EFFECT OF CORPORATE GOVERNANCE PRACTICES ON WORKING CAPITAL MANAGEMENT FOR LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

NOVEMBER, 2017

DECLARATION

This research paper is my original work and has not been presented for any award in any other university.

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D63/65242/2013

Supervisor

This research proposal has been submitted with my approval as the university supervisor.

Signed…………………………………………… Date……………………………...

Prof. Josiah Aduda

DEDICATION

I dedicate this project to my family for their encouragement throughout the duration of this project. I thank the Lord for letting them be part of my life and my success.

ACKNOWLEDGEMENTS

I acknowledge the Lord's presence in every decision and effort I made throughout this study. I would not have made it this far without Him.

My sincerest and special thanks are to my family for their emotional support and prayers which made me never give up on the research project.

I also really appreciate the great support I was accorded by my able supervisor Prof. Aduda. Truly, I owe the success of this study to his guidance, suggestions, critique and advice. He was always present whenever I needed his assistance. May God bless you abundantly.

My gratitude also goes to my moderator, Dr. Lishenga, whose invaluable keenness on my project enabled him to identify crucial areas that needed improvement and clarification.

I also wish to appreciate my department Chairman, Dr. Mirie, for being patient with me, and allowing me to proceed with the project despite the tight deadlines that were in place.

Dr. Iraya and Dr. Nyamute, I really thank you for the advice I got during the presentation of my proposal. The corrections had a strong impact on my entire project.

My friendly and helpful classmates, I very much appreciate your advice and encouragement.

ABSTRACT

Corporate governance strategies must take into consideration the interests of stakeholders both in the short term and in the long term. Working capital management involves ensuring that the firm's operations are carried out efficiently to enable the firm to meet its financial obligations to suppliers as well as its operational needs. Improperly managed working capital has the potential to adversely affect the running of the organization. Corporate governance aspects such as size of the audit committee, the board size and board composition have diverse aspects on working capital management in firms. The executive directors who also have administrative functions in the organization have an in-depth understanding of the firm's operations and requirements from an insider's perspective. They are thus critical in enabling the board to reach adequate working capital requirements and management aspects. This study aimed to establish the effect of corporate governance practices on working capital management for firms listed at the Nairobi Securities Exchange (NSE). It looked into the influence of the independence of the board, the size of the board and the size of the audit committee on various working capital management aspects for firms listed at the NSE. The study utilized a descriptive research design in order to study the variables in their natural form. The target population was the 65 companies listed at the NSE. The study used the census survey since all the companies were examined. The annual reports of listed firms for five years from 2012 to 2016 were used to collect secondary data obtained from the websites of the NSE and the Capital Markets Authority (CMA). Data was analysed using Statistical Packages for Social Sciences (SPSS). Descriptive analysis including the means, frequency distributions and percentages were used to reveal patterns. Multiple linear regression was used for inferential statistics. The regression analysis indicated that the days sales outstanding had a negative relationship with the number of directors (board size), proportion of non-executive directors (independence of the board), number of audit committee members (size of the audit committee), firm size and sales growth independently. The regression analysis results indicated that inventory holding period had a positive relationship with the board size due to a regression coefficient of 24.468. The board size, independence of the board and the size of the audit committee had a positive influence on days payable outstanding, but firm size and sales growth had negative relationships on days payable outstanding. The study further found that the corporate governance metrics and firm size and sales growth are jointly positively correlated (R=0.650) with the days payable outstanding to the tune of 0.650. The independence of the board, size of the audit committee, firm size and sales growth had negative

relationships with inventory holding period due to regression coefficients of -248.53, -39.165, -71.090, and -0.845 respectively. Since the regression analysis indicated that both the days sales outstanding and the days payable outstanding each had negative relationships with the firm size and the sales growth, the conclusion was therefore that the big firms had a lower number of days sales outstanding and a lower number of days payable outstanding compared to smaller firms. From the study's finding that the board size had a positive influence on the inventory holding period, it was recommended that the board size should be enhanced in the listed companies for there to be a positive influence on the inventory holding period. In the context of the days of payable outstanding, the board size, independence of the board and the size of the audit committee had positive regression coefficients. The study therefore recommended that these aspects should be emphasized in the firm in order for the days payable outstanding to improve. The study also recommended for further studies the examination of the corporate governance measures on working capital management based on segmentation of industries such as agricultural firms, manufacturing firms and others due to varying practices within the firms.

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ABBREVIATIONS AND ACRONYMS

ATS	Automated Trading System
CEO	Chief Executive Officer
CMA	Capital Markets Authority
NSE	Nairobi Securities Exchange
SPSS	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The process of managing a firm is of critical importance to its operations. Corporate governance has been conceptualized as a framework for ensuring that the interests of the stakeholders are adequately catered for in the process of managing a firm (Ibadin, 2012). In particular, corporate governance is critical to working capital management through management of working capital management dynamics. According to the agency theory, corporate governance is critical for the purposes of eliminating the moral hazard and information asymmetry challenges of an organization´s operations Mageto (2010). On the other hand, the stewardship theory and the stakeholders theory of corporate governance are critical for ensuring that the firm's stewards are able to give value in the working capital management aspects.

1.1.1 Corporate Governance

According to Jill (2014), corporate governance is a set of principles and procedures both inside and outside a firm designed to enable the firm to be accountable to all its stakeholders while at the same time ensuring that the same stakeholders are dealt with in a socially responsible manner in all the various undertakings of the firm.

Mageto (2010) examines corporate governance as a means through which organizations deal with the conflict of interest aspects within the organization amongst diverse players in the organization. These conflicts of interest often occur between the owners of the business and the employees to whom the owners have delegated the authority to run the organization on their behalf (Maina, 2012). The owners of the business often wish to maximize their return on investments and expect that the employees undertake their duties in a manner that enables actualization of this goal. However, the employees may act in a manner that enhances their self-interest and hence compromise the interests of the owners of the business.

Achchuthan and Kajananthan (2013) view corporate governance as the process of running the firm and creating accountability in the firm. This process may involve diverse aspects such as authority, accountability, control, direction, leadership and stewardship in the process of management. Corporate governance has also been conceptualized as a framework for ensuring that the interests of the stakeholders are adequately catered for in the process of managing a firm (Ibadin, 2012). The stakeholders involve all the persons that have the capacity to influence or be influenced by the operations of a firm. These may include the firm’s employees, management, customers, suppliers and shareholders amongst others. Corporate governance strategies must consider stakeholders’ interests in a sustainable manner.

