THE EFFECT OF CORPORATE GOVERNANCE ON EARNINGS MANAGEMENT IN FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE IN KENYA

BY

HELLEN FIDELIS MWENDWA

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DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

Signature_____ Date _20th Nov 2020_

Hellen Fidelis Mwendwa
D63/10327/2018

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

Signature_____ Date 20 November 2020

Prof. Cyrus Iraya
Department of Finance and Accounting
School of Business, University of Nairobi

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DEDICATION

This project is dedicated to my loving husband, my daughter, my parents and my siblings.

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ANOVA   Analysis of Variance

CBK   Central Bank of Kenya

CEO   Chief Executive Officer

CMA   Capital Market Authority

DA   Discretionary Accruals

DEP   Depreciation and Amortization

EASE   East Africa Security Exchange

FE   Fixed Effect

NSE   Nairobi Securities Exchange

RE   Random Effect

SPSS   Statistical Package for Social Sciences

ABSTRACT

Managers use earnings management to lure unsuspecting shareholders to financial scams. Since managers have discretion in making some of the accounting choices, some unscrupulous managers take advantage of this opportunity to make the financial statements look better than they are. Over the years, some Kenyan firms have collapsed while others have been put under receivership because of financial misappropriation. This has led to the loss of shareholders' wealth, unemployment, and loss of revenue to the Kenyan government. Thus, the present study sought to investigate the effect of corporate governance on earnings management of companies listed at NSE. The study covered board activity, audit committee independence, ownership concentration, board size and board independence as the independent variables, firm size as the control variable and earnings management as the dependent variable. The study adopted descriptive research design that with a longitudinal approach covering 65 listed firms at the Nairobi Securities Exchange. Census was used and thus all the 65 firms were covered. Data was gathered from auxiliary sources covering a five year period (2015-2019) that was summarized using means and standard deviations as the descriptive statistics while correlation and regression analysis were the inferential statistics. The findings indicated that after controlling for firm size, board size had the largest beta followed by audit committee independence, board independence, ownership concentration and board activity. The study concluded that size of the board and the independence of the audit committee are the dimensions of corporate governance that significantly enhances the earnings management of the listed firms. The study recommended that shareholders should ensure that audit committees of their listed firms are properly constituted to have independent directors who will bring in outside experience and expertise that would minimize earnings management. The policy makers at the Capital Markets Authority should establish sound policies and regulations on the ideal board size and the independent directors of the audit committee that would bring about minimization of the earnings management. The policy makers at the Central Bank of Kenya should formulate sound prudential guidelines and regulations on corporate governance of the listed commercial banks that would maximize their earnings. The study was limited by a small sample size of 65 listed firms at the Nairobi Securities Exchange. This relatively smaller sample size made it hard to generalize the findings to other non-listed firms. The study recommended that further studies should be conducted further studies should be conducted by covering the cross listed firms on the East Africa Security Exchange (EASE) aside from the firms listed at the NSE. This will give room for in-depth comparative analysis.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Studies on corporate governance have been in the rise in the recent years due to the increased cases of financial fraud in local and international organizations. The International Accounting Standards Board requires organizations to provide useful, timely and correct information to shareholders to aid them in decision making. However, managers have discretion over some financial reporting guidelines and may often apply earnings management techniques to alter the figures to their advantage. Brickley et al. (1997) explain that proper governance structures like instituting an operational board can create an opportunity through the established internal controls to monitor the earnings quality and hence minimize the practice of earning management in firms.

Different theories provide differing opinions on the relationship between the study variables. Berle and Means (1932) described the state at which some firms operated by having different people as owners while the firms is run and managed by different persons. This is considered to be the source of agency theory. The theory advocates for enhanced corporate governance practices which minimize the level of conflict of interest in an organization. Stewardship theory proposed that managers are people of integrity and thus corporate governance actions are unnecessary as they act in good faith and are assumed to make good uses of resources (Donaldson & Davis, 1991). Supporters of the Resource dependency theory suggest that boards are formed in a manner that seeks to offer maximum resources in an organization (Boyd, 1990; Hillman, et al, 2000; Pfeffer, 1972). Each member of the board is assumed to bring different connections and unique value to the Board. The theory thus holds the need for a board in an organization so as to control the managers' behavior.

Understanding how earnings management practices take place in the NSE listed companies is an important step in establishing whether the established guidelines in Kenya on corporate Governance are effective. Following the issue of these guidelines, the NSE amended its listing manual to incorporate the guidelines on corporate governance into the continuous obligations of the listed firms (https://www.nse.co.ke/). The findings of this research will provide additional literature to the discipline of Earnings Management and thus assist in identifying any gaps in the implementation of the Corporate Governance regulations.

1.1.1 Corporate Governance

The Capital Markets Act of Kenya (Cap. 485A), defines Corporate Governance as a system used to the activities of an organization to accomplish the set objectives and targets while maximizing the owners' wealth. The Cadbury Committee (1992) explains Corporate Governance to be a system by which organizations are controlled and directed. Corporate Governance is also seen as the process of managing resources for the benefit of the shareholders. The Kenyan Company law requires all the publicly listed companies to ensure that their accounts are audited annually. Good corporate governance practices aid in the establishment of a transparency and accountability framework. This provides a platform for monitoring the managers' decisions and judgements in the preparations of financial reports which eventually leads to reduced levels of earnings management.

Several studies prove that weak corporate governance practices are linked to higher levels of earnings management (Beasley, 1996; Klein, 2002). Over the years, Kenya has experienced an increase in the collapse of big firms such as Nakumatt, Chase bank, Athi River Mining Cement, Webuye Pan Paper Mills among others. In Kenya, great emphasizes for compliance on good governance practices and accountability to the shareholders has been put on the listed firms due to

the risk of sanctions due to non-compliance by NSE or CMA. Stiles (1993) ascribe corporate failure to a weak board that is unable to exercise its mandate adequately. There however exist theories that offer varied opinions on the importance of corporate governance mechanisms. This study will help single out the extent of compliance with the issued guidelines by the listed firms.

Wangaruro (2014) did a study of listed commercial banks in Kenya which sought to establish the relationship between corporate governance practices and earnings management. Corporate Governance was measured using the following independent variables; board activity, board composition, executive compensation over time while the control variables were the firm's leverage level and the firm's size. Muchoki (2013) in a similar study measured Corporate Governance by the following independent variables; Board Size, Board Activity, Ownership Concentration, Board Independence and CEO Duality. He used the NSE listed companies.

1.1.2 Earnings Management

Earnings management entails the use of discretion available to managers in deciding the accounting treatment of various transactions and events for the sake of their expected incomes (Ronen & Sadan, 1981). Healy and Wahlen (1999) stated that managers practice earnings management when they use the opportunity to make accounting choices to misreport the financial reports for purposes of lying to some stakeholders about the firm's economic conditions or take advantage of a certain benefit that is depended on the amount of earnings reported. Dechow et al. (1995) suggested that managers engage in earnings management when they alter the financial statements so as to correspond to the set targets. The shareholders being the legal owners require to get correct and timely information on the affairs of their companies. Proper measures should be taken both by the government and the regulatory agencies to ensure that shareholders get reliable information from the managers.

Earning management is a technique that cannot easily be detected by the shareholders especially those that lack expertise in financial reporting. The financial reports issued create a means by which shareholders evaluate a firm's performance and investment make decisions. It is therefore necessary to have in place an oversight mechanism that ensures that the organization is managed in a manner that yields the best for the shareholders. A survey undertaken by Price Water House Coopers (2011) ranked Kenya among leading countries perpetrating fraud, with creative accounting being the main cause.

Firm's earnings comprise of cash inflows and outflows and discretionary and non-discretionary accruals. Jones (2011) stated that the quality of earnings can be compromised by altering the capital structure, and the accounting methods. Jones in his study, tabulates earnings management using total accruals. Jaggi and Leung (2007) in their study used a cross-sectional regression to estimate earnings management. This was a modification of the Jones model of 1991. Guay et al. (2006) concluded that only the Jones and modified Jones models established the abnormal accruals that could be distinguished from the random decomposition of earnings.

1.1.3 Corporate Governance and Earnings Management

The inter-relationships between the variables of this study is explained by various theories including the agency theory and the stewardship theory which both hold different opinions in regards to the relationship (Berle & Means, 1932; Donaldson & Davis, 1991). The agency theory holds that the relationship between corporate governance and earnings management is negative and is necessitated by the separation of ownership and control which results to agency costs (Berle & Means, 1932; Jensen & Meckling, 1976). There is therefore leads to the need to establish mechanisms to monitor this conflict which include establishing a board of directors and internal controls systems (Dibia & Onwuchekwa, 2014). Jensen and Meckling (1976) argued that the

shareholders hold the opinion that managers can only act in good faith when proper measures to monitor their decisions and reward systems have been put in place. The agency theory holds that the board performs better its oversight role when it has a majority of independent directors and when the position of the CEO and the Chairman should be held by separate persons. The Stewardship theory suggests that the managers are trustworthy and that they will make decisions that will benefit the shareholders and thus eliminates the need for monitoring (Donaldson & Davis, 1991). Concerning the board, the Stewardship Theory proposers prefer a board made of a majority of inside directors and that the position of Chairman and CEO should be held by the same person (Donaldson & Davis, 1991).

Were (2018) in a similar study of the firms quoted at NSE, concluded that board independence and board activity had a negative relationship whereas firm size was positively related to earnings management. Additionally, ownership characteristics and board size were found not to be statistically significant determinants of the dependent variable (earnings management). Muchoki (2013) in a similar study for listed companies found out that board independence has a negative impact on the level of earnings management while CEO duality is significantly related to earnings management.

