to Baum, Lewbel, Schaffer and Talavera, (2012) Heteroskedasticity is the extent to which the data values for the dependent and independent variables have unequal variances. Heteroskedasticity implies that error term among working capital management practices decisions do not have constant variances. Failure of this assumption affects OLS estimator such that it cannot be utilized for hypothesis testing since it would bring inefficient predictions (Dansey & Reidy, 2004).

The study tested Heteroskedasticity using modified Wald test where the null hypothesis was Homoscedasticity while alternative was Heteroskedasticity. Where the P value was less than critical level of significance at 0.05, then the null hypothesis was accepted and resulting residuals may be homoscedastic (Poi & Wiggins, 2001). Where data was found to be heteroskedastic, logarithmic transformation was used to reduce such Heteroskedasticity by compressing the scale in which variables is measured several times.

3.11.4 Autocorrelation.

The use of panel data was necessitated on test of autocorrelation. Autocorrelation is where error terms between periods are correlated. Presence of autocorrelation causes error terms to be biased and inefficient has wrong inferences (Kock & Lyne, 2012). The study utilized Breusch-Godfrey test for serial correlation because it can be applied for several lags.

3.11.5 Stationarity Test

Since the data to be utilized in this study will be panel, stationary test was necessary. Stationary is a situation where mean and variance of data over time is constant. According to Aczel, (2009) non-stationary data gives rise to spurious regression results. Panel Unit root tests was carried out using the ADF test to ascertain if the data was stationary or non-stationary. Critical values at 5% significance level was compared to corresponding ADF test statistic. In situations where the ADF test statistic is greater than the critical value at 5%, then the null hypothesis should be accepted. That is, the data is non-stationary (Woolridge, 2002). Where variables are found to have unit root, the variable are differentiated and equations run using the differentiated variable.

3.11.6 Test for Fixed or Random effect

To determine whether to run a fixed model or a random model, Hausman specification test was used. The consistency and efficiency of the random effect (RE) and fixed effect (FE) estimators was considered. This test tried to determine whether there exist significant correlation between the unobserved specifics random effects and the regressors. Where no correlation is detected then the random effect was used while such correlation was detected, fixed effect model will be appropriate (Elhorst, 2003). In case the fixed model is recommended, a test for inclusion of time fixed effects was undertaken in the study estimation. Where random effect model is found suitable, test as to whether the data have panel effects was undertaken (Allison, 2009).

3.12 Ethical Consideration

Ethics is the study of right and wrong conduct (Resnik, Rasmussen, & Kissling, 2015). The study ensured that ethical considerations are adhered to by seeking permission from the relevant authorities before conducting the study. A research authorization letter was sought from

Kenyatta University and research permit from NACOSTI. The data sources were acknowledged and relevant literature was reviewed, cited and referenced.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION OF FINDINGS AND DISCUSSIONS

4.1 Introduction

Grounded on the analysis model, reliability and diagnostics tests, this chapter presents the data analysis, results, interpretation and discussion of findings. The study results are presentations based on the objectives and study hypothesis. The chapter also represents the results for an analysis of the link between WCM and financial performance of manufacturing and allied firms listed at the NSE, Kenya.

4.2 Descriptive Statistics

Descriptive statistics were often utilized to elucidate the fundamental characteristics of the data in a research and provide concise summaries pertaining to the sample and the measurements (Mugenda and Mugenda, 2003). The research findings were derived through the calculation of several statistical measures, including the mean, standard deviation, maximum, and lowest values acquired from the examination of the study data. The mean was intentionally employed to represent the centre tendency of the research variable, while the standard deviation was utilised to quantify the dispersion or range of the study data from the central values, correspondingly. The variables for the research work were: Accounts receivables management practices measured by Credit sales/ average accounts receivable x Days in period (X1), Inventory Management practices measured as Cost of goods sold/average inventory x Days in period (X2), Accounts payable management practices measured as Average accounts payable/ (Total credit purchases x days in period) (X3), Cash management practices measured in Days inventory outstanding + day

sales outstanding- day's payable outstanding, GDP measured using GDP growth rate and finally and Financial performance measured as Net income/ Average Total Assets.

4.2.1 Descriptive Statistics for Account Receivables Management (X1).

The summary of descriptive statistics for A/C receivables management practices measured by credit sales/ average accounts receivable X Days in period (X1) averaged quarterly for the year period 2011 to 2020 as exhibited in table 4.1 below.