1.1.2 Working Capital Management

In order for a firm to carry out its financial obligations to suppliers as well as its operational needs, working capital management aspects are deployed. These are undertaken through adequate management of its current assets and liabilities (Nyandemo, 2012). Ragen (2015) notes that firms must ensure that they manage their inventories, cash aspects, accounts receivable, and accounts payable. According to Kabethi (2013), cash management is a critical component of working capital management. The cash involves the money within the bank checking account as well as cash in hand. The cash management component of working capital management involves the planning and control of cash movement in and out of the business as well as within the business. One major objective of cash management is enabling the organization to have sufficient cash for operational purposes. Cash management also enables any excess cash which is not required in an organization to be utilized in an efficient way (Nyabenge, 2014). Therefore, cash management must be able to balance the lost business opportunity for holding too much cash and the inability of meeting its operational needs if it holds too little cash. Firms may hold cash for transactionary, precautionary and speculative reasons (Kiarie, 2013).

The accounts receivable are a critical component of working capital management. They are short term loans given to customers as a means of increasing the sales of a business. A firm may be forced to sell on credit as a market penetration strategy, as a need to defend its territory and in order to improve its sales levels. While the accounts receivable have the advantage of expanding the sales levels, these benefits are often threatened by the default risk of the customers. The firms must therefore balance between the benefits of increasing sales through accounts receivable and the potential risks of defaults as well as associated costs of recovery (Kosgey and Njiru, 2016). This monitoring is often undertaken through having a credit policy which regulates the terms and conditions of accounts receivable being granted to customers. The firm must also have a collection policy in order to be able to collect the outstanding debts through credit sales. The credit policy should also ensure that only vetted customers are issued with credit sales.

The accounts payable enable a firm to receive short term loans from its suppliers. This is often utilized in order for the firm to have goods to sell without committing its financial resources (Nyandemo, 2012). The advantages of accounts payable are that firms receive goods on credit and firms are able to examine the goods for their quality before they are put on sale. Since the accounts payable act as a cheap source of cash, firms must continually manage their accounts payable in order to continue to benefit from this cheap source of cash (Mwaniki, 2012). However, to maximally benefit from the accounts payable, the firm must drag their payments to the last possible date in order to have undertaken sales of the products to enable the firm generate cash for payments.

The inventory management is another critical component of working capital management. Inventories refer to stock of different commodities that the firm has throughout its production and logistics channels (Kariuki, 2012). There are different considerations to be undertaken in respect to inventory management. The firm must manage its work in progress inventory so as to reduce the production time and ensure that the finished goods are quickly available for sale.

On the other hand, the finished goods must be quickly sold in order to convert finished goods into sales. Inventory management therefore is concerned with the inventory being held at any given time (Achchuthan and Kajananthan, 2013). This will involve holding the optimum levels of inventory at the minimum possible costs. Too much inventory may be expensive to hold in terms of storage and insurance costs, risks of breakages and items going stale and losing their value. Too little inventory being held implies that there is a risk of stock outs, whereby items are no longer available for sale in the market.

1.1.3 Corporate Governance and Working Capital Management

The corporate governance metrics that influence working capital management include board size, independence of the board, audit committees amongst others. The audit committees play a critical role in the working capital management aspects. These roles include ensuring prudent financial reporting aspects, scrutiny of the financial practices in the firm, enhancement of proper control in financial practices and adherence to accounting standards in financial practices in an organization (Wamugo, Muathe and Makau, 2014). These aspects of the audit committees are impacted by the audit committee size, independence levels and qualification aspects (Thiuru, 2013). The qualification aspects of the audit committee are correlated with sound financial management aspects. Thus audit committees should have members of professional accounting bodies to enhance their financial expertise.

The independence of the board of directors and the size of the board is of importance in working capital management aspects of the firm. The independence in an audit committee is critical in enhancing diverse aspects of working capital management including proper functioning of cash and inventory accounts, accounts receivable and accounts payable (Afrifa, 2013). This is critical in eliminating agency problems. The board characteristics are critical in corporate governance formulation aspects. According to Kariuki (2012), smaller boards of directors are more efficient in decision making than too large boards.

The boards of directors are of great significance to the financial management of the firms since they are charged with supervision of the management functions (Kariuki, 2012). The board of directors' independence indicates that there is little possibility of agency problems occurring leading to improper allocation of funds. This independence is achievable through use of independent directors amongst the board of directors.

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) can trace its origins in the early 1920s where some informal exchange of shares was undertaken without the presence of a physical trading floor.

The recognition of Nairobi Stock Exchange by the London Stock Exchange in 1953 led to its formal registration in 1954 under the societies act. In 1988, the Nairobi Stock Exchange handled its first privatization of a public company through the privatization of Kenya Commercial Bank (Nairobi Securities Exchange., 2017). Another milestone was the automating of the trading through an Automated Trading System (ATS). The Nairobi Stock Exchange was to later change its name to Nairobi Securities Exchange (Nairobi Securities Exchange., 2017).

Firms at the NSE are listed in different categories, that is, agriculture (7 firms), automobiles and accessories (2 firms), banking (11 firms), construction and allied (5 firms), commercial and services (11 firms), energy and petroleum (5 firms), and insurance (6 firms). Others are investment (5 firms), investment services (1 firm), manufacturing and allied (9 firms), telecommunication and technology (1 firm), Real Estate Investment Trust (1 firm) and Exchange Traded Firm (1 firm) (Nairobi Securities Exchange., 2017). The aspects of corporate governance are of critical importance to the listed firms in Kenya. The Capital Markets Act sets minimum guidelines in respect to diverse aspects of corporate governance which have an influence on working capital management. The guidelines note that the board of directors should authorize significant capital expenditure of the firm and also identify corporate business opportunities as well as sufficient risk mitigation measures (Nairobi Securities Exchange., 2017).

1.1.5 Research Problem

Working capital management involves ensuring that the firm's operations are carried out efficiently to enable the firm to meet its financial obligations to suppliers as well as its operational needs. Improperly managed working capital has the potential to adversely affect the running of the organization.

Corporate governance has diverse aspects on working capital management in firms, such as audit committees, board size and board composition. Audit committees play diverse critical roles that impact on the working capital management (Afrifa, 2013). These roles include ensuring prudent financial reporting, scrutinizing the financial practices in the firm, ensuring control in financial practices, and ensuring adherence to accounting standards in financial practices in an organization. Both the executive and non-executive directors have their importance in proper functioning of the board and its corporate governance formulation aspects (Wamugo, Muathe, and Makau 2014). The executive directors who also have administrative functions in the organization have an in-depth understanding of the firms' operations and requirements from an insider's perspective. They are thus critical in enabling the board to reach adequate working capital requirements and management aspects.