1.1.4   Listed Firms at the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) began its operations in 1994. It is the leading securities exchange in East Africa. It is a member of the East African Securities Exchange Association and the World Federation of Exchanges (www.nse.co.ke). There are 65 listed companies which are divided into banking(12), automobiles and accessories(1), agricultural(6), construction and allied(5), commercial and services(12), energy and petroleum(6), insurance(6), investment(5),

investment services(1), manufacturing and allied(8), telecommunication(1), technology sectors, real estate investment trust(1) and exchange-traded funds(1).

Firms are listed at NSE after meeting the requirements of corporate governance practices contained in the guidelines issued by CMA in 2002. The guidelines proposed the establishment of an audit committee that would be chaired by an independent and non-executive director. The Committee is required to have at least three independent and non-executive directors. The Government of Kenya has put in place several guidelines to limit the practice of earnings management which include the implementation of the International Financial Reporting Standards (IFRS) effective January 1999 and the issue of Corporate Governance Guidelines (CMA, 2002). Njogu (2016) states that some listed firms have experienced hard economic times which are at times occasioned by managers in their bid to carry out earnings management practices which have resulted to the closure of business, loss of shareholders' wealth which impacts negatively on the Kenyan economy.

1.2 Research Problem

Managers use earnings management to lure unsuspecting shareholders to financial scams. Therefore, a good corporate governance structure provides oversight on the use of a firm's resources and also ensures good quality of the financial reports (Lin & Hwang, 2010). Since managers have discretion in making some of the accounting choices, some unscrupulous managers take advantage of this opportunity to make the financial statements look better than they are. It is for this reason that an effective board is essential for providing oversight during the financial reporting process to ensure that the financial reports are accurately done.

Over the years, some Kenyan firms have collapsed while others have been put under receivership because of financial misappropriation. This has led to the loss of shareholders' wealth,

unemployment, and loss of revenue to the Kenyan government. Wairimu (2010) stated that there were still ways available to managers to misappropriate shareholders' wealth regardless of the existing laws and regulations in her article that focused on the existing irregularities in Kenya. It is thus important to carry out more research in this area in order to understand how and to what extend earnings management is practiced in Kenya.

There are a considerable number of studies on the effect of corporate governance practices on the level of earnings management. Leuz et al. (2003) examined the variations in earnings management across 31 countries using descriptive statistics and concluded that managers use earnings management practices to portray a picture of good performance while concealing the truth from the shareholders. Chen, et al. (2004) concluded that good corporate governance practices are more beneficial in organizations with good cash flows but lack areas to invest in (Jensen & Mecling, 1976).

The Kenyan studies mostly concentrated on the effect of corporate governance practices on the firm's performance. Aduda, Chogii and Magutu (2013) investigated the importance of the board composition variables of the proportion of non -executive directors, the proportion of executive directors, size of the board, and the role of CEO duality on firm performance for actively trading companies at the NSE from 2004 to 2007. A few other local studies on the relationship between the research variables exist; these include studies by Muchoki in 2013 and Waweru & Riro in 2013.

However, since these studies are few and have differing conclusions in Kenya, the findings of the relationship between the study variables provided additional literature. This is so because the study collected data for recent years which will differ with the available literature. The study also

employed a mix of different corporate governance mechanisms. This research thus sought to answer the question: which corporate governance mechanisms (board size, board independence, and audit committee independence and CEO shares) affect earnings management of the companies listed at the NSE?

1.3 Research Objective

The objective of this study is to investigate the effect of corporate governance on earnings management of companies listed at NSE.

1.4 Value of the Study

Firms listed at NSE have separate owners and managers as well as the managers' report to the shareholders on the firms' performance through the financial reports. It is thus important for these firms to establish good corporate governance mechanisms to ensure the credibility of the financial reports published. This is important because the stakeholders depend on these financial reports to make decisions.

This study would help create awareness to shareholders of firms on the relevance of having good corporate governance practices in order to reap maximum benefits. The empirical results of this study would provide an overview of the effectiveness of the already existing regulations and policies and identify gaps in corporate governance regulations from KRA, NSE, CMA and CBK.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter gives a review relevant literature on the effect of selected corporate governance variables on earnings management of the companies listed at the NSE. This chapter is made up of five sections namely; theoretical framework, determinants of earnings management, empirical review, conceptual framework and the summary.

2.2 Theoretical Review

Under this sub-section, relevant theories on corporate governance practices that hold differing opinions are analyzed.

2.2.1 Agency Theory

Berle and Means (1932) described the separation of ownership and control between the owners and the managers. This is believed to be the origin of the Agency Theory. The shareholders (owners) entrust the rights to manage the organizations affairs to the managers (agents) who control the operations of the firms (Jensen & Meckling, 1976; Ross, 1973). The problem however exists in determining whether the managers conduct business for their benefit or the shareholders' benefit.

Perrow (1986) criticized the agency theory by arguing that the proponents of the theory only viewed the cause of the 'principal and agent problem', to be caused by the agent and ignored the fact the same could be caused by the principal. Other critics of the agency theory developed a behavioral agency theory that suggested the inclusion of agent's motivation and fair compensation (Sanders & Carpenter, 2003; Pepper & Gore, 2012; Wiseman & Gomez-Mejia, 1998).

The Agency theory proposes that the board should be made up of independent directors and the position of Chairman and CEO should be held by separate persons. In the study of the relationship

between corporate governance practices and Earnings Management, the agency problem creates an avenue for managers to manipulate earnings thus misleading the economic performance of the company (Sari & Mimba, 2015). This theory was adopted as it helps in understanding why managers engage in earnings management (Njogu, 2016).

This theory was adopted as it helps in understanding why managers engage in earnings management (Njogu, 2016). Thus, on the basis of this theory, a positive relationship is predicted between corporate governance and earnings management. This is because of existence of conflicting interests between the management and the shareholders would essentially promote and encourage earnings management by the management team.

2.2.2 Stewardship Theory

The Stewardship theory suggests that the managers are honest and that they will make decisions that will benefit the shareholders and thus eliminates the need for monitoring (Donaldson & Davis, 1991). The behaviors of the directors and managers are assumed to be in line with those of the owners. The Stewardship Theory suggests boards made up of a large number of inside directors and where the position of Chairman and CEO is held by the same person is more efficient (Donaldson & Davis, 1991).

Van Slyke (2006) stated that the Stewardship theory encourages cooperation and effort towards achieving a similar goal among the agent and the principal hence dismissing the existence of a conflict of interest between the two parties. McEvily et al. (2003) criticized the theory by arguing that such a stewardship relationship based on trust prevents the much-needed scrutiny of the managers' actions. This also hinders the need for the board to evaluate the financial information issued by the managers. The supporters of the Stewardship theory suggest that good corporate

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performance is achieved by having a large number of inside directors and having the position of Chairman and CEO held by the same person. The reason for this is that since the inside directors are involved in the organization's daily operations, they more understanding of the firm's operations and hence are able to make better decisions (Donaldson & Davis, 1991; Donaldson, 1990).

In view of this stewardship theory, a negative relationship is predicted between corporate governance and earnings management. This is because the stewardship theory infers that the management of the listed firms will always be motivated to engage in practices that seek to maximize the wealth of shareholders. Thus, with or without sound corporate governance, this stewardship theory implies that the management will not take part into activities like earnings management since they are stewards of the listed firms.

2.2.3 Resource Dependency Theory

This theory is derived from the open system theory which holds that firms rely on the external environment for its resources. The theory came about as a result of studies on board composition by researchers who sought to understand the various directorates and how they affect institutions (Pettigrew, 1992). Future uncertainties cause an organization to make decisions that control its (Pfeffer & Salancki, 1978). Board members are chosen in a manner that will benefit the firm by maximizing the benefits each member brings to the board (Boyd, 1990; Hillman, et al, 2000; Pfeffer, 1972). Directors are picked based on the resources and connections they have. The managers and the board are considered as a resource because of the social and business networks they offer (Johnson, Daily & Ellstrand, 1996; Pearce & Zahra, 1992).

The opposers of this theory argue that it assumes some of the important roles played by the board which includes offering advice on varied matters and providing policy direction (Lorsch & MacIver, 1989; Westphal, 1999). The theory recommends a larger board size since this will bring greater opportunity for more people with more connections and hence access to more resources. This theory was used to support how resources available can promote and strengthen corporate governance mechanisms of the listed firms that would make it hard for the management to take part in earnings management.

2.2.4 Stakeholder's Theory

Freeman (1984) developed this theory whereby he focused on a wider group of stakeholders instead of focusing on the shareholders only. He defined a stakeholder as a person(s) who can affect or be affected by the organization's decisions. McDonald and Puxty (1979) argued that companies operate within a society and thus have a duty to the other stakeholders which contradicts the agency theory that emphasizes on the shareholders only.

Hetherington (1973) criticized the stakeholder theory by stating that there is no reason why shareholders should be comfortable owning a company that is not profitable for the purpose of being considerate to the other stakeholders. Additionally, Jenson (2001) criticized the theory for assuming focusing on one objective. He argued that a firm's performance is calculated by other factors in addition to the benefits accrued to its stakeholders.

The theory gives insight into the critical role played by managers of an organization who should not only focus on profit maximization but also balance the responsibilities of the company to other stakeholders. This includes undertaking environment-friendly investments, conducting corporate

social responsibility (CSR) activities among others. Thus, this knowledge will be important in this study in undertaking a wholesome evaluation of organizations.

2.3 Determinants of Earnings Management among Listed Firms in Kenya

The credibility of financial reports issued by the management is of essence since the stakeholders make decisions based on this information. This section is set out to analyze literature on the determinants of earnings management among Kenyan listed firms.

2.3.1 Corporate Governance Structures

According to Tricker (1984) boards are expected to offer strategic and policy directions in an organization. They also monitor the actions of the management (Eisenhardt, 1989). The common corporate governance structures include the size of the board, board activity, board independence, the audit Committee independence and the CEO shares.