Table 4.1: Descriptive Statistics for Account receivables management

	N	Min	Max	Mean	Std Dev
Account receivable management practices.	40	.2227	.8457	.7626	.1347
Valid N (List)	40				

Source; Author 2023

The parameter adopted for account receivables management practices was the averaged quarterly for the year period 2011 to 2020. This research utilised the metric of credit sales divided by average accounts receivable multiplied by the number of days in the period to assess the efficacy of a company's receivables collection process, specifically pertaining to the retrieval of funds owed by customers. The study findings were exhibited in table 4.1 which showed that, the mean was 0.7626 with a std dev of 0.1347. The minimum figure over that entire period was 0.2227 while the maximum was 0.8457 as depicted by the 9 manufacturing and Allied firms.

Based on Table 4.1 results for descriptive statistics on the weighted quarterly manufacturing sector Accounts Receivable measured using credit sales/ average accounts receivable x days in period and averaged for the ten year period 2011 to 2020, mean was a modest 0.7626 with relatively small standard deviation of 0.1347, given that, the basic understanding of low credit sales average accounts receivable indicating that majority of the manufacturing and allied firms collection of accounts receivable are modestly efficient and have a high proportion of quality customers that pay their debts on a timely basis. The findings from the study shows that managers can increase their firms' profits by reducing credit levels granted by their customers.

4.2.2 Descriptive Statistics for Inventory management practices

The summary of descriptive statistics for Inventory management practices analyzed by the weighted quarterly manufacturing and Allied firms measured as cost of goods sold/average inventory x days in period for the ten-year period 2011 to 2024 as exhibited in table 4.2 below:

Table 4.2: Descriptive Statistics for Inventory management practices

	N	Min	Max	Mean	Std Dev
Inventory turnover period	40	2.1354	6.1007	3.7822	1.0508
Valid N (List)	40				

Source; Author 2023

The key measurement for Inventory Management in this study was measured as cost of goods sold/average inventory x days in period for the ten-year period 2011 to 2020. The results as indicated by the table 4.2 show an average mean of 3.7822 with a std dev of 1.0508. The

minimum and maximum figures recorded were 6.1007 and 2.1304 respectively. This research examines the management of the cost of goods sold in relation to the average inventory by comparing the cost of goods sold with the average inventory within a certain time. The average means for weighted inventory conversion ratio and averaged for the ten year period 2011 to2020 indicates a relatively low inventory turnover rate which is in this case attributed to the fact that Kenyan manufacturing firms are known for their cash-on-order supply and hoarding practises, which include prepositioning inventory to meet rapidly increasing demand or anticipating price increases or shortages. This observation is consistent with the findings of Mathuva's (2010) research, which demonstrated that excessive investment in inventories might impede the allocation of money towards activities that generate income.

4.2.3 Descriptive Statistics for accounts payable turnover period

The summary of descriptive statistics for accounts payable turnover period analyzed by Average accounts payable of the weighted quarterly manufacturing and Allied firms measured as Average accounts payable/ (Total credit purchases * days in period) for ten-year period 2011 to 2020 as exhibited in table 4.3 below:

Table 4.3: Descriptive Statistics for accounts payable turnover period

	N	Min	Max	Mean	Std Dev
Accounts payable turnover period	40	1.8679	3.9009	2.6989	.7162
Valid N (List)	40				

Source : Author 2023

The key measurement for accounts payable turnover period in this study was measured as Average accounts payable/ (Total credit purchases * days in period) for a period of ten years 2011 to 2020.The result as indicated by the table 4.3 show an average mean of 2.6989 with a standard deviation of 0.7162. The minimum and maximum figures recorded were 1.8679 and 3.9009 respectively. Accounts payable turnover in this study shows debt management policies, monitoring accounts receivables and debts collection policy. Consequently, a relatively low mean of 2.6989 revealed by the current study implies majority of the manufacturing firms engaged in the study take longer to pay off their supplies. These results are supported by the research conducted by Naimulbari (2012), which revealed that firms tend to minimize the amount of cash they hold in their disbursement tills. The underlying concept of these systems is on maintaining the bare minimum funds required to cover the operational expenses of the firm, hence potentially enhancing operational efficiency (Marenya, 2020).

4.2.4 Descriptive Statistics for cash management practices.

The summary of descriptive statistics for statistics for cash management practices analyzed by average accounts payable of the weighted quarterly manufacturing and Allied firms measured as Days inventory outstanding + day sales outstanding- day's payable for ten-year period 2011 to 2020 as exhibited in table 4.5 below:

Table 4.4: Descriptive Statistics for cash management practices.