Various scholars have examined the role of corporate governance in working capital management. These include America, Gill and Biger (2013) who focused on manufacturing firms and Jamalinesari and Soheili (2015) who studied firms listed at the Tehran Stock Exchange. Achchuthan and Kajananthan (2013) focused on similar concepts using manufacturing companies that had been listed in Sri Lanka. Kamau and Basweti (2013) examined the effect of the board size, number of board meetings and the CEO tenure on working capital management efficiency for listed firms in Kenya for years 2006 to 2012. The study found a weak positive relationship between corporate governance and working capital management efficiency. The current study differs from this one in terms of the corporate governance metrics studied. Lekaram (2014) studied how the board size and the independence of the board related to the financial performance of manufacturing companies at the NSE and found they had a significant relationship with the financial performance of the companies.

Karani (2013) did a similar study using listed Kenyan manufacturing firms. His study did not examine the corporate governance influence on working capital management at the NSE in a holistic manner, which is the focus of this study.

1.2 Research Objective

The research objective is to establish the effect of corporate governance practices on working capital management for firms listed at the Nairobi Securities Exchange.

1.3 Value of the Study

This study is of importance to the regulatory bodies in respect to the listed firms such as the CMA and the NSE. This study illustrates the ways in which the various aspects of corporate governance influence the working capital management aspects. Such information will be of importance in the development of policies and guidelines on corporate governance and working capital management aspects. This will enable these regulatory bodies to effectively manage policy gaps in CMA’s corporate governance guidelines of 2002.

This study is also of importance to the running of the individual listed firms. The management makes corporate governance policies which govern their working capital management at the individual firm level and in consideration of industry practices. This study enriches the understanding on the various ways in which corporate governance in a firm influences the working capital aspects. This is important in the formulation of policies to address any gaps in existing policy frameworks of the firms and in embracing best practices in relation to working capital management.

The study provided critical information for use in the non-listed firms in the country by giving insights into corporate governance and working capital management. In this context, the study is useful to the financial management of the diverse firms in formulation of their policy aspects. The study is also useful to academicians and researchers in expanding their literature and the understanding of the aspects of corporate governance and working capital management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains the empirical studies, conceptual framework and summary of reviewed literature in relation to corporate governance and working capital management.

2.2 Theoretical Literature Review

2.2.1 Agency Theory

This theory is attributed to Jensen and Meckling's works in 1976 that extended on earlier works by Alchian and Demsetz. The theory indicates that there are two distinct groups involved in the management of the firm: the principals and the agents. The principals are the owners of the firm through provision of capital to run the business. The owners of the business may then delegate the running of the firm to the employees at different levels who must work to further the interests of the business owners (Ahmed, 2009). These employees with delegated authority to run the firm are known as the agents of the principals.

The expectation is that the agents will maximize returns on investment for the benefit of the owners of the firm. However, the agents when acting on the principals' behalf might have a conflict of interest in decision making. The conflict of interest occurs due to moral hazard challenges and asymmetrical information challenges. The asymmetrical information challenges occur due to the agents having superior and in-depth understanding of the firm compared to the principals (Jamalinesari and Soheili 2015). They may use this superior knowledge to further their self-interest as opposed to that of the principals. On the other hand, the moral hazard challenges occur due to the principals' failure to put in place adequate mitigation measures to the identified operational risks of an organization. The information asymmetry and moral hazard challenges, collectively known as agency problems, often lead to agents perpetrating their self-interests on the expense of the principals' interests.

The agency theory is applicable to this study in the context that the corporate governance mechanisms are meant to eliminate the agency challenges within an organization. The corporate governance mechanisms ensure that the decisions made by the management are to the best interests of the firm and that they are financially sound. The aspects of being financially sound ensure that the working capital management aspects are addressed in an objective manner within the organization.

2.2.2 Stakeholders Theory

The stakeholders theory was formulated in 1984 by Freeman (Azeez, 2015). The theory examines the role of stakeholders on the operations of a firm. The stakeholders were defined as all the persons that have an influence on the firm or are influenced by the firm's activities. Stakeholders in a firm include customers, employees and shareholders amongst others. The stakeholder theory indicates that the firm must consider the interests of its stakeholders in its operations. In this context, the firm must be aware of the diverse stakeholders' expectations and demands in order for the firm to optimally operate (Ab Razak and Palahuddin, 2014). The firm is therefore within the center of a network of the stakeholders' demands and expectations. The firm must provide value for the stakeholders since the firm's relationship with its stakeholders influences both the processes and outcomes of organizational objectives.

The stakeholders theory is applicable in this study in the context that corporate governance practices ensure that working capital management is undertaken in a manner that serves the stakeholders' interests. The diverse stakeholders in the organizations have interests that may sometimes compete, and corporate governance ensures that there is a balancing act amongst diverse stakeholders' interests.

2.2.3 Stewardship Theory

This theory was advanced by Donaldson and Kay in 1976 (Góis, 2014). The theory seeks to give a counterargument to the agency theory. In this context, the theory indicates that the managers of an institution have certain intrinsic characteristics that make them work optimally for the organization (Ahmed, 2009). These include the desire of the managers to perform satisfactorily, to gain satisfaction for excellent performance, and recognition from their peers and seniors (Nulawadin, 2012). The stewardship theory also credits the managers to lack the moral hazard challenge, thus displaying goodwill in the performance of the organization. In this context, the managers have goodwill for the organization to optimally perform well.

The stewardship theory is applicable in this theory in the context that corporate governance enables the organization to achieve its objectives. In this context, corporate governance assists the management in making decisions and leading the firm in a manner that is sound in nature.

2.3 Determinants of Working Capital Management

The aspects of working capital management include accounts payable, accounts receivable, cash management and inventory management. The cash management aspect is a critical determinant of the working capital management. Cash management controls the available cash within the organization including the cash flowing into the organization and outside the organization. The cash sources within a firm include the accounts payable and equity. The accounts payable refer to the money the firm owes it suppliers or trade credit the customer gets from the supplier of goods or services while equity is defined as the owner's claim against a business entity, which keeps on changing, and the amount payable is determined upon the firm's liquidation (Gitonga, 2015). The amount of cash held is critical for replenishing stock and meeting the operational requirements of the firm.

The accounts receivable relate to short term loans given to customers as a means of expanding the sales. The firm must continually keep on checking on the repayment levels of the loans and enforce a credit policy on the same. The accounts payable relate to the short term loans that the firm receives from its suppliers. It is critical to maintain the appropriate levels of accounts payable to avoid conflicts with the suppliers. The inventory management refers to the levels of goods that the firm has for the purpose of sales (Kariuki, 2012). Keeping the appropriate levels of inventory ensures that there are no stock outs and at the same time there is no excess stock that is held unprofitably in the organization.