Board size refers to the total number of board members in comparison to the size of the firm. This includes both the executive and non-executive directors. Barnhart and Rosenstein (1998); Jensen (1993) proposes that smaller boards (in number) are efficient than large boards since they are easier to control. On the contrary, Peasnell, Pope, and Young (2004) suggested that organizations with large board sizes are more efficient and thus increases the quality of earnings reported.

Board independence refers to the proportion of independent outside directors as compared to inside directors on the board and is commonly known as non-executive directors. Firstenberg and Mikiel (1980) argued that non-executive directors do not participate in the day to day operations of the firm. Fama and Jensen (1983) suggest that non-executive directors enhance effective monitoring by the board of the managers' actions and hence ensure that the shareholders' interest is catered for. Jebet (2001) sampled out NSE quoted firms and compared the performance of firms with a

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high number of non-executive directors to those with less. The findings of the study were that the ones with a higher number of non-executive directors performed better than the ones with less. Bradbury, Mak, and Tan (2006) conducted a similar study in Singapore, however, the results did not prove the existence of any relationship between earnings management and board independence.

Board activity refers to the number of board meetings within a given time. Ntim (2009); Vafeas (1999) concluded that regular board meetings are beneficial as they enhance closer monitoring and supervision of the management actions. This ultimately leads to improved firm's performance and higher quality of earnings reported. Abbott and Parker (2000) argued that frequent board meetings are associated with a higher quality of reported earnings. Additionally, Beasley et al (2000) concluded that a higher number of meetings leads to a decrease in financial reporting fraud.

Audit Committee independence- CMA issued guidelines that required the board of firms listed at NSE to establish an audit committee of at least three independent and non-executive directors who shall report to the board. Hasan and Ahmed (2012) stated that an audit committee is crucial in assessing the management decisions for the purpose of safeguarding the shareholders' interest. However, for the audit committee to function effectively, they should be independent. Lin (2006) found out that an audit committee had a negative effect on the earnings management level. García-Meca and Sánchez-Ballesta (2009) proposed that an independent audit committee could offer increased oversight on the financial reporting process boosting the earnings quality and reduce cases of earnings management.

Proportion of CEO Shares- Core and Larker (2002) suggested that offering equity-based incentives to CEOs encourages them to make decisions that increase the value of the shareholders. Proponents

of the agency theory argued that the percentage of managerial ownership in a company affects how they align their objectives to the company's strategies (Fama & Jensen, 1983; Warfield et al., (1995). Past studies have shown that when managers have some ownership of the company through ESOP, they limit their managerial opportunism which reduces the levels of earnings management (Alzoubi, 2016). However, Brown (2002); Levitt (1998) argued that incentives offered to the CEOs based on the value of the equity them to manage earnings for the sake of increasing the short term stock prices without considerations of the future firm's value.

Ownership concentration- this is measured by the percentage of ownership held by a main shareholder of an institutional nature. Jesus and Emma (2013) in a study concluded that ownership concentration among other corporate governance practices negatively affects earnings management. Iraya et al., (2015), in a similar study for enlisted firms at NSE found that ownership concentration, board size and board independence negatively affect earnings management while CEO duality and board activity affect positively the levels earnings management.

2.3.2 The Level of Leverage of a Firm

Jensen (2001) argued that leverage is an efficient way to limit managerial discretion. Increased debt level leads to reduced accrual earnings management since it constrains the opportunistic behavior of managers because the burden of repaying the debt reduces the cash flow available for investing in unnecessary projects (Jelinek, 2007). Additionally, a highly leveraged firm faces close monitoring from its lenders hence the management properly controls its expenditure levels.

2.3.3 The Size of the Firm

Beasley, et al (2000) proposed that larger firms were likely to have stronger internal control mechanisms and monitoring tools than smaller firms hence increased quality of reported earnings.

Heninger (2001) reported that large firms have a better quality of financial reports because they have the ability to hire well-established auditing firms because of their financial muscles. This reduces the level of earnings management. On the contrary, Naz, Bhatti, Ghafoor, and Khan (2011) in a study on Pakistan listed firms did not find a significant relationship between firm size and the levels of earnings management.

2.3.4 Management Bonus

Some managers increase the reported earnings up to a certain point so that they can earn a bonus. Gaver et al. (1999) suggested that managers' report edited earings so as to increase their compensation. Similarly, Khoshtinat and Khani (2003) in their findings, managers are willing to manipulate earnings to get huge bonuses. This is because managers are promised to receive bonuses by the shareholders when the company performs well (Nurdiniah & Herlina, 2005). There exists a notable connection between management bonuses and earnings management.

2.4 Empirical Review

Various studies have been done in connection to the relationship between this study research variable. Below are some of the international and local empirical studies.

2.4.1 International Evidence

Shah, Butt and Hassan (2009) did a similar study on Pakistan listed companies for 2006. The findings revealed a positive relationship between the two variables. The researchers applied the Modified Cross-sectional Jones Model in determining the Discretionary Accruals. The results were analyzed using the ordinary least square estimation. Abdullah and Norman (2010) did a similar study around United Kingdom rights issues. The findings revealed that organizations with higher

debt to equity ratios, with less outside directors, were more likely to use discretionary current accruals to modify earnings around the rights issues.

Bhuiyan (2010) did a study that sought to examine the effects of corporate governance practices on managerial decisions in New Zealand. The study used free cash flow to measure the total accruals. The findings showed that earnings management reduces as firms comply more with the corporate governance regulation instituted. Swastika (2013) examined the relationship between Firm Size, Corporate Governance and Earnings Management in Indonesia Stock Exchange for 51 food and beverage listed companies using data from the year 2005. The results revealed that the board of directors, the audit quality, and the firm size had a significant impact on the earnings management levels. Dibia and Onwuchekwa (2014) did a similar study in Nigeria for 90 companies that were selected for the year 2006 to 2011. The study findings revealed a significant effect of the board size and firm size on the level of earnings management while there was no significant effect of board independence, audit committee independence, audit type and CEO shares on the level of earning management.

The above studies show that a literature review on the relationship between corporate governance and earnings management exists. However, the international studies in this area do not reflect the Kenyan context due to the difference in the economic conditions, laws and regulations among others. This therefore created the need for one to review local studies in a bid to understand the situation within a Kenyan context.

2.4.2 Local Evidence

Were (2018) also did a similar study on firms quoted at NSE. The study used a population of all the 64 firms quoted for 2017 and a descriptive cross-sectional research design was applied.

However, data was obtained from only 53 out of the 64 listed companies giving a response rate of 82.81%. Corporate governance had four measures: board independence, board size, ownership concentration and board activity. Multiple linear regression model was used to establish the relationship between the variables while SPSS 22 was used for data analysis. The study results revealed that board independence and board activity produced negative and statistically significant values while firm size produced positive and statistically significant values. Ownership characteristics and board size were found not to be statistically significant determinants of earnings management of firms at the NSE listing.

Mugetha (2010) investigated the relationship between the level of earnings management and some selected macroeconomic variables for listed companies in Kenya. The sample size was 15 firms for the years (2005 to 2009). The conclusion of the study showed that there was no significant relationship between study variables. It was determined that other factors other than the ones investigated in this study cause earnings management practices among managers. Waweru and Riro (2013) examined the relationship between corporate governance and firm-specific characteristics on earnings management of 37 NSE listed companies from year the 2006 to 2011. The findings showed that board composition and ownership structure highly influenced earnings management levels.

Muchoki (2013) undertook a similar study for a sample size of 49 firms listed on the NSE for 2010- 2012. Using a descriptive research design the findings revealed that ownership concentration, board size and board independence negatively affected earnings management while board activity and CEO duality positively affected earnings management levels. Aduda, Chogii and Magutu (2013) examined the impact of the board composition variables on firm performance for NSE listed companies from 2004 to 2007. The study applied a regression analysis and the

Tobin Q ratio. The findings showed that the overall regression models for the firm performance for both the Return on Assets and the Tobin Q ratio were significant. This, therefore, meant that board composition variables were important predictors of firm's performance. Wangaruro (2012) undertook a similar study for 11 NSE listed commercial banks in 2013. This study adopted a descriptive research design and the results concluded that organizations with effective corporate governance practices have fewer instances of earnings management.

The results from the local studies prove the existence of earnings management within the Kenyan operated firms. This created the need for proper scrutiny of the financial reports before releasing them for use by the various stakeholders. Reviews of the existing financial reporting regulations should be done to minimize the existence of earnings management.

2.5 Conceptual Framework

A conceptual framework explains the relations between variables. In this study, the dependent variable is the earnings management while the independent variables are the corporate governance practices which include; audit committee independence, board independence, board size, board activity and ownership concentration. The control variable in this study is the size of the firm.