	N	Min	Max	Mean	Std Dev
Cash management practices.	40	224.91	244.31	233.88	6.3129
Valid N (List)	40				

Source: 2023

The parameter utilized to analyze cash management was averaged quarterly manufacturing and allied firms by average accounts payable averaged for ten -year period 2010 to 2020. The study findings showed that the mean and standard deviation is 233.88 and 6.3129 respectively. The study results showed in the table 4.5 also showed that, the minimum and maximum figures were 224.91 and 244.31 respectively. Generally, as per the study, cash management practices is indicated by cash budget preparation, Cash budget review and determining the ideal cash balance. Consequently, the weighted quarterly of manufacturing sector cash management practices averaged for the ten- year period 2011 to 2020. Relatively low mean of 233.88 implied that majority of the manufacturing sector had a relatively shorter conversion period that implies majority of them were good at selling inventories and recovering cash from those sales while paying suppliers.

4.2.5 Descriptive Statistics for financial performance

The summary of descriptive statistics for financial performance of manufacturing firms measured by ROE is as exhibited in table 4.5 below:

Table 4.5; Descriptive Statistics for financial performance

	N	Min	Max	Mean	Std Dev
Financial performance	40	.1461	.8513	.5214	.1719
Valid N (List)	40				

Source: 2023

The parameter used to analyze financial performance of manufacturing and Allied firms was weighted quarterly manufacturing sector return on Equity and averaged for the ten-year period 2011 to 2020. The study results showed in table 4.6 that, the weighted quarterly manufacturing sector return on equity and averaged for ten-year period 2011 to 2020 was 0.5214 and 0.1719 as the standard deviation. The minimum figure was 0.1461 and a maximum of 0.8513. Basically, ROE gives management, an assessment of the level of efficiency with which a corporation utilizes its money to create returns. Consequently, a relatively low return on equity mean of 0.5214 implies that majority of the manufacturing and Allied firms were not effective in using capital to make returns to the company.

4.2.6 Summary of Descriptive Results

Table 4.6; exhibits all the descriptive outcomes for the five variables namely; Account receivable management practices, inventory turnover management practices, Account payable management practices, Cash management practices and finally financial performance.

Table 4.6: Summary of Descriptive Results

Variable	N	Min	Max	Mean	Std Dev
Account receivable management practices.	40	.2227	.8457	.7626	.1347
Inventory turnover period	40	2.1354	6.1007	3.7822	1.0508
Accounts payable turnover period	40	1.8679	3.9009	2.6989	.7162
Cash management practices.	40	224.91	244.31	233.88	6.3129
Financial performance	40	.1461	.8513	.5214	.1719

Source Researcher 2023

The parameter of firm size analyzed was capital adequacy ratio, the study results showed a relatively high mean of 5.75 implied that majority of the manufacturing companies engaged in the study have high capital adequacy ratio. On cash management the study used Cash Conversion Cycle as parameter. The study results showed that the weighted quarterly manufacturing sector cash conversion cycle ratio and averaged for the eleven-year period 2006 to 2016 relatively low mean of 0.446907 implied that, majority of the companies in the manufacturing sector had a relatively shorter cash conversion cycle, that implies majority of them were good at selling inventories and recovering cash from those sales while paying suppliers. On accounts payable management the study used accounts payable turnover ratio as parameter. The study results showed a relatively low mean of 2.3031 revealed by the current

study implies majority of the manufacturing companies engaged in the study take longer to pay off their suppliers.

About inventory management, the study used Inventory Turnover ratio as parameter, the study results as summarized in Table 4.7 showed that, the average means for weighted Inventory conversion ratio and averaged for the eleven year period 2006 to 2016 indicates a relatively low inventory turnover rate which is in this case attributed to the fact that manufacturing companies in Kenya are characterized by cash on order basis supplies and hoarding, such as, in cases when there is an anticipation of price increases (resulting in the pre-positioning of goods to cater to rapidly increasing demand) or when shortages are projected.. And finally, accounts receivable management was measured using accounts receivable turnover ratio, the study results showed a mean of 0.6067 which implied a modest accounts receivable turnover ratio indicating that a majority of the manufacturing company's collection of accounts receivable are modestly efficient and have a high proportion of quality customers that pay their debts on a timely basis.

4.3 Diagnostic Tests

To make inferences on the relationships between variables under study, diagnostic tests were carried out. The tests were carried out purposely to establish accurately the need to empirically analyze the data using the multiple regression analysis. Mugenda and Mugenda, (2003) assert that regression model is accurately estimated when the basic assumptions are met. Therefore, the study found it necessary to determine whether, normality, Multicollinearity, autocorrelation, Heteroskedasticity and Panel Unit root tests for multiple regression analysis assumptions were met.