2.3.1 Independence of the Board

The board composition in terms of dependent directors (executives) and independent directors (non-executives) is of critical importance to the working capital management aspects (Vo and Phan, 2013). The Capital Markets Authority has set qualifications for who may be considered an independent director including persons who have not been employed by the firm in the last five years; does not work for the firm in any direct or indirect capacity, does not undertake significant business with the firm; has no personal services with any senior member of management or their immediate family members; and is not an immediate member of their family.

It is often recommended that a board of directors should have at least a third of the directors being non-executive directors. The composition of the board of directors has the importance in proper functioning of the board and its corporate governance formulation aspects (Nulawadin, 2012). The executive directors who also have administrative functions in the organization have an in-depth understanding of the firm's operations and requirements from an insider's perspective. They are thus critical in enabling the board to reach adequate working capital requirements and management aspects. However, the executive directors can be affected by agency problems and thus the need for non-executive directors to ensure that there is objectivity in policy making in board deliberations (Azeez, 2015). The non-executive directors also have experiences and insights from other firms that enrich the policy formulation in relation to working capital management aspects.

2.3.2 Size of the Board

The board efficiency in its policy formulation and monitoring of the execution of the policies is affected by the board size. In this context, a very large board size often leads to agency challenges and its roles become more symbolic as opposed to effective in nature (Ab Razak and Palahuddin, 2014). A very small board size may lack the necessary expertise amongst its members and/or diversity of expertise amongst the board members as well as diversity of experience, skills, gender and nationality (Ahmed, 2009). A very small board size may also lead to the board directors dealing predominantly with the administrative functions and neglect the monitoring aspects. The corporate governance guidelines of 2002 note that the size of the board should be adequate in size to ensure effectiveness of the board is not compromised by lack of expertise and skills (Nairobi Securities Exchange., 2017).

2.3.3 Audit Committee Characteristics

The audit committee characteristics are critical in an organization because they enhance the working capital management aspects. The audit committees enable the setting of the working capital requirements, and optimum deployment of working capital aspects. Additionally, they are involved in auditing of diverse aspects of the working capital management (Ab Razak and Palahuddin, 2014). The corporate governance guidelines of 2002 indicate that the audit committee should have more than two independent and non-executive directors who must have an in-depth understanding of the business of the firm.

2.3.4 Control Variables

The control variables that were used in this study were the firm size and sales growth. The effect of the board size, the independence of the board and the size of the audit committee on the various working capital management metrics with the firm size and the sales growth as the control variables was determined.

2.4 Review of Empirical Studies

Jamalinesari and Soheili (2015) examined the aspects of accounts payable and cash management. A sample size of 83 firms listed at Tehran Stock exchange, using data from 2001 to 2010 was utilized. The study analytical model utilized was a regression model. A positive correlation between corporate governance and working capital management aspects was established.

Gill and Biger (2013) examined corporate governance in relation to working capital management. The corporate governance aspects that were examined included CEO duality, gender effect, audit committee, board meetings and board size. The sample size of the study was 62 listed manufacturing firms at the Pakistan Stock Exchange. The study used the firm's data for three periods covering three years from 2014 to 2016. Regression and correlation analytical models were utilized for the study. The study found that board meetings and CEO duality did not have significant influence on working capital management aspects. On the other hand, gender and audit committees were found to have a positive influence on working capital management.

Achchuthan and Kajananthan (2013) used a sample size of 25 listed manufacturing firms in Sri Lanka with the data considered for the years 2007 to 2011. The study used the t tests for its inferential statistics. The study found no significant relationship between working capital management and board composition of independent members. Ali and Shah (2017) in a study on Pakistani manufacturing firms found that the size of the board, frequency of board meetings, and CEO duality had a negative effect on working capital.

Karani (2013) used a sample size of 17 listed manufacturing firms with a consideration of data from 2008 to 2012. The study used the regression model for the purpose of analysis. The study found that independent audit committee and CEO tenure had a positive influence on the working capital dynamics. It found a negative relationship between efficient management of inventory and the measures of corporate governance specifically CEO tenure, firm size and sales growth of the firm. Lekaram (2014) found that the board size and the independence of the board had a significant relationship with the financial performance of the companies at the Nairobi Securities Exchange. Kamau and Basweti (2013) included all listed firms in Kenya in the sample with data considerations from 2006 to 2012. The study found a positive but weak relationship between corporate governance and working capital management efficiency.