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┌─────────────────────────┐     ┌─────────────────────────┐     ┌─────────────────────────┐
│  Independent Variable   │     │   Control Variable      │     │   Dependent Variable    │
└─────────────────────────┘     └─────────────────────────┘     └─────────────────────────┘

┌───────────────────────────────────┐
│  Corporate Governance Practices   │                    ┌───────────────────────────────┐
│     • Board Size                  │                    │                               │
│     • Board Independence          │  ───────────────►  │   Earnings Management         │
│     • Audit Committee             │                    │                               │
│       Independence                │                    │                               │
│     • Board Activity              │                    └───────────────────────────────┘
│     • Ownership Concentration     │                                    ▲
└───────────────────────────────────┘                                    ┊
                                                          ┌───────────────────────────────┐
                                                          │      Size of the Firm         │
                                                          └───────────────────────────────┘
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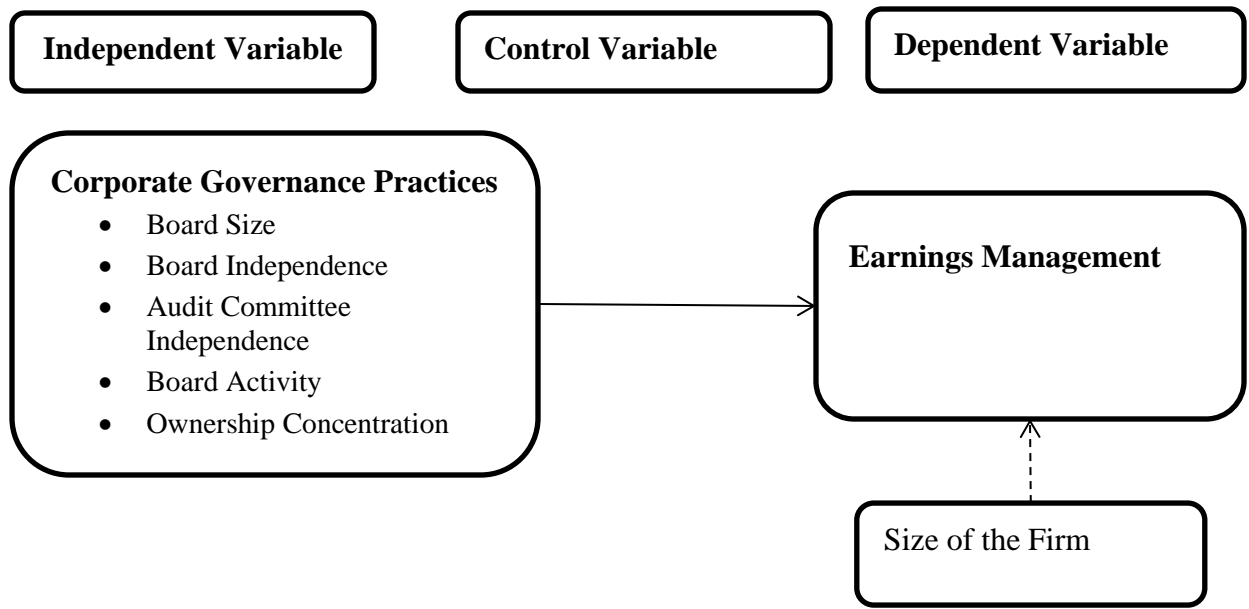
Figure 2.1: Conceptual Framework

2.6 Summary of Literature Review

A review of the empirical studies shows conflicting results in connection to the relationship between corporate governance practices and earnings management. Some of the studies show a positive, others negative while some show no significant relationship between the variables. The study by Aduda, Chogii and Magutu (2013) examined the impact of the board composition variables on firm performance found out the board composition variables were significant predictors of the level of earnings management. On the contrary, Dibia and Onwuchekwa (2014) in a study concluded that board independence does not affect the level of earnings management. However, the available literature is not standardized due to differences in the country of study, choice of the population, corporate governance practices reviewed and the choice of the statistical methodology being applied. Proper knowledge of good corporate governance practices is important in developing strategies towards the establishment of the same. This is particularly important in establishing proper internal controls and governance structures to avoid fraudulent activities that have gross impact on the firm's financials.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the research methodology for this study and is sub-divided as follows: research design, target population, sample design, data collection procedures and data analysis techniques.

3.2 Research Design

This particular study considers earnings management to be all actions taken by management in order to manipulate the reported earnings, for the purpose of achieving their personal interest. The research used a descriptive research design which sought to explain the characteristic of one variable with regard to the other (Mugenda & Mugenda, 1999). This research design was suitable for illustrating the relationship between corporate governance practices and earnings management. The study applied a longitudinal approach since the data for the NSE listed companies was examined over a period of 5 years.

3.3 Population

This study's population comprised of NSE listed companies for a period of 5 years from 2015 to 2019. A census approach was used for the 65 listed companies as at December 2019 (Appendix I).

3.4 Data Collection

The study used secondary data that was obtained from the listed companies' published annual reports and this was sourced from the NSE database. Information about Corporate Governance practices was sourced from the statement of Corporate Governance. The data included information on the size of the board, percentage of executive and non-executive directors in the board, percentage of non- executive and executive directors in the audit committee, board activity and

ownership concentration. Additionally, the data for estimating the discretionary accruals was include; cash flow from operations, accounts receivables, net income, and net property, plant and equipment. This data was collected over a period of 5 years from 2015 to 2019 (Appendix II).

3.5 Data Analysis

The collected data was analyzed using linear regression and correlation analysis to test the relationship between the dependent variable of discretionary Accruals as an earnings management tool and selected independent variable of corporate governance. Since the data collected was quantitative, it was analyzed through the use of descriptive statistics. Data was simulated using the SPSS application for the purpose of conducting the correlation and multiple regression analysis.

3.5.1 Diagnostic Tests

The study assumed linearity in the parameters which means that they are not multiplied, divided squared or cubed together. Models can be transformed to linear by a suitable substitution.

Normality test was conducted to test whether the data used in the study was normally distributed. To test for normality, the study used Kolmogorov-Smirnov and Shapiro-Wilk. In most cases, Shapiro-Wilk is ideal for smaller samples of less than 2000 while Kolmogorov-Smirnov would be appropriate for larger sample above 2000. In utilizing Kolmogorov-Smirnov and Shapiro-Wilk, the rule of thumb is that p-values greater than 0.05 indicates presence of normality in the data (Schmidt & Finan, 2018).

Homoscedasticity was carried to determine whether the variance of the error term is constant. Heteroscedasticity which is the opposite of homoscedasticity is caused by omitted variables, outliers and parameter variation caused by the variable transformation. In carrying out these tests,

the study utilized the graphical method by plotting residual against fitted values. When the plotted graph is cone shaped, the presence of heteroscedasticity would be assumed (Jochmans, 2018).

Multicollinearity is a situation where at least one of the independent variables is highly correlated with each other. Such a situation is undesirable as it violates the assumptions of regression analysis. To test for multicollinearity, the study used the values of Variance of Inflation Factors (VIF). The rule of thumb was that values of VIF within range of 1-10 signified absence of multicollinearity in the data (Daoud, 2017).

Autocorrelation is a situation where one observation of the error term could predict the next observation. Autocorrelation can be negative or positive and it is undesirable. It usually occurs in time series data. To test for autocorrelation, the study relied on the value of Durbin Watson Statistic. The value of Durbin Watson Statistic (d) usually ranges from 0 to 4, and it can be negative or postive. The value of (d) closer or equal to 2 signifies absence of autocorrelation in the data (Vatcheva, Lee, McCormick & Rahbar, 2016). To remedy autocorrelation, one could investigate the omission of a key predictor. One could also use Cochrane-Orcutt which is more advanced procedure.

3.5.2 Analytical Model

The study in the measurement of discretionary accrual (Earnings Management tool) applied a model previously used by Jesus and Emma (2013) which was based on the Dechow et al. (1995) modification of the cross-sectional Jones discretionary accruals model The study used the following multiple regression model;

$DA_{it} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + £$

Where DA_{it} represents Discretionary accruals, for Company i in year t. This is used as an estimate for earnings management and is calculated by subtracting non-discretionary accruals from total accruals. The accrual variables were estimated using the lagged total assets.

$$ACCRUAL = (\Delta CA - \Delta\ Cash) - (\Delta CL - \Delta STD - \Delta TP) - DEP$$

Where;

ΔCA = Change in Current Assets.

$\Delta\ Cash$ = Change in Cash/ Cash equivalents.

ΔCL = Change in Current Liabilities.

ΔSTD = Change in Short-Term Debts included in Current Liabilities.

ΔTP = Change in Income Taxes Payables

DEP = Depreciation and Amortization Expense

From the above multiple regression model;

β_0 – Constant co-efficient

$\beta_1 - \beta_6$ - Beta co-efficient of independent variables

X_1, - X_5 - Independent variables

X_6 – Control variable

X_1 - Board Size, is measured by the total number of directors in the board.

X_2 - Board Independence, is measured by the proportion of non-executive directors in relation to the entire board numbers.

X_3 - Audit Committee Independence, is measured by the ratio of non-executive directors in audit committee to the total number of audit committee members.

X_4 – Ownership Concentration, is measured by the percentage of ownership held by the main shareholder of an institutional nature.

X_5 – Board activity, is measured by the number of board meetings in a year.

X_6 - Size of the Firm, is measured by the natural logarithm of the book value of assets as reported in the annual reports.

£ - Standard Error term.

3.5.3 Significance Tests

The p-values results obtained from the multiple regression analysis were used to analyze the relationships in the study variables. A significance level of 5% was used to determine the region where rejection or acceptance of the null hypothesis was done.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter is set out to present the results of the analysis based on secondary data that was collected. The analysis started with determination of the criteria for data analysis, the descriptive statistics, diagnostic tests, and correlation and regression results.

4.2 Proportion of Firms Analyzed

The study targeted 65 firms listed at the Nairobi Securities Exchange. For firms to be included in the study, they ought to have been continuously listed at NSE for the last 5 years. However, complete information was readily available and collected from 40 firms (for 5 years 2015-2019). This represented a proportion of 61.5% of the total firms as presented in Table 4.1.

Table 4.1: Proportion of Firms Analyzed

	Frequency	**Percentage**
Firms continuously listed for 5 years	40	61.5
Firms not continuously listed for 5 years	25	38.5
Total Firms listed as at 31ˢᵗ Dec 2019	**65**	**100.0**

Source: Survey Data (2020)

4.3 Descriptive Statistics

The study computed the values of means and standard deviations to describe the variables that were covered as presented in Table 4.2.