4.3.1 Normality Test

In this study, normality test was assessed using Shapiro- wilk tests to show whether, Accounts receivables management practices, Inventory Management practices, Accounts payable management practices Cash management practices GDP measured and financial performance. According to Razali, Wah & Bee (2011) Shapiro- will has the best power analysis for a given significance and that this may detect even trivial departure from the null hypothesis. The null hypothesis provided in this test asserts that the underlying population follows a normal distribution. If the p-value is found to be less than 0.05, it indicates that the null hypothesis may be rejected, providing evidence that the data being tested does not follow a normal distribution. Conversely, when the p-value exceeds 0.05, it is not possible to reject the null hypothesis that the data originates from a population with a normal distribution. The study findings indicated that the p-values for accounts receivable management practices, inventory management practices, accounts payable management practices, cash management practices, GDP, and financial performance data were greater than 0.05. This suggests that the data followed a normal distribution, as determined by a normality test. Due to this circumstance, the investigation was unable to reject the null hypothesis, which posits that the data values conform to a normal distribution at a significance level of 95%. Consequently, it was determined that the residuals exhibited normal behavior, as shown by the findings exhibited in table 4.7.

Table 4.7 Normality Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Return on assets	.202	40	.000	.891	40	.001

a. Lilliefors Significance Correction

a. Design: Intercept + Accounts Receivable Management practices + Inventory Management practices + Accounts Payable management practices + Cash Management practices + GDP growth rate.

Source; Author 2023

3.3.2 Multi collinearity Test

Correlation matrix was used in the study to detect Multicollinearity where threshold of Multicollinearity will be 0.8 (Blumberg, Cooper & Schindler, 2008). Where Multicollinearity was to be detected, the variables were centered in order to standardize the predictor as exhibited in Table 4.8 below:

Table 4.8: Multi collinearity Test

Model	Correlation matrix
Accounts receivable turnover period.	0.419
Inventory turnover period	0.057
Accounts payable turnover period	0.300
Cash conversion cycle	-0.418
Return on Equity	1000

Source; Author 2023

4.3.3 Heteroscedasticity Test

The study tested Heteroskedasticity using modified Wald test where the null hypothesis was Homoscedasticity while alternative was Heteroskedasticity. Where the P value was less than critical level of significance at 0.05, then the null hypothesis was accepted and resulting residuals may be homoscedastic (Poi & Wiggins, 2001) as exhibited in table 4.9.

Table 4.9: Heteroscedasticity Test

Panel Model	Chi-Square stat	P- value
1	103.45	0.000

Heteroscedasticity Test: White
Null Hypothesis: Homoscedasticity
Source Author 2023

From table 4.9 above detections showed that chi-square statistics for model 1

were significant at 5% level, hence null hypothesis test white for testing heteroscedasticity was rejected. Explanation showed that heteroscedasticity was available and model data was recommended. The study used feasible generalized least of square.

4.3.4 Autocorrelation test

Durbin Watson (DW) statistics was utilized to test Autocorrelation. Durbin Watson statistic lies between zero to four. p- values less than 0 means there is positive correlation while values greater than or equal to 4 means there is negative autocorrelation. The study will adopt a Durbin Watson of less than 0 to indicate negative autocorrelation and value greater than 4 showing positive autocorrelation. A value near 2 is the best showing no correlation. The vale between 0-4 shows no autocorrelation as shown in Table 4.10 below.

Table: 4.10: Autocorrelation test

Variable	Value	Status
Durbin Watson	0.0432	No

Autocorrelation

H0: No autocorrelation

H1: Presence of autocorrelation

Table 4.11 above shows a Durbin Watson value of 0.0432, therefore it indicates that the value was between 0-4 thus implying that there is no autocorrelation between model variables. This implies that variances of the error term were not interdependence. The study accepted the null hypothesis.

4.3.5 Panel Unit Root Test

Researcher examined the study variables to test if the panel data was stationary.

Table 4.11: Panel Unit Root Test

Variable	Coefficient	P-Value
Accounts receivable	-0.418	0.004
Inventory Turnover	0.300	0.300
Accounts Payable	0.057	0.365
Cash Management	0.419	0.004
Average	0.2985 0.1682	

H0; Panel Data
H1; Stationary
Source Author 2023

Statistics conducted in the table 4.11 above shows regressed results of (0.02985>0.05) Null hypothesis was rejected because P values were greater than 0.05 showing that variables were stationary and significant. Statistic tested showed that model data was stationary when tested at significant level of 5%. P - Values tested were less than 0.05

4.4 Testing Hypothesis

To examine the hypotheses, the researchers adopted multiple regression analysis to empirically evaluate the research hypothesis in relation to the acceptance or rejection of the null hypotheses. The researchers used Multiple Regression analysis to ascertain the degree and significance of the

association between the variables, as well as to evaluate the proposed hypotheses. The hypothesis was tested at 95% level of confidence in order to draw conclusion.