2.5 Conceptual Framework

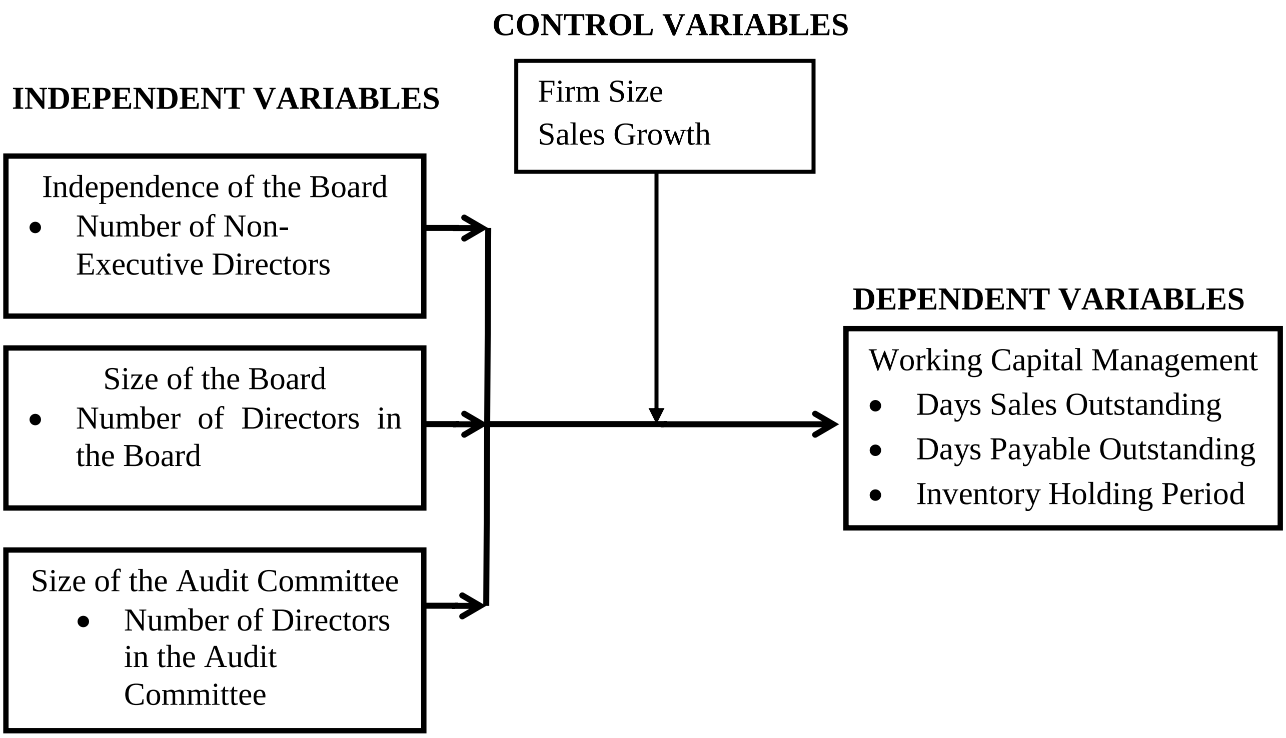

Figure 2.1: Conceptual Framework

2.6 Summary of Reviewed Literature

The reviewed literature found that there was a positive correlational effect between some corporate governance aspects and working capital management aspects. Frequency of the board meetings and aspects of CEO duality were not found as major influences of working capital management. Gender and audit committees were found to have a positive influence on working capital management. The reviewed literature also found no statistical significance of working capital management aspects of various firms based on the proportion of the non-executive board members.

There was no significant relationship found between working capital management and board composition in terms of independent directors. However, it was found that there was a negative relationship between efficient management of inventory and CEO tenure, firm size and sales growth of the firm.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research design, target population, sampling design, data collection and data analysis aspects were covered in this chapter.

3.2 Research Design

A research design is the structure for systematic collection and analysis of data in a manner that is applicable to the problem and is cost-effective for obtaining information (Cooper and Schindler, 2003). This research utilized a descriptive research design which allowed the researcher to study the elements in their natural form without making any alterations to them (Orodho, 2003).

3.3 Population

The population is the entire group of individuals or objects to which the researchers are interested in generalizing the results (Kombo and Tromp, 2009). The target population for this study was 65 listed companies at the Nairobi Securities Exchange (NSE). The study used the census survey since all the companies were examined.

3.4 Data Collection

The annual reports of listed firms were used to collect secondary data. They were obtained from the website of the NSE and that of the Capital Markets Authority. The study used the annual reports of the listed firms for the last five years, that is, for the years 2012, 2013, 2014, 2015 and 2016 respectively.

3.5 Data Analysis

Data was examined for completeness, coded, analyzed using Statistical Packages for Social Sciences (SPSS) version 23 for windows, and tabulated with the aim of discovering useful information, meant to either validate or invalidate the initial propositions of the study. Percentages were used to analyze the background information while descriptive analysis including the means, frequency distributions and percentages were used to reveal patterns. The diagnostic tests that were used in this study included the normality tests and the multicollinearity tests. The normality tests are used to detect on whether the data is normally distributed. On the other hand, the multicollinearity tests are used to check on whether the predictor variables are closely correlated. Both the normality and multicollinearity tests are critical for undertaking of multiple linear regression. Multiple linear regression was used for inferential statistics.

The study had the independent variables, dependent variables and control variables. The independent variables were the corporate governance practices, dependent variables were the working capital management aspects and the control variables were the firm size and sales growth. The Table 3.1 shows the variables, their measures and the symbols representing them.

Table 3.1: Definition of Variables

Concept	Variables	Measures	Symbol
Corporate Governance Practices (Independent Variables)	Board Size	Number of directors serving in the board	BS
	Independence of the Board	Proportion of non-executive directors in the board (1 for below the measure 0.70 and 2 for beyond the measure 0.70)	IB
	Audit Committee size	Number of Audit Committee Members	AC
Working Capital Management (Dependent Variable)	Days Sales Outstanding	(Accounts receivable/sales) × 365 days	DSO
	Days Payable Outstanding	(Accounts payable/cost of goods sold) × 365 days	DPO
	Inventory Holding Period	(Inventory/cost of goods sold) × 365 days	IHP
Control Variables	Firm Size	Log of total assets	FS
	Sales Growth	(A given Year Sales less Previous Year Sales)/Previous Year Sales	SG

The multiple linear regression models which were used are as follows:

Regression equation 1

DSO = βo+ β1BS+ β2IB+ β3AC+ β4FS + β5SG + α where:

The days sales outstanding (DSO) is the dependent variable.

The independent variables are the board size (BS), the independence of the board (IB) and the number of audit committee members (AC).

The control variables are firm size (FS) and sales growth (SG).

βo and α are the constant and the error term respectively.

β1, β2, β3, β4 and β5 are the coefficients of the board size, the independence of the board, the number of audit committee members, the firm size and the sales growth respectively.

Regression equation 2

DPO = βo+ β_1BS+ β_2IB+ β_3AC+ β_4FS + β_5SG + α where:
The days payable outstanding (DPO) is the dependent variable.

Regression equation 3
IHP = βo+ β_1BS+ β_2IB+ β_3AC+ β_4FS + β_5SG + α where:

The inventory holding period (IHP) is the dependent variable.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter examines the results that were found, their analysis and discussion of the results. The data was collected from the financial results of the diverse listed companies at the Nairobi Securities Exchange (NSE) obtained from the website of the NSE and that of the Capital Markets Authority.

4.2 Background Characteristics

The background characteristics for the study were determined by examining the number of firms in each sector of listed firms at the NSE, number of directors as well as non-executive directors in the firms, proportion of non-executive directors, and the number of audit committee members.

4.2.1 Distribution by Sector of Operation of Firms Listed at the NSE

The study examined the number of firms listed under each sector of the NSE. The results of listed firms by the sector they operate in are as shown in Table 4.1. Most of the companies whose data was used for this study were in the banking and commercial and services sectors, that is, 16.9% of all the firms, for each sector. The firms in the telecommunication and technology sector, real estate investment trust sector and the exchange traded fund sector were 1.5% of all the firms for each sector in this study. Data was collected from financial reports of 14.1% of all the firms, listed under manufacturing and allied sector; 10.7% of all the firms, listed under the agricultural sector; 9.2% of all the firms, listed under the insurance sector; and 3.1% of all the firms, listed under the automobiles and accessories sector of the NSE. Data on firms listed under the construction and allied sector, the energy and petroleum sector and the investment sector was collected from 7.7% of all the firms, for each sector, listed at the NSE.

Table 4.1: Listed Firms at the NSE by Sector of Operation

Sector	Number of Listed Firms	Percentage
Agricultural	7	10.7%
Automobiles and accessories	2	3.1%
Banking	11	16.9%
Construction and allied	5	7.7%
Commercial and services	11	16.9%
Energy and petroleum	5	7.7%
Insurance	6	9.2%
Investment	5	7.7%
Investment services	1	1.5%
Manufacturing and allied	9	14.1%
Telecommunications and technology	1	1.5%
Real estate investment trust	1	1.5%
Exchange traded fund	1	1.5%
Total	**65**	**100.0%**

4.2.2 Number of Directors

The number of directors of each company listed at the NSE was established from the financial reports of the individual firms, as presented in Table 4.2.