Table 4.2: Descriptive Statistics

	Min	Max	Mean	Std. Dev	Var	Skewness		Kurtosis	
							Std.		Std.
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Error	Statistic	Error
Board Size (Individuals)	200	4.00	13.00	8.0	2.078	-.215	.172	-.606	.342
Board Independence (%)	200	.25	.80	.79	.143	-1.538	.172	2.657	.342
Audit Committee Independence (%)	200	.00	.98	.96	.158	-1.183	.172	2.303	.342
Ownership Concentration (%)	200	1.01	92.26	40.67	21.387	.140	.172	-.696	.342
Board Activity (No of Meetings)	200	3.00	22.00	6.12	3.154	2.089	.172	1.456	.342
Firm Size (Kshs. million)	200	12.23	20.62	16.80	2.195	-.145	.172	-1.090	.342
Earnings Management (Kshs. million)	200	2.73	7.75	5.85	.992	-.279	.172	-.107	.342

Source: Survey Data (2020)

The results in Table 4.2 indicate that on average, the highest number of board members among the listed firms is 13 with the least being 4 and the average board members being 8 individuals. Literature on board size by Barnhart and Rosenstein (1998) and Jensen (1993) proposes that smaller boards (in number) are efficient than large boards since they are easier to control. On the contrary, Peasnell, Pope, and Young (2004) suggested that organizations with large board sizes are more efficient and thus increases the quality of earnings reported.

It was established that while some firms had low level of board independence (25%), other firms had boards that had highest level of independence (80%). On average, 79.0% of the board members in the studied firms were independent. This implies that that there was a high degree of board

independence in the studied firms which is consistent with the agency theory by Jensen and Meckling (1976) and Ross (1973) who noted that boards should be made of independent directors who may enhance the oversight role as they reduce the conflicts of interests. Firstenberg and Mikiel (1980) argued that non-executive directors do not participate in the day to day operations of the firm. Fama and Jensen (1983) suggest that non-executive directors enhance effective monitoring by the board of the managers' actions and hence ensure that the shareholders' interest is catered for.

The results of the study further indicated that while some of the listed firms at the NSE had no independent directors in their audit committees, the highest firm had about 98.0% of its audit committee being made up independent directors. On average, the audit committees of the studied listed firms had about 96% of its members as independent directors. Audit independence is critical since it strengthen the entire accounting system of the firm. Consistent with this finding, Hasan and Ahmed (2012) stated that an audit committee is crucial in assessing the management decisions for the purpose of safeguarding the shareholders' interest. However, for the audit committee to function effectively, they should be independent.

The study established that the least level of ownership concentration among the listed firms was 1.01% with the highest being 92.26% and the average being 40.67%. This finding is consistent with the proponents of the agency theory (Fama & Jensen, 1983; Warfield et al., 1995) who argued that the percentage of managerial ownership in a company affects how they align their objectives to the company's strategies.   On board activity, the study noted that the least number of board meetings among the listed firms was 3 with the highest meetings being 22. On average, it can be inferred that the listed firms hold 6 board meetings in a year. Therefore, on average, the number of board meetings held among the listed firms are relatively low which is inconsistent with Ntim

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(2009); Vafeas (1999) who shared that that regular board meetings are beneficial as they enhance closer monitoring and supervision of the management actions and this leads to improved firm's performance and higher quality of earnings reported. Abbott and Parker (2000) argued that frequent board meetings are associated with a higher quality of reported earnings. Additionally, Beasley et al (2000) concluded that a higher number of meetings lead to a decrease in financial reporting fraud.

The findings on firms' size indicated that while some listed firms had least asset base of Kshs. 12.23 million, the firm with highest asset base had Kshs. 20.62 million with the average asset base among the listed firms being Kshs. 16.80 million. This implies that the listed firms had a relatively large asset base that they probably used as collateral when accessing external sources of financing (debts) among the lending institutions. With this relatively larger asset base, it can be inferred that majority of the listed firms were larger in size. The advantage of this as shared by Beasley, et al (2000) is that larger firms were likely to have stronger internal control mechanisms and monitoring tools than smaller firms hence increased quality of reported earnings. Heninger (2001) reported that large firms have a better quality of financial reports because they have the ability to hire well-established auditing firms because of their financial muscles.

The results on earning management indicated that the least firm realized the earning Kshs. 2.73 million with the highest firm posting an earning of Kshs. 7.75 million. On average, the earnings among the listed firms hovered around Kshs. 5.85 million. Firm's earnings comprise of cash inflows and outflows and discretionary and non-discretionary accruals. Jones (2011) stated that the quality of earnings can be compromised by altering the capital structure, and the accounting methods.

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4.4 Diagnostic Tests

The study conducted diagnostic tests to test the fitness of the data in relation to the assumptions of regression analysis. The specific diagnostic tests that were conducted by the study include autocorrelation test, multicollinearity test, normality test and heteroscedasticity test as indicated in subsequent sections.

4.4.1 Autocorrelation Test

Autocorrelation test was done to ascertain whether there was positive serial correlation in the data which could be a violation of the regression analysis assumption. The study used Durbin Watson Statistic to test for presence of autocorrelation as summarized in Table 4.3.

Table 4.3: Autocorrelation Test

Model	Durbin-Watson
1	1.640[a]

a Predictors: (Constant), Firm Size, Ownership Concentration, Audit Committee Independence, Board Activity, Board Independence, Board Size
b Dependent Variable: Earnings Management
Source: Survey Data (2020)

The results in Table 4.3 indicate that the overall value of Durbin Watson was 1.640, which is roughly taken as 2 when approximated. Most empirical studies argue that values of Durbin Watson closer or equal to 2 indicate absence of serial correlation in the data. Hence, absence of autocorrelation in the present study was assumed signifying its suitability for carrying out regression analysis.

4.4.2 Multicollinearity Test

Multicollinearity was conducted using Variance of Inflation Factor (VIF) and its essence was to test whether any of the independent variable of the study was highly correlated with each other. Table 4.4 is a summary of the findings.

Table 4.4: Multicollinearity Test

	Collinearity Statistics	
	Tolerance	**VIF**
Board Size	.446	2.243
Board Independence	.562	1.779
Audit Committee Independence	.664	1.506
Ownership Concentration	.959	1.042
Board Activity	.779	1.284
Firm Size	.478	2.092
Overall Value	**.648**	**1.658**

a. Dependent Variable: Earnings Management

Source: Survey Data (2020)

The results in Table 4.4 indicate that the overall value of VIF was 1.658. The rule of thumb is usually that VIF values within the range of 1-10 signify absence of multicollinearity. Thus, it can be deduced that the data for the study had no multicollinearity and thus suitable for use in carrying out inferential analysis as detailed in subsequent sections.

4.4.3 Normality Test

Normality test was conducted to test whether the data set had normal distribution. The study used Kolmogorov-Smirnov and Shapiro-Wilk to test for normality with the results as indicated in Table 4.5.

Table 4.5: Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Firm Size	.264	2.240	.000	.141	0.560	.072
Ownership Concentration	.247	4.159	.019	.720	3.750	.389
Audit Committee Independence	.218	50.000	.022	.666	49.500	.119
Board Activity	.247	4.159	.019	.720	3.750	.389
Board Independence	.234	8.435	.018	.732	8.087	.248
Board Size	.148	20.000	.200	.847	19.800	.364

Source: Survey Data (2020)

Because of the relatively smaller sample (n=200), the study used the values of Shapiro-Wilk to test for normality. From the results, all the variables had p-values of ($p>0.05$), which was interpreted to infer the presence of normality in the data.

4.4.4 Heteroscedasticity Test

Heteroscedasticity test was conducted using scatter plot with the results as indicated in Figure 4.1.

Scatterplot
Dependent Variable: Earnings_Management
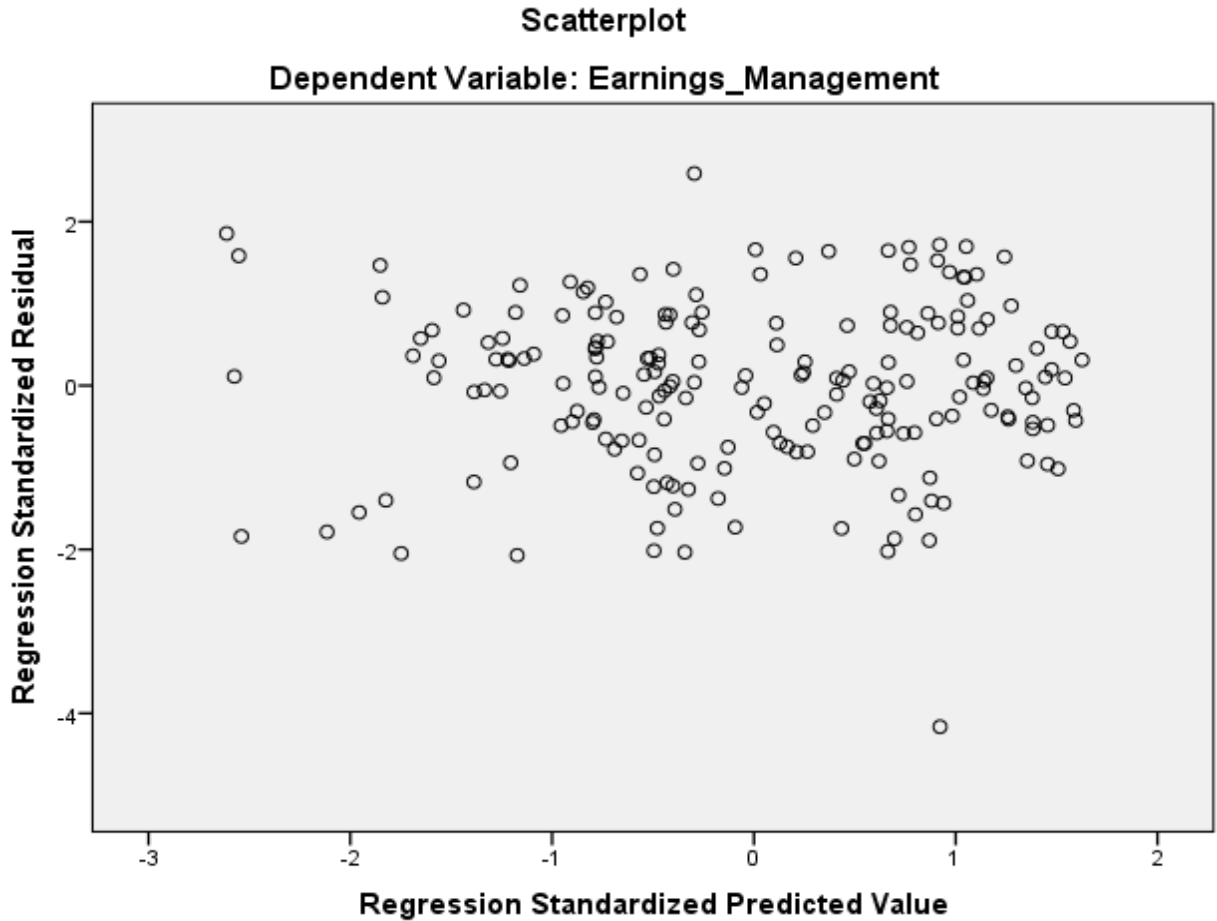
Figure 4.1: Heteroscedasticity Test
Source: Survey Data (2020)

Figure 4.1 indicate the spread of the observations between residual and a set of predictive values.