4.4.1 Results of Hypothesis Testing

Based on the findings of the regression analysis, the research hypotheses (H01- H04) may be discussed. The regression model has determined that the financial performance of manufacturing and allied firms listed at the NSE, Kenya is influenced by factors such as Accounts Receivable management practises, Inventory management practises, Accounts payable management practises, and Cash management practises, with a coefficient of 203.903.

Hypothesis one (H_{01}) Pearson correlation test conducted is test correlation between accounts receivable management practices and financial performance of manufacturing and allied firms listed at the NSE. As measured by return on equity reveals that there is enough evidence to reject the null hypothesis (P=0.030) and conclude that accounts receivable management practices significantly affect financial performance of manufacturing and allied firms listed at the NSE. In terms of strength and direction of correlation, the findings shows that accounts receivable management practices and financial performance is positively correlated but weak (r=-0.418). The average payment period for the period spanning from 2011 to 2020 exhibits statistical significance and a positive correlation with the financial well-being of manufacturing firms. This finding aligns with the conclusions drawn by Mathuva (2010), who posited that there exists a positive relationship between profitability and the average payment period. This implies that delaying accounts payable by just one day increases the likelihood of realising profits. Nevertheless, in the event that the firm is provided with discounts for prompt payment,

shortening the payment time may result in more expenses being incurred by the company. Hence, there exists a positive correlation between the average payment time and profitability.

Hypothesis two (H_{02}) Pearson correlation test conducted is test correlation between inventory turnover management practices and financial performance of manufacturing and allied firms listed at the NSE. As measured by return on equity reveals that there is enough evidence to reject the null hypothesis (P=0.04) and conclude that inventory turnover management practices significantly affect financial performance of manufacturing and allied firms listed at the NSE. In terms of strength and direction of correlation, the findings shows that inventory turnover management practices and financial performance is positively correlated but weak (r=0.3). This suggests that there is a positive correlation between the average quarterly inventory management practises from 2011 to 2020 and the financial performance of manufacturing firms. This relationship is also supported by Wachira's (2015) study, which found that reducing stock holdings leads to shorter stock transformation periods and increased profitability for companies, while the opposite is true when stock holdings are higher.

Hypothesis Three (H_{03}) Pearson correlation test conducted is test correlation between accounts payable management practices and financial performance of manufacturing and allied firms listed at the NSE. As measured by return on equity reveals that there is enough evidence to accept the null hypothesis (P=0.365) and conclude that accounts payable management practices significantly affect financial performance of manufacturing and allied firms listed at the NSE. In terms of strength and direction of correlation, the findings shows that accounts payable management practices and financial performance is positive correlated but very weak r=0.057.

The average payment period for the period spanning from 2011 to 2020 exhibits statistical significance and a positive correlation with the financial well-being of manufacturing firms. This finding aligns with the conclusions drawn by Mathuva (2010), who posited that there exists a negative relationship between profitability and the average payment period. This implies that any delay in settling accounts payable by even a single day may hinder the realisation of profits. Nevertheless, in the event that the firm is provided with discounts for prompt payment, shortening the payment time may result in more expenses being incurred by the company. Hence, there exists a positive correlation between the average payment time and profitability.

Hypothesis Three (H_{04}) Pearson correlation test conducted is test correlation between cash management practices and financial performance of manufacturing and allied firms listed at the NSE. As measured by return on equity reveals that there is enough evidence to accept the null hypothesis (P= 0.004) and conclude that cash management practices significantly affect financial performance of manufacturing and allied firms listed at the NSE. In terms of strength and direction of correlation, the findings shows that cash management practices and financial performance is positive correlated but very weak r=0.419. Averaged for the ten-year period 2011 to 2020 is statistically significant and positively related to the financial performance of manufacturing firms. The results of this research are consistent with the findings of Salih et al. (2011), who also examined the association between profitability and WCM among firms listed on the Istanbul Stock Exchange from 2005 to 2009. The research revealed a favourable correlation between the reduction in the cash cycle and the ROA.