Table 4.2: Distribution by Number of Directors of Firms Listed at the NSE

Number of Directors	Percentage
1-10 directors	29.4%
Above 10 directors	70.6%

Most of the firms (70.6%) listed at the NSE had more than ten directors while a few firms (29.4%) had at most ten directors. These findings show that most of the firms follow the corporate governance guidelines of 2002 which note that the size of the board should be adequate in size to ensure effectiveness of the board is not compromised by lack of expertise and skills (Nairobi Securities Exchange., 2017). The membership of the board should include diversity of expertise amongst the board members as well as diversity of experience, skills, gender and nationality (Ahmed, 2009). A very small board size may lead to the board directors dealing predominantly with the administrative functions and neglect the monitoring aspects.

4.3 Number of Non-Executive Directors

After establishing the total number of directors in the firms, the number of non-executive directors was also of interest in a view to determine the background characteristics of the firms. Table 4.3 shows results of this examination.

Table 4.3: Distribution by Number of Non-Executive Directors of Firms Listed at the NSE

Number of Non-Executive Directors	Percentage
4-7	23.5%
8-10	47.1%
Above 10	29.4%

Almost half of the firms listed at the NSE (47.1%) have 8-10 non-executive directors. The firms with 4-7 non-executive directors were 23.5% while those which had more than 10 non-executive directors were 29.4%. These findings indicate that the firms listed at the NSE are able to avoid conflicts of interests as highlighted in the agency theory. The agency theory is applicable to this study in the context that the corporate governance mechanisms are meant to eliminate the agency challenges within an organization. Conflict of interest occurs due to moral hazard challenges and asymmetrical information challenges. The asymmetrical challenges occur due to the agents having superior and in-depth understanding of the firm compared to the principals (Jamalinesari and Soheili 2015).

4.3.1 Proportion of Non-Executive Directors

The proportion of non-executive board members versus that of the executive board members for firms listed at the NSE was also determined. The number of non-executive members was divided by that of all the board members and a percentage of the proportion derived, which was displayed in Table 4.4.

Table 4.4: Distribution by Proportion of Non-Executive Directors of Firms Listed at the NSE

Proportion of Non-Executive Directors	Percentage
70%-80%	23.5%
81%-90%	58.9%
Over 90%	17.6%

The boards of all firms listed at the NSE have more than 70% of their membership formed by non-executive directors. These findings satisfied the recommendation that a board of directors should have at least a third of the directors being non-executive directors (Nulawadin, 2012). The non-executive directors ensure that there is objectivity in policy making in board deliberations especially in instances where executive directors (directors involved in the administrative functions of the firms) are affected by agency problems (Azeez, 2015). The non-executive directors also have experiences and insights from other firms that enrich the policy formulation in relation to working capital management aspects. More than half of the firms listed at the NSE (58.9%) had a proportion of 81%-90% as non-executive directors. 23.5% of the firms had the proportion of non-executive directors in their boards as 70%-80%. Finally, 17.6% of the firms listed at the NSE have more than 90% of their directors as non-executive directors.

4.3.2 Number of Audit Committee Members

The number of board members who were in the audit committees of the firms listed at the NSE was also determined and results presented in Table 4.5. Most of the firms (82.4%) listed at the NSE have four board members as audit committee members.

Table 4.5: Distribution by Number of Audit Committee Members of Firms Listed at the NSE

Number of Members in Audit Committees	Percentage
3 members	11.8%
4 members	82.4%
5 members	5.9%
Total	**100.0%**

The firms with 3 audit committee members from the board were 11.8% while those with 5 audit committee members were 5.9% of the listed firms at the NSE. The findings of this study imply that the firms listed at the NSE follow the corporate governance guidelines of 2002 which indicate that the audit committee should have at least three non-executive directors who must have an in-depth understanding of the business of the firm.

4.4 Descriptive Statistics of the Variables in this Study

The descriptive statistics were used to describe the characteristics of the various corporate governance and working capital management metrics. The number of directors in the board was used to describe the board size. The descriptive statistics indicated that the firm with the lowest number of directors had five directors while the firm with the largest number of directors had fourteen board members. The board size is an important characteristic of corporate governance mechanisms as it is linked to the efficiency of the board. Very small board sizes are deemed inefficient as they are unable to form a sufficient number of committees dealing with diverse issues in a firm and they may also be overworked. On the other hand, an extremely large board size can also be inefficient in terms of coordination of its functions and decision making efficiency. The firms must therefore strive to have an adequate board size dependent on the size of the firm.

The proportion of the non-executive directors within the board is used as a measure of board independence. The descriptive analysis indicated that the firms with the least number of non-executive directors had a proportion of 0.50 in the board while the largest had 0.88 in the board. The larger the proportion of the non-executive directors, the more independent the board is considered to be. This is with a view that the non-executive directors are not involved in the day to day functions of the firm and as such are able to give an objective view in respect to diverse aspects under the deliberations of the board.

The audit committee forms a critical subcommittee of the board of directors in charge of the audit functions. The descriptive statistics indicated that the firm with the lowest number of audit committee members had three members while the firm with the highest number had five audit committee members. Similar to the board size, the audit committee size is linked to its efficiency. It is now the practice for listed firms to have at least three audit committee members. The days sales outstanding has a mean value of 63.22 and a standard deviation of 37.04. This indicates that the average number of days that firms are staying before being paid by their debtors is 63.22 with a deviation of 37.04 days less or more. The lower the number of days sales outstanding, the better for the firm as it is able to receive cash from its debtors far much quickly hence sustaining its operations.

The days payable outstanding has a mean value of 149.27 and a standard deviation of 68.84. This implies that firms at the NSE on average stay up to 149.27 days before paying their creditors with a deviation of 68.84 days less or more. The credit given to the business is a critical source of cash to the firm as it enables the firm to trade before paying up for its stock. The longer the period given, the better for the firm’s operations although care should be taken not to strain the creditors' relationship. A prudent management of accounts payable is also necessary since firms taking long periods to pay up their creditors may be signs of cash flow challenges.

The inventory holding periods were calculated at a mean of 84.64 with a standard deviation of 75.22 which implied that stocks take an average of 84.64 days before they are sold with a deviation of 75.22 more or less days. Firms with shorter inventory holding periods are able to quickly sell off their inventories hence converting their inventories to cash. This is healthy for the firm's operational aspects and profitability.