From the results, the observations are widely spread with no clearly established pattern. This could

be an indication of absence of heteroscedasticity and thus homoscedasticity was assumed.

4.5 Correlation Results

Correlation analysis was conducted to establish the relationship between corporate governance and

earnings management among the listed firms in Kenya. The findings are as indicated in Table 4.6.

Table 4.6: Correlation and the Coefficient of Determination

	Earnings Management	Board Size	Board Independence	Audit Committee Independence	Ownership Concentration	Board Activity	Firm Size
Earnings Management	1						
Board Size	.691	1					
Board Independence	.428	.516**	1				
Audit Committee Independence	.392	.366	.564	1			
Ownership Concentration	.002	.010	.040	-.027	1		
Board Activity	.354	.412	.268	.142	.156	1	
Firm Size	.815	.699	.455	.361	-.042	.392	1

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

Source: Survey Data (2020)

The results in Table 4.6 indicated that that board size had a strong and positive relation (r=0.691) with earning management. Board independence (r=0.428) was seen to have a moderate and positive correlation with earnings management. It was noted that audit committee independence (r=0.392) had a moderate and positive relationship with earning management. The study established that ownership concentration (r=0.886) had a strong and positive relationship with earning management. The study established that board activity (r=0.412) had a moderate and positive correlation with earning management. Firm size (r=0.815) had a strong and positive relationship with earning management. This means that corporate governance had a positive relationship with earning management.

4.6 Regression Results

Regression analysis was used to establish the effect of corporate governance on earnings management with the findings as presented in subsequent sections.

4.6.1 Model Summary

The results of the regression model summary are as indicated in Table 4.7

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.711[a]	.505	.493	.70851	.505	39.439	5	194	.000
2	.837[b]	.700	.691	.55311	.195	124.676	6	193	.000

a. Predictors: (Constant), Board Activity, Audit Committee Independence, Ownership Concentration, Board Size, Board Independence
b. Predictors: (Constant), Board Activity, Audit Committee Independence, Ownership Concentration, board Size, Board Independence, Firm Size
Source: Survey Data (2020)

Table 4.7 gives a summary of two models; the first model was used before introduction of the control variable firm size. From the results, before controlling for firm size, R square was 0.505, which means that 50.5% change in earning management among listed firms before controlling for their sizes was jointly explained by their corporate governance mechanism in place. On controlling for their size in model 2, there was a change in R square of .195, which imply that firm size explain 19.5% change in earning management of the listed firms in consideration of their corporate governance mechanisms.

4.6.2 Analysis of Variance
The results of the ANOVA were established and summarized as indicated in Table 4.8.

Table 4.8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	98.988	5	19.798	39.439	.000[b]
	Residual	96.882	194	.502		
	Total	**195.870**	**199**			
2	Regression	137.131	6	22.855	74.706	.000[c]

	Residual	58.739	193	.306		
	Total	**195.870**	**199**			

a. Dependent Variable: Earnings Management
b. Predictors: (Constant), Board Activity, Audit Committee Independence, Ownership Concentration, Board Size, Board Independence
c. Predictors: (Constant), Board Activity, Audit Committee Independence, Ownership Concentration, Board Size, Board Independence, Firm Size

Source: Survey Data (2020)

As indicated in Table 4.8, before controlling for firm size in model 1, the value of F calculated was 39.439 with p<0.000. This means that the first model of the study was significant and that corporate governance had significant effect on earnings management. After controlling for firm size in model 2, the value of F calculated increased to 74.706 with p<0.05. This means that on controlling for firm size, corporate governance still had significant effect on earning management.

4.6.3 Regression Beta Coefficients and Significance

The findings of the regression beta coefficients and the significance as indicated by the p-values were established and summarized as shown in Table 4.9.

Table 4.9: Regression Beta Coefficients and Significance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.289	.352		6.497	.000
	Board Size	.283	.030	.592	9.403	.000
	Board Independence	.081	.464	.012	.174	.862
	Audit Committee Independence	.975	.386	.156	2.528	.012
	Ownership Concentration	-.001	.002	-.013	-.260	.795
	Board Activity	.027	.018	.086	1.533	.127
2	(Constant)	-.381	.364		-1.045	.297
	Board Size	.108	.028	.227	3.849	.000
	Board Independence	-.255	.363	-.037	-.703	.483
	Audit Committee Independence	.624	.303	.100	2.061	.041
	Ownership Concentration	.001	.002	.031	.767	.444
	Board Activity	.000	.014	.001	.012	.990
	Firm Size	.288	.026	.638	11.194	.000

a. Dependent Variable: Earnings Management

Source: Survey Data (2020)

Since some of the data used in the study had not been standardized, interpretation of the beta

coefficients will be based on standard values. The results in Table 4.9 indicate that before

controlling for firm size in model 1, when holding corporate governance constant, earnings

management among the listed firms would be at 2.289 units. It was shown that a unit change in

board size when all the variables were to be held constant would lead to 0.592 unit increase in

earnings management among listed firms in Kenya. A unit change in board independence when other variables are held constant would result into 0.012 unit increase in earnings management among listed firms. It was shown that when holding other variables constant, a unit change in audit committee independence would lead to 0.156 unit increase in earnings management among listed firms at the NSE. A unit change in ownership concentration when other variables are held constant would lead to 0.013 unit decrease in earnings management among listed firms. The study noted that a unit increase in board activity when other variables are held constant would lead to 0.086 unit increase in earning management among the listed firms. However, at 5%, only board size ($p<0.05$) and audit committee independence ($p<0.05$) were significant.

On controlling for their sizes in model 2, a unit change in board size when all the variables were to be held constant would lead to 0.227 unit increase in earning management among listed firms in Kenya. A unit change in board independence when other variables are held constant would result into 0.037 unit decrease in earnings management among listed firms. It was shown that when holding other variables constant, a unit change in audit committee independence would lead to 0.100 unit increase in earnings management among listed firms at the NSE. A unit change in ownership concentration when other variables are held constant would lead to 0.031 unit increase in earnings management among listed firms. The study noted that a unit increase in board activity when other variables are held constant would lead to 0.001 unit increase in earning management among the listed firms. Thus, after controlling for firm size, board size ($\beta=.227$) had the largest

beta followed by audit committee independence (β=.100), board independence (β=.036), ownership concentration (β=.031) and board activity (β=.001). Taking the level of significance as 5%, it was noted that both board size (p<0.05) and audit committee independence (p<0.05) had significant effect on earning management. Furthermore, firm size (p<0.05) was also significant.

4.7 Interpretation and Discussion

The study was set out to establish the effect of corporate governance on earnings management of companies listed at NSE. From correlation results, board size had a strong and positive relation (r=0.691) with earning management. Board independence (r=0.428) was seen to have a moderate and positive correlation with earnings management. These findings are consistent with who noted that Barnhart and Rosenstein (1998) and Jensen (1993) proposed that smaller boards (in number) are efficient than large boards since they are easier to control. On the contrary, Peasnell, Pope, and Young (2004) suggested that organizations with large board sizes are more efficient and thus increases the quality of earnings reported. Jebet (2001) sampled out NSE quoted firms and compared the performance of firms with a high number of non-executive directors to those with less where the findings of the study were that the ones with a higher number of non-executive directors performed better than the ones with less. Bradbury, Mak, and Tan (2006) conducted a similar study in Singapore; however, the results did not prove the existence of any relationship between earnings management and board independence.

On the other hand, audit committee independence (r=0.392), ownership concentration (r=0.886) and board activity (r=0.412) all had moderate and positive correlation with earning management. Firm size (r=0.815) had a strong and positive relationship with earning management. The result contradicts with Lin (2006) who found out that an audit committee had a negative effect on the

earnings management level. Similarly, inconsistent findings were established by Jesus and Emma (2013) in a study that concluded that ownership concentration among other corporate governance practices negatively affects earnings management. Iraya et al., (2015) in a similar study for enlisted firms at NSE found that ownership concentration, board size and board independence negatively affect earnings management while CEO duality and board activity affect positively the levels earnings management.

Regression results showed that on controlling for their size, there was changes in R square of 0.195, which imply that firm size explains 19.5% change in earning management of the listed firms in consideration of their corporate governance mechanisms. Heninger (2001) reported that large firms have a better quality of financial reports because they have the ability to hire well-established auditing firms because of their financial muscles. This reduces the level of earnings management. On the contrary, Naz, Bhatti, Ghafoor, and Khan (2011) in a study on Pakistan listed firms did not find a significant relationship between firm size and the levels of earnings management.