Table 4.12: Summary for Hypothesis Testing

Hypothesis	**Pearson correlation**	**P-Value**	**Sig**	**Decision**
H_{01}: Inventory turnover management practices do not significantly affect financial performance of manufacturing and allied firms listed in NSE.	Positively correlated but weak, *r*=0.3	0.004	Significant	Reject
H_{02}: Accounts receivable management practices does not significantly affect financial performance of manufacturing and allied firms listed in NSE.	Negatively correlated and weak *r*=-418	0.030	Significant	Reject
H_{03}; Accounts payable management practices do not significantly affect financial performance of manufacturing and allied firms listed in NSE.	Positive correlated but very weak *r*=0.057	0.365	Not Significance	Accept
H_{04}: Cash management practices do not significantly affect financial performance of manufacturing and allied firms listed in NSE.	Positively related but weak *r*=0.419	0.004	Significant	Reject

Source: Research data, (2023)

4.5 Multiple Regression Results

After confirming the fulfilment of all the assumptions of OLS regression, including normality, multicollinearity, autocorrelation, heteroskedasticity, and panel unit root tests, the necessary computations were performed. Table 4.12 presents the model summary findings, which provide an estimation of the explained variations in the financial performance of manufacturing and

allied firms listed at the NSE, Kenya. These variations are measured by the R square change between WCM components. Table 4.12 exhibits the regression results on model summary.

Table 4.13: Multiple Regression Results

		B	Std. Error	Beta		
1	(Constant)	203.903	1.960		104.018	.000
	Accounts Receivable Management Practices	10.073	2.227	.387	4.523	.000
	Inventory Management practices	3.796	.605	.477	6.278	.000
	Accounts payable Management practices	1.154	.818	.121	1.410	.017
	Cash Management practices	8.185	2.403	.227	3.406	.002

a. Dependent Variable: ROE

Source: Author 2023.

4.6 Analysis of Variance (ANOVA)

The following table depicts the results of ANOVA from the study.

Table 4.14: Analysis of Variance (ANOVA)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.637	4	.159	10.782	.000[b]
	Residual	.517	35	.015		
	Total	1.153	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), Cash conversion cycle, A/c Receivable turnover period, A/c payable turnover period, Inventory turnover period

In an attempt to test the significant of the model, the study used ANOVA. From the Table: the P - value is 0.000b which is less than 0.05 thus the model is statistically significance in predicting the Independent variables (Accounts payable management practices, Inventory turnover management practices, Accounts payable management practices and cash management practices) influence on financial performance of manufacturing and allied firms listed at the NSE, Kenya. The crucial F-value with a significance level of 4% is 1.153. The estimated F value (10.782) exceeding the required F value indicates that the suggested model has shown a good fit.

4.7 Regression Coefficients with GDP as additional variable

From the study the results of Regression Coefficients with GDP as additional variable are as shown in Table 4.15 below.

Table 4.15: Regression Coefficients with GDP as additional variable

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-5.054	1.386		-3.647	.001	-7.867	-2.240					
	A/c Receivable turnover period	-.792	.152	-.620	-5.196	.000	-1.101	-.483	-.418	-.660	-.588	.898	1.114
	Inventory turnover period	-.070	.039	-.429	-1.818	.078	-.149	.008	.300	-.294	-.206	.229	4.359
	A/c payable turnover period	-.032	.030	-.133	-1.056	.298	-.093	.029	.057	-.176	-.119	.813	1.230
	Cash conversion cycle	.028	.007	1.025	4.230	.000	.015	.041	.419	.582	.479	.218	4.588

a. Dependent Variable: Return on equity

Source: Research data, (2023)

The model has determined that factoring accounts receivable management practices, Inventory management practices, Accounts payable management practices and cash management practices included as an independent variable at constant zero, the financial performance of manufacturing and allied firms is at 6.054. From the study findings, the researcher established that, cash management practices had the greatest influence on the financial performance of manufacturing and allied firms at $\beta = 1.026$ with p-value=0.000 implying a positive and significant relationship.

The second most influential variable on the financial performance of manufacturing and allied firms listed at the NSE according to the study is Accounts receivable management practices with

a β= 0.620 with p-value=0.000. This suggests that Cash Management has importance and exhibits a favourable correlation with the financial well-being of manufacturing and allied firms.

The third most influential variable was Inventory management practices. The study findings showed that, Inventory management had a β= 0.428 with p-value= 0.078 implying a positive and significant relationship with financial performance of manufacturing and allied firms listed at the NSE Kenya.