The sales growth of the firms registered a mean of 7.76% and a standard deviation of 16.50%. This implied that the sales growth of firms were at an average of 7.76% with a deviation of 16.50% more or less in sales growth. The sales growth was used in this study as a control variable. A high sales growth implies that the firm is increasingly expanding on its sales levels in progressive years. The firm size was calculated using the natural logarithm of the total assets which yielded a mean of 10.00.

Table 4.6: Descriptive Statistics of Variables

	Minimum	**Maximum**	**Mean**	**Standard Deviation**
Board Size	5.00	14.00	8.56	2.68
Proportion of Non-Executive Directors within the board	0.50	0.88	0.74	0.12
Audit Committee Members	3.00	5.00	3.50	0.63
Days Sales Outstanding	6.56	122.99	63.22	37.04
Days Payable Outstanding	44.12	295.12	149.27	68.84
Inventory Holding Period	10.84	214.68	84.64	75.22
Firm Size	8.94	11.20	10.00	0.77
Sales Growth	-13.27	60.00	7.76	16.50

4.5 Inferential Statistics

4.5.1 Days Sales Outstanding

The regression analysis indicated that the days sales outstanding had a negative relationship with the number of directors (board size), the proportion of non-executive directors (independence of the board), the number of audit committee members (size of the audit committee), firm size and sales growth independently. This was due to the regression coefficients indicating that board size, proportion of non-executive directors, size of the audit committee, firm size and sales growth having coefficients of -0.126, -14.199, -18.80, -19.381, and -0.414 respectively.

The regression model is illustrated below;

DSO=337.841 -0.126BS-14.199IB-18.800AC-19.381FS-0.414SG where DSO= Days Sales Outstanding, BS= Board Size, IB=Independence of Board, AC=Number of Audit Committee Members, FS= Firm Size , SG= Sales Growth

Table 4.7: Regression Analysis of Days Sales Outstanding

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	337.841	165.882		2.037	.069
Board Size	-.126	6.948	-.009	-.018	.986
Proportion of Non-Executive Directors	-14.199	102.566	-.046	-.138	.893
Audit Committee Members	-18.800	19.700	-.321	-.954	.362
Firm Size	-19.381	24.129	-.405	-.803	.441
Sales Growth	-.414	.583	-.185	-.711	.494

a. Dependent Variable: Days Sales Outstanding

The negative relationship between days sales outstanding and each of the corporate governance metrics and control variables indicated that each of the corporate governance and control variables on their own cannot lead to a positive increase in days sales outstanding. The implication is that each of the independent variables must act conjunctively with other metrics to lead to a positive increase in the days sales outstanding.

The model summary of days sales outstanding results that are presented in table 4.8 shows that the multiple linear correlation coefficient R is 0.665. This indicates that the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the days sales outstanding to the tune of 0.665. The coefficient of determination (R Square) of 0.442 indicates that the independent variables considered in this model account only to 44.2% of the variance in the days sales outstanding. The implication is that 55.8% of the variance in the days sales outstanding is attributed to other factors that are not in this model.

Table 4.8: Model Summary of Days Sales Outstanding

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.665[a]	.442	.164	33.88323

a. Predictors: (Constant), Sales Growth, Firm Size, Size of Audit Committee, Independence of the Board, Board Size

4.5.2 Days Payable Outstanding

The regression analysis indicated that the days payable outstanding had a negative relationship with the firm size and the sales growth. This was due to the regression model results indicating regression coefficients of -66.013 and -0.484 for firm size and sales growth respectively. On the other hand, the days payable outstanding had a positive relationship with the board size, the independence of the board and the size of the audit committee. This was indicated by regression coefficients of 25.395, 16.476, and 16.373 for board size, independence of the board, and size of the audit committee respectively.

DPO =526.601 + 25.395BS + 16.476IB+ 16.373AC-66.013FS-0.484SG where DPO= Days Payable Outstanding, BS= Board Size, IB=Independence of the Board, AC= Size of the Audit Committee, FS= Firm Size, SG= Sales Growth.

The regression model indicated that there was a positive relationship between days payable outstanding and board size, independence of the board and the size of the audit committee individually. The board size had the largest effect on the days payable outstanding as a unit increase in board size would result to 25.395 increases in days payable outstanding compared to 16.476 for independence of the board and 16.373 for the size of the audit committee. There was a negative relationship between days payable outstanding and firm size as well as sales growth. This implied that a unit increase in firm size led to 66.013 decreases in days payable outstanding while a unit increase in sales growth led to 0.484 decreases in days payable outstanding.

Table 4.9: Regression Analysis of Days Payable Outstanding

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	526.601	313.832		1.678	.124
Board Size	25.395	13.145	.989	1.932	.082
Independence of Board	16.476	194.044	.029	.085	.934
Audit Committee Members	16.373	37.271	.150	.439	.670
Firm Size	-66.013	45.650	-.743	-1.446	.179
Sales Growth	-.484	1.103	-.116	-.438	.671

a. Dependent Variable: Days Payable Outstanding

The model summary of days payable outstanding results that are presented in table 4.10 shows that the multiple linear correlation coefficient R is 0.650. This indicates that the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the days payable outstanding to the tune of 0.650. The coefficient of determination of 0.422 indicates that the independent variables considered in this model account only to 42.2% of the variance in the days payable outstanding. The implication is that 57.8% of the variance in the days payable outstanding is attributed to other factors that are not in this model.

Table 4.10: Model Summary of Days Payable Outstanding

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.650[a]	.422	.133	64.10367

a. Predictors: (Constant), Sales Growth, Firm Size, Size of the Audit Committee, Independence of Board, Board Size

4.5.3 Inventory Holding Period

The regression analysis results indicated that inventory holding period has a positive relationship with board size due to a regression coefficient of 24.468. This indicated that a unit increase in board size would result to 24.468 increases in inventory holding period with the other variables kept constant. The independence of the board, size of the audit committee, firm size and sales growth had negative relationships with the inventory holding period due to regression coefficients of -248.53, -39.165, -71.090, and -0.845 respectively as illustrated in the regression model below.

IHP =915.326 + 24.468BS -248.53IB-39.165AC-71.090FS-0.845SG where IHP = Inventory Holding Period, BS= Board Size, IB=Independence of the Board, AC=Size of the Audit Committee, FS= Firm Size, SG= Sales Growth.

Table 4.11: Inventory Holding Period Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	915.326	261.056		3.506	.006
Board Size	24.468	10.934	.873	2.238	.049
Independence of the Board	-248.53	161.413	-.395	-1.540	.155
Size of the Audit Committee	-39.165	31.003	-.329	-1.263	.235
Firm Size	-71.090	37.973	-.732	-1.872	.091
Sales Growth	-.845	.918	-.185	-.921	.379

a. Dependent Variable: Inventory Holding Period

The model summary of inventory holding period results that are presented in table 4.11 shows that the multiple linear correlation coefficient R is 0.815. This indicates that the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the inventory holding period to the tune of 0.815. The coefficient of determination of 0.665 indicates that the independent variables considered in this model account only to 66.5% of the variance in the inventory holding period. The implication is that 33.5% of the variance in the inventory holding period is attributed to other factors that are not in this model.