The ANOVA results showed that before and after controlling for firm size, the value of F calculated was 39.439 with p<0.000. This means that corporate governance had significant effect on earnings management. Bhuiyan (2010) showed that earnings management reduces as firms comply more with the corporate governance regulation instituted. Swastika (2013) revealed that the board of directors, the audit quality, and the firm size had a significant impact on the earnings management levels. Dibia and Onwuchekwa (2014) revealed a significant effect of the board size and firm size on the level of earnings management while there was no significant effect of board independence, audit committee independence, audit type and CEO shares on the level of earning management.

The results of regression beta coefficients and significance indicated that before controlling for firm size, board size had the largest beta ($\beta=0.592$) followed by audit committee independence ($\beta=0.156$), board activity ($\beta=0.086$), ownership concentration ($\beta=0.013$) and board independence ($\beta=0.012$). Iraya et al., (2015) in a similar study for enlisted firms at NSE found that ownership concentration, board size and board independence negatively affect earnings management while CEO duality and board activity affect positively the levels earnings management. However, at 5%, only board size ($p<0.05$) and audit committee independence ($p<0.05$) were significant. On controlling for their sizes, both board size ($p<0.05$) and audit committee independence ($p<0.05$) had significant effect on earning management besides firm size itself. Barnhart and Rosenstein (1998) and Jensen (1993) proposed that smaller boards (in number) are efficient than large boards since they are easier to control. On the contrary, Peasnell, Pope, and Young (2004) suggested that organizations with large board sizes are more efficient and thus increases the quality of earnings reported.

Thus, the study therefore infers that board size and audit committee independence had significant effect on earnings management of the listed firms at the NSE. The study further deduced that firm size was a significant controlling effect in the relationship between corporate governance and earnings management of the listed firms at the NSE. The results contradicts Dibia and Onwuchekwa (2014) who shared that board independence does not affect the level of earnings management. Similarly, the results are inconsistent with Muchoki (2013) who revealed that ownership concentration, board size and board independence negatively affected earnings management while board activity and CEO duality positively affected earnings management levels.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter is a summary of the analyzed findings as informed by the specific objectives. The conclusions and recommendations are provided based on the findings. The limitations as well as areas that require further research are also indicated.

5.2 Summary of the Findings

The study was set out to establish the effect of corporate governance on earnings management of companies listed at NSE. From correlation results, board size, ownership concentration and firm size all had strong and positive relationship with earnings management among listed firms. On the other hand, board independence, audit committee independence and board activity all had moderate and positive relationship with earnings management of the listed firms in Kenya. Thus, it was inferred that corporate governance had positive relationship with earning management of the listed firms at the NSE.

Regression results showed that on controlling for their size, there was a change in R square which implies that firm size controlled the relationship between corporate governance and earning management of the listed firms. The ANOVA results showed that before and after controlling for firm size, the p-value was less than 0.05. This implies that corporate governance had significant effect on earning management of the listed firms. The results of regression beta coefficients and significance before controlling for firm size indicated that board size had the largest beta followed by audit committee independence, board activity, ownership concentration and board independence. However, only board size and audit committee independence were significant.

However, after controlling for firm size, board size had the largest beta followed by audit committee independence, board independence, ownership concentration and board activity. Furthermore, both board size and audit committee independence had significant effect on earning management besides firm size itself.

The study further deduced that firm size was a significant controlling effect in the relationship between corporate governance and earnings management of the listed firms at the NSE.

5.3 Conclusion

Corporate governance has been shown to have far reaching implications on earnings management of the listed firms at the NSE. The results of the study show that the size of the board and the independence of the audit committee are the dimensions of corporate governance that significantly affects the earnings management of the listed firms. In terms of the strength of the interaction between corporate governance (covered in isolation) and earnings management, the study concludes that board size has the largest effect on earnings management followed by audit committee independence, board activity, ownership concentration and board independence. This assertion only holds when corporate governance is considered solely. Furthermore, the relationship between board independence and earning management was inverse, implying that a board with a larger number of non-executive directors is able to provide more oversight that discourages the management from practicing earnings management.

Although corporate governance is a key driver of earnings management of the listed firms, careful consideration of their relative sizes would alter this relationship. For instance, when the sizes of the listed firms at the NSEs has been factored in, board size will have the largest effect on their earnings management followed by audit committee independence, board independence,

ownership concentration and board activity. Board activity including the meetings held has the least effect on earnings management of the listed firms when their sizes have not been considered. However, when the size of the respective listed firms has been considered, board activity will impact on their earnings management to some extent. Irrespective of the sizes of the respective listed firms at the NSE, their board size and audit committee independence remains to be the key drivers of their earnings management. When the size of the respective firms is put into consideration, ownership concentration and earnings management will be inversely related.

5.4 Recommendations for Policy and Practice

The study recommends that shareholders of the listed firms in Kenya should put in place ideal boards with adequate members so as to provide an oversight role that would minimize on earnings management.

The shareholders should ensure that audit committees of their listed firms are properly constituted to have independent directors who will bring in outside experience and expertise that would minimize earnings management.

The policy makers at the Capital Markets Authority (CMA) should establish sound policies and regulations on the ideal board size and the independent directors of the audit committee that would bring about minimization of the earnings management.

5.5 Limitations of the Study

Conceptually, the study was limited on corporate governance and earnings management with firm size as the control variable. The study covered board size, board independence, audit committee independence, ownership concentration and board activity as the proxies of corporate governance

in relation to earnings management. Contextually, the study was limited to listed firms at the NSE. The study covered 40 listed firms at the NSE that are classified into different categories (bourses).

Methodologically, the study was limited to secondary data that was gathered over a five year time frame (2015-2019). The limitation of using secondary data is that it is the second hand and thus chances of biasness may be higher. The study was limited to the use of multiple regression analysis during the analysis of the findings.

5.6 Areas for Further Research

The study recommends that further studies should be conducted linking corporate governance with other proxies like profitability or operational performance aside from earnings management.

The study recommends that further studies should be conducted by covering the cross listed firms on the East Africa Security Exchange (EASE) aside from the firms listed at the NSE. This will give room for in-depth comparative analysis.

The study recommends that further studies should adopt the use of panel data methodologies. This will require more complex soft wares like STATA that will allow the use of Hausman's test to specify on whether to adopt Random effect (RE) or Fixed effect (FE) models. This will allow for drawing of relevant inferences on corporate governance and earnings management.

Future researchers could focus on earnings management for non-listed companies in Kenya as well as the family ran firms. This would be beneficial so as to ensure transparency in the operations of these firms.

Further studies could include debt level as a control variable in order to determine the systematic risk affecting the listed firms.

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Researchers could consider analyzing data from government owned institutions that have offered their shares to the public through IPOs or private placements to establish whether they engaged in earnings management to attract potential investors.

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APPENDICES

Appendix I: NSE Listed Firms

	Agricultural
1.	Eaagads Ltd
2.	Kakuzi Plc
3.	Kapchorua Tea Co. Ltd
4.	The Limuru Tea Co. Plc
5.	Sasini Plc
6.	Williamson Tea Kenya Ltd
7.	Rea vipingo Plantations
	Automobiles & Accessories
8.	Car & General (K) Ltd
9.	Sameer Africa Ltd
10.	Marshalls East Africa Ltd
	Banking
11.	ABSA Bank Kenya Plc
12.	Diamond Trust Bank Kenya Ltd
13.	Equity Group Holdings Plc
14.	HF Group Plc
15.	I&M Holdings Plc
16.	KCB Group Plc
17.	National Bank of Kenya Ltd
18.	NIC Group Plc
19.	Stanbic Holdings Plc
20.	Standard Chartered bank Kenya Ltd
21.	The Co-operative Bank of Kenya Ltd
	Commercial & services
22.	Atlas African Industries Ltd
23.	Deacons East Africa Plc
24.	Eveready East Africa
25.	Express Kenya Ltd
26.	Kenya Airways Ltd
27.	Longhorn Publishers Plc
28.	Nairobi Business Venture Ltd
29.	Standard Group Plc
30.	TPS Eastern Africa Ltd
31.	Uchumi Supermarket Plc
32.	WPP Scangroup Plc
	Construction & Allied

33.	ARM Cement Plc	
34.	Bamburi Cement Ltd	
35.	Crown Paints Kenya Plc	
36.	East Africa Cables Ltd	
37.	E.A Portland Cement	
	Energy & Petroleum	
38.	KenGen Co. Plc	
39.	Kenol Kobil	
40.	Kenya Power & Lighting Co Ltd	
41.	Total Kenya Ltd	
42.	Umeme Ltd	
	Insurance	
43.	Britam Holdings Plc	
44.	CIC Insurance Group	
45.	Jubilee Holdings Ltd	
46.	Kenya Re Insurance Corporation Ltd	
47.	Liberty Kenya Holdings	
48.	Sanlam Kenya Plc	
	Investment	
49.	Centum Investment Co Plc	
50.	Home Afrika Ltd	
51.	Kurwitu Ventures Ltd	
52.	Olympia Capital Holdings ltd	
53.	Trans-century Plc	
	Investment Services	
54.	Nairobi Securities Exchange Plc	
	Manufacturing & Allied	
55.	A. Baumann Co.	
56.	B.O.C Kenya Plc	
57.	British American Tobacco Kenya Plc	
58.	Carbacid Investments Ltd	
59.	East African Breweries Ltd	
60.	Eveready East Africa Ltd	
61.	Flame Tree Group Holdings Ltd	
62.	Kenya Orchards Ltd	
63.	Mumias Sugar Co	
64.	Unga Group Ltd	
	Telecommunication	
65.	Safaricom Plc	