Lastly, Accounts payable was found to be the least influential on the financial performance of manufacturing and allied firms as shown by β=0.133 implying a positive however insignificant relationship with the Financial performance of manufacturing and allied firms listed at the NSE, Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusion and recommendations on the research of the study. The general objective of the study is to determine the relationship between WCM practices and financial performance of manufacturing and allied firms listed in NSE, Kenya. The summary, conclusion and recommendations are based on the objectives of the study and the findings drawn from the analysis and interpretations.

5.1 Summary of the study findings

The main purpose of this research was to investigate the impact of WCM on the financial performance of manufacturing and allied firms listed on the NSE, Kenya. The multiple regression analysis results explicitly showed that variations in working capital elements tested that is; Accounts receivable Management, Inventory management, Accounts payable management and Cash management explain about 84.2% of the variations on financial performance of listed category of manufacturing and allied firms at NSE, Kenya.

The first objective aimed to determine the effect of account receivable management practices on financial performance of manufacturing and allied firms listed at the NSE, Kenya. The multiple regression analysis results showed that account receivables management as measured by Credit sales/ average accounts receivable * Days in

period averaged for the ten-year period 2011 to 2020 is significant and positively related to the financial performance of listed manufacturing and allied firms in Kenya as evidenced by $\gamma = 0.3$ with P- value = 0.004 at 5% level of significance.

The second objective was to ascertain the effect of inventory management practices on financial performance of manufacturing and allied firms listed in the NSE, Kenya measured in Cost of goods sold/average inventory ×Days in period. The multiple regression results showed that there was a statistically significant and positive effect of inventory management as measured by weighted quarterly manufacturing sector inventory conversion ratio and averaged for the eleven-year period 2011 to 2020 evidenced $\gamma = 0.418$ with a P-value =0.030 at 5% level of significance.

On the third objective, the specific objective was to ascertain the effect of account payables management practices on financial performance of listed manufacturing and allied firms in Kenya measured in. The findings from the multiple regression analysis indicate a positive and statistically significant connection between account payables management practises, specifically measured by the average accounts payable divided by the product of total credit purchases and the number of days in the period, and the financial performance of manufacturing and allied firms listed in Kenya. This relationship was observed over a ten-year period from 2011 to 2022. Additionally, the study also established that, account payables management had the least influence on financial performance of listed manufacturing and allied firms in Kenya at $\gamma = 0.057$ with P- value = 0.365 at 5% level of significance.

The fourth objective of this research was to investigate the impact of cash management

on the financial performance of manufacturing and allied firms listed in Kenya. The findings of the multiple regression analysis indicate a significant and positive relationship between cash management, as measured by the composite variable of Days Inventory Outstanding, Day Sales Outstanding, and Days Payable Outstanding, and the financial performance of listed manufacturing and allied firms in Kenya. This relationship is supported by a gamma coefficient (γ) of 0.419, which is statistically significant at a 5% level of significance, as evidenced by a p-value of 0.004. These results are based on data collected over a ten-year period from 2011 to 2020.

5.2 Conclusion

The study's findings led to the formulation of several conclusions. These conclusions revolve around the objective of WCM, which is to ensure the continuity of a firm's operations and its capacity to meet both short-term debt obligations and upcoming operational expenses. In spite of these good intentions, poor working capital management may jeopardize the company ability to finance its day-to-day operations. Accordingly, in the first objective, account receivables management was found to be positively and significantly related to the financial performance of listed manufacturing and allied firms in Kenya. Hence, it can be inferred that manufacturing firms need to consider account receivables management as a managerial strategy to enhance operational efficiency and profitability.

On the second objective, it was discovered that inventory control significantly and favourably affected the financial results of Kenyan listed manufacturing and related

companies. Thus, the research came to the conclusion that listed manufacturing and allied firms in Kenya may perform better financially as a result of efficient inventory management.

On the third objective, it was found that there was a statistically significant and favourable relationship between account payables management and the financial performance of manufacturing and allied firms listed in Kenya. This observation demonstrates a positive correlation between the rise in payables and the corresponding improvement in the financial performance of these organisations. Thus, management should take accounts payable as a crucial factor in assessing financial performance.

On the fourth objective, cash management was found to have a statistically significant and positive effect on the financial performance of listed manufacturing and allied firms in Kenya. Accordingly, the study concluded that, cash management may lead to better financial performance of listed manufacturing and allied firms in Kenya.

5.3 Recommendations

Based on the empirical evidence presented in the study, the researcher has formulated the following recommendations;

5.3.1 Recommendation for Policy

The results of the research indicate that the management of accounts payable has a statistically significant and favourable impact on the financial performance of manufacturing and allied firms that are listed in Kenya. Consequently, the manufacturing firms should adopt a monitoring system that highlights any payment

made earlier than the due date required by the supplier.