Table 4.12: Model Summary of Inventory Holding Period

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815[a]	.665	.498	53.32368

a. Predictors: (Constant), Sales Growth, Firm Size, Size of Audit Committee, Independence of the Board, Board Size

CHAPTER FIVE

SUMMARY, CONCULSIONS AND RECOMMEDATIONS

5.1 Summary of the Results

The number of directors in the board was used to describe the board size. The descriptive statistics indicated that the firm with the lowest number of directors had four directors while the firm with the largest number of directors had eleven board members. The descriptive analysis indicated that the firms with the least number of non-executive directors had a proportion of 50% while the largest had 88% as non-executive directors. The descriptive statistics indicated that the firm with the lowest number of audit committee members had three members while the firm with the highest number had five audit committee members. Similar to the board size, the audit committee size is linked to its efficiency.

The findings indicated that the average number of days that firms are staying before being paid by their debtors is 63.22 with a deviation of 37.04 days less or more. The lower the number of days sales outstanding, the better for the firm since it is able to receive cash from its debtors far much quickly hence sustaining its operations. Firms at the NSE on average stay up to 149.27 days before paying their creditors with a deviation of 68.84 days less or more days. The credit given to the business is a critical source of cash to the firm since it enables the firm to trade before paying up for its stock. On the other hand, the inventory holding period with a mean of 84.64 and standard deviation of 75.22 implied that stocks take an average of 84.64 days before they are sold with a deviation of 75.22 more or less days. The sales growth of firms was at an average of 7.76% with a deviation of 16.50% more or less in sales growth. The sales growth was used in this study as a control variable.

5.2 Conclusion of the Study

The board size, independence of the board and the size of the audit committee had a positive influence on days payable outstanding. The study further found that a multiple linear correlation coefficient R of 0.650 indicates that the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the days payable outstanding to the tune of 0.650. The study also revealed that board size had a positive influence on the inventory holding period and as such should be enhanced for a better influence on the inventory holding period.

Since the regression analysis indicated that both the days sales outstanding and the days payable outstanding each had a negative relationship with the firm size and the sales growth, the conclusion was therefore that the big firms had a lower number of days sales outstanding and a lower number of days payable outstanding compared to smaller firms.

The study also found that the days payable outstanding had a positive relationship with the board size, the independence of the board and the size of the audit committee. This was indicated by regression coefficients of 25.395, 16.476, and 16.373 for board size, independence of the board and the size of the audit committee respectively.

The regression analysis results indicated that inventory holding period has a positive relationship with board size due to a regression coefficient of 24.468. The independence of the board, size of the audit committee, firm size and sales growth had negative relationships with inventory holding period due to regression coefficients of -248.53, -39.165, -71.090, and -0.845 respectively. The multiple linear correlation coefficient R of 0.815 indicates that the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the inventory holding period to the tune of 0.815. The coefficient of determination (R Square) of 0.665 indicates that the independent variables considered in this model account only to 66.5% of the variance in the inventory holding period.

5.3 Recommendations to Policy and Practice

In the context of the days payable outstanding, the board size, the independence of the board and the size of the audit committee had positive regression coefficients. The study therefore recommended that these aspects should be emphasized on in the company in order for the days payable outstanding to improve. The positive regression coefficients indicated that the companies should improve on the aspects of board size, the board's independence and the size of the audit committee to optimally improve their days payable outstanding. The days payable outstanding to be improved should be optimal enough to keep the firm with enough cash to run its operations and not a too large value of the number of days to spoil the suppliers' relationships with the firm.

The board size had a positive influence on the inventory holding period and the study therefore made a recommendation that the board size metric should be highly improved in order for the inventory holding period to be improved on. The inventory holding period should be optimum to ensure that it is neither too short to result to stock outs nor too long to result to goods expiring before being sold.

The independence of the board and the size of the audit committee did not produce a positive influence on the inventory holding period individually. However, the multiple linear correlation coefficient R of 0.815 indicates that the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the inventory holding period to the tune of 0.815. The study thus recommended that the corporate governance metrics and the control variables be examined simultaneously within the organization.

In the context of days sales outstanding, the independence of the board, the size of the audit committee and the size of the board had negative regression coefficients in the context of their influence on the days sales outstanding aspects. However, the corporate governance metrics and the two control variables (firm size and sales growth) are jointly positively correlated with the days sales outstanding to the tune of 0.665. This indicated that the policies should aim to strengthen these aspects simultaneously in order for the day sales outstanding to improve.

5.4 Limitations of the Study

The study was limited by the use of different sectors in the NSE which have differing working capital requirements that impact on the results of the study. The data in diverse sectors was varying hence imparting on the data reliability.

The study was also limited by some companies updating their financial reports at different periods within the study periods, making it difficult to make a comparative study on two subsequent years when they did not have similar information.

The data presentation in the financial statements was not the same across the sectors, with the financial statements from the banking sector significantly differing from those of other organizations. This presented a challenge in the presentation and analysis of the data.

This study depended on the secondary data obtained from the websites of the individual companies, the website of the Nairobi Securities Exchange and the Capital Markets Authority. There was a challenge of not getting adequate data for all the companies required.

5.5 Suggestions for Further Studies

The study recommended for further studies the examination of the corporate governance practices on working capital based on segmentation of industries such as agricultural firms, manufacturing firms and others due to varying practices within the firms.

The study also suggests for further studies an examination of the role of corporate governance on the working capital requirements of the private sector companies such as those in the Small and Medium Enterprises (SMEs) sector.

The study made a recommendation for the comparative aspects of the role of the corporate governance on working capital requirements within the private and public sector companies.

The study also recommends a comparison of the different firms in the segments such as the financial sector and manufacturing sector in order to derive the various aspects specific to the sectors.

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APPENDIX A
DATA COLLECTION FORM

Firm	Year	Number of Directors in a firm (A)	Number of Non-Executive Directors (B)	Proportion of Non-Executive Directors (B/A)	Number of Audit Committee Members	Accounts Receivable (c)	Sales (D)	Days Sales Outstanding (C/D) * 365	Accounts Payable (E)	Cost of Goods Sold (F)	Days Payable Outstanding (E/F) *365	Inventory (G)	Inventory Holding Period (G/F)*365	Logarithm of Assets	Current Year Sales (H)	Last Year Sales (I)	Sales Growth (H-I)/I