Additionally, the research conducted demonstrated that inventory management had a statistically significant and favourable impact on the financial performance of manufacturing and allied firms listed in Kenya. The report suggests that manufacturing organisations should consider implementing just-in-time buying for qualifying raw materials and goods. The proposed strategy aims to optimise inventory management by strategically reducing on-hand stocks via the use of delayed purchasing and the receipt of goods in smaller amounts.

5.3.2 Recommendation for Practice

It was ascertained that, there was a statistically significant and positive effect of cash management on to financial performance of listed manufacturing and allied firms in Kenya. Based on the aforementioned finding, the research suggests that investment durations should not surpass the forecasting period. Furthermore, if a company is inclined to allocate funds towards relatively illiquid investments, it is advisable to refrain from making investments that cannot be accessed for durations exceeding the company's current forecasting period.

Furthermore, it is recommended that manufacturing and allied firms in Kenya establish a policy whereby the sales staff are prohibited from offering customers credit terms that exceed a predetermined number of days, as determined by the credit department. Any exceptions to this policy should require prior approval from a senior manager. Additionally, it is advisable for firms to utilise an industry-specific formula to

determine a reasonable maximum credit amount to offer customers. In cases where the determined amount is exceeded, the terms should be subject to approval by a senior manager.

5.4 Limitations of the Study

First, availability of data to include analysis of desired rations for the study was restricted with regards to the data available using secondary sources. The researcher however managed to acquire variables key parameters data and was satisfied with the validity of the data used.

Secondly, the study adopted explanatory survey research design, though explanatory survey research design is usually preferred to help us find out the problem that was not studied in- depth before. More often than not the research design supplies qualitative information and interpretation of the findings which is usually judgmental.

Finally, the options for each question in this study's variable analysis were selected based on ratios utilised in prior research. It is important to note that alternate choices may not have been taken into account. The survey's conclusions, which draw upon several sources of knowledge and employ objective data, have the potential to provide further perspectives.

5.5 Suggestions for Further Research

The study suggests that, a similar study can be replicated in other firms not allied to NSE and other organizations in Kenya given that this study was for listed

manufacturing and allied firms only, so as to compare results. This study has successfully demonstrated that a significant portion, specifically 55.2%, of the fluctuations in the financial performance of manufacturing and allied firms listed in Kenya can be attributed to variances in their practises of managing working capital. These practises encompass the management of accounts receivable, inventory, accounts payable, and cash. Therefore, it is crucial to elucidate the residual variation, and further research may be conducted to explore other factors that might account for these determinants.

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APPENDIX 1 LIST OF ACTIVITIES

Activity	**August, 2022**	**September, 2022**	**October, 2022**	**December , 2022**
Selection of Topic				
Topic approval				
Research proposal writing				
Questionnaire				
Project Submission				

APPENDIX II: BUDGET

Examination Items	Amount (Ksh)
Flash disk	3,000
Stationery	15,000
Transport	20,000
Telephone	20,000
Internet Cost	20,000
Consultation fee	5000
Laptop (HP)	35000
Total	**118,000**

APPENDIX III LIST OF MANUFACTURING AND ALLIED COMPANIES

1. B.O.C Kenya Ltd
2. British American Tobacco Kenya ltd
3. Carbacid Investments ltd

4. East African Breweries ltd
5. Mumias Sugar Co. Ltd
6. Unga Group ltd
7. Eveready East Africa Ltd
8. Kenya Orchards Ltd
9. Flame Tree Group Holdings Ltd

Data Collection Instrument

Year	Inventory turnover management practices	Accounts receivable management practices	Accounts payable management practices	Cash management practices	Return on equity
2011	12.538/4	3.040/4	11.746/4	901.52/4	1.314/4
2012	11.544/4	3.227/4	9.643/4	907.9/4	0.881/4
2013	15.541/4	3.367/4	9.615/4	934.84/4	1.431/4
2014	15.494/4	3.303/4	10.602/4	944.52/4	2.008/4
2015	16.477/4	3.271/4	9.567/4	951.79/4	2.49/4
2016	20.406/4	3.112/4	14.510/4	964.01/4	2.498/4
2017	20.320/4	3.018/4	13.480/4	937.02/4	2.399/4
2018	18.909/4	3.006/4	13.417/4	931.79/4	2.208/4
2019	18.920/4	2.994/4	13.408/4	930.79/4	2.112/4