Appendix II: Raw Data

Firm		X1 - Board Size	X2 - Board Independence	X3 - Audit Committee Independence	X4 - Ownership Concentration	X5 - Board Activity	X6 - Firm's size	Earnings Management
Kakuzi Plc	2015	7.000	0.710	1.000	26.060	4.000	15.330	4.851
	2016	8.000	0.750	1.000	26.060	4.000	15.440	5.263
	2017	8.000	0.750	1.000	26.060	4.000	15.560	4.979
	2018	8.000	0.750	1.000	26.060	4.000	15.600	4.496
	2019	7.000	0.710	1.000	26.060	4.000	15.680	5.013
Kapchorua Tea Co. Ltd	2015	7.000	0.710	1.000	39.560	4.000	14.500	4.790
	2016	7.000	0.710	1.000	39.560	4.000	14.660	4.863
	2017	7.000	0.710	1.000	39.560	4.000	14.520	5.538
	2018	7.000	0.710	1.000	39.560	4.000	14.730	4.954
	2019	7.000	0.710	1.000	39.560	3.000	14.530	5.083
The Limuru Tea Co. Plc	2015	4.000	0.250	0.000	52.000	4.000	12.660	3.777
	2016	4.000	0.250	0.000	52.000	4.000	12.550	4.707
	2017	5.000	0.400	0.000	52.000	4.000	12.480	4.607
	2018	6.000	0.500	0.000	52.000	4.000	12.230	2.729
	2019	6.000	0.500	0.500	52.000	4.000	12.370	3.111
Sasini Plc	2015	8.000	0.875	1.000	41.840	5.000	16.590	5.175
	2016	8.000	0.875	1.000	41.840	4.000	16.640	5.332

	2017	7.000	0.857	1.000	41.840	4.000	16.400	5.490
	2018	9.000	0.889	1.000	41.840	4.000	16.380	4.822
	2019	8.000	0.875	1.000	41.840	4.000	16.500	4.946
Williamson Tea Kenya Ltd	2015	7.000	0.714	1.000	51.460	4.000	15.960	4.842
	2016	7.000	0.714	1.000	51.460	4.000	16.040	4.844
	2017	7.000	0.714	1.000	51.460	4.000	15.940	5.917
	2018	7.000	0.714	1.000	51.460	4.000	16.070	4.696
	2019	7.000	0.714	1.000	51.460	3.000	15.930	5.967
Car & General (K) Ltd	2015	7.000	0.714	1.000	32.470	4.000	16.010	5.258
	2016	7.000	0.714	1.000	32.470	6.000	16.090	5.502
	2017	7.000	0.857	1.000	32.500	4.000	16.060	5.668
	2018	7.000	0.857	1.000	32.500	4.000	16.140	5.450
	2019	7.000	0.857	1.000	32.500	4.000	16.260	5.548
Sameer Africa Ltd	2015	6.000	0.833	1.000	72.150	5.000	15.140	5.781
	2016	7.000	0.857	1.000	72.150	5.000	15.010	5.205
	2017	8.000	0.875	1.000	72.150	4.000	14.900	5.749
	2018	8.000	0.875	1.000	72.150	4.000	14.770	5.546
	2019	8.000	0.875	1.000	72.150	4.000	14.240	5.796
ABSA Bank Kenya Plc	2015	8.000	0.750	1.000	68.500	8.000	19.300	5.809
	2016	8.000	0.750	1.000	68.500	10.000	19.370	6.381
	2017	8.000	0.750	1.000	68.500	10.000	19.420	4.322

	2018	11.000	0.818	1.000	68.500	8.000	19.600	6.472
	2019	9.000	0.778	1.000	68.500	8.000	19.740	6.865
Diamond Trust Bank Kenya Ltd	2015	11.000	0.909	1.000	17.320	5.000	19.420	6.665
	2016	11.000	0.909	1.000	17.320	4.000	19.610	7.751
	2017	11.000	0.909	1.000	16.500	5.000	19.710	7.450
	2018	12.000	0.830	1.000	16.500	4.000	19.750	7.110
	2019	13.000	0.820	1.000	16.500	4.000	19.770	7.003
Equity Group Holdings Plc	2015	9.000	0.667	1.000	12.220	5.000	19.870	6.776
	2016	9.000	0.778	1.000	11.990	5.000	19.980	6.831
	2017	10.000	0.800	1.000	11.990	4.000	20.080	7.067
	2018	11.000	0.818	1.000	11.990	7.000	20.170	6.533
	2019	9.000	0.778	1.000	11.990	5.000	20.330	6.676
HF Group Plc	2015	7.000	0.857	1.000	19.460	4.000	18.090	5.581
	2016	9.000	0.889	1.000	19.430	4.000	18.090	6.642
	2017	9.000	0.889	1.000	19.420	4.000	18.030	6.255
	2018	9.000	0.889	1.000	19.410	4.000	17.940	6.245
	2019	9.000	0.889	1.000	19.410	4.000	17.940	6.135
KCB Group Plc	2015	11.000	0.818	1.000	17.530	10.000	20.140	6.795
	2016	11.000	0.818	1.000	17.530	10.000	20.200	7.443
	2017	9.000	0.778	1.000	17.530	9.000	20.290	6.689
	2018	11.000	0.818	1.000	17.530	8.000	20.390	7.185

	2019	11.000	0.818	1.000	19.760	12.000	20.620	7.376
National Bank of Kenya Ltd	2015	9.000	0.778	1.000	48.050	11.000	18.650	6.147
	2016	9.000	0.889	1.000	48.050	14.000	18.560	6.910
	2017	9.000	0.889	1.000	48.100	11.000	18.510	6.095
	2018	9.000	0.889	1.000	48.100	13.000	18.560	6.820
	2019	9.000	0.889	1.000	48.100	13.000	18.530	7.316
NIC Group Plc	2015	12.000	0.833	1.000	15.840	4.000	18.930	7.261
	2016	11.000	0.818	1.000	15.840	6.000	18.950	6.889
	2017	11.000	0.818	1.000	15.840	5.000	19.140	7.520
	2018	9.000	0.778	1.000	15.840	7.000	19.160	7.056
	2019	9.000	0.778	1.000	15.840	7.000	19.180	5.533
The Co-operative Bank of Kenya Ltd	2015	13.000	0.923	1.000	64.560	8.000	19.650	6.943
	2016	12.000	0.917	1.000	64.560	5.000	19.680	7.187
	2017	12.000	0.917	1.000	64.560	7.000	19.770	6.544
	2018	12.000	0.917	1.000	64.560	7.000	19.840	7.487
	2019	12.000	0.917	1.000	64.560	7.000	19.940	7.451
Express Kenya Ltd	2015	5.000	0.333	1.000	60.430	4.000	13.000	4.589
	2016	5.000	0.500	1.000	60.430	4.000	12.850	4.652
	2017	4.000	0.500	1.000	60.430	4.000	12.790	4.919
	2018	4.000	0.750	1.000	60.430	4.000	12.680	3.375

	2019	4.000	0.750	1.000	60.430	4.000	13.060	3.566
Kenya Airways Ltd	2015	11.000	0.818	1.000	29.800	5.000	19.020	6.775
	2016	11.000	0.818	1.000	29.800	5.000	18.880	7.447
	2017	11.000	0.818	1.000	29.800	5.000	18.800	7.157
	2018	11.000	0.818	1.000	48.900	8.000	18.730	6.624
	2019	11.000	0.909	1.000	48.900	10.000	19.090	7.166
Longhorn Publishers Plc	2015	8.000	0.875	1.000	31.250	7.000	13.440	4.771
	2016	9.000	0.889	1.000	60.200	6.000	14.440	5.808
	2017	9.000	0.889	1.000	60.200	7.000	14.440	4.884
	2018	9.000	0.889	1.000	60.200	3.000	14.690	5.264
	2019	9.000	0.889	1.000	60.200	4.000	14.670	4.938
Standard Group Plc	2015	8.000	0.625	1.000	69.030	7.000	15.290	5.610
	2016	8.000	0.625	1.000	69.030	7.000	15.300	5.392
	2017	9.000	0.889	1.000	69.030	8.000	15.310	5.984
	2018	9.000	0.889	1.000	69.030	6.000	15.360	6.305
	2019	8.000	0.875	1.000	69.030	6.000	15.250	6.135
TPS Eastern Africa Ltd	2015	11.000	0.818	1.000	45.040	5.000	16.580	5.628
	2016	10.000	0.800	1.000	45.040	6.000	16.650	5.578
	2017	9.000	0.778	1.000	45.040	4.000	16.680	5.775
	2018	9.000	0.889	1.000	45.040	3.000	16.680	5.688
	2019	8.000	0.750	1.000	45.040	5.000	16.710	5.791

WPP Scangroup Plc	2015	7.000	0.714	1.000	46.690	4.000	16.340	6.024
	2016	7.000	0.714	1.000	46.690	4.000	16.420	5.099
	2017	7.000	0.714	1.000	46.690	4.000	16.440	6.004
	2018	7.000	0.714	1.000	46.690	4.000	16.480	6.133
	2019	7.000	0.714	1.000	46.690	4.000	16.370	5.630
Bamburi Cement Ltd	2015	9.000	0.667	1.000	29.300	8.000	17.350	5.826
	2016	9.000	0.667	1.000	29.300	5.000	17.520	5.963
	2017	8.000	0.875	1.000	29.300	5.000	17.670	6.884
	2018	11.000	0.727	1.000	29.300	8.000	17.730	6.563
	2019	11.000	0.727	1.000	29.300	8.000	17.710	6.386
KenGen Co. Plc	2015	11.000	0.909	1.000	70.000	10.000	19.650	6.956
	2016	11.000	0.909	1.000	73.920	12.000	19.720	6.916
	2017	11.000	0.909	1.000	70.000	12.000	19.750	6.709
	2018	11.000	0.909	1.000	70.000	8.000	19.750	6.754
	2019	11.000	0.909	1.000	70.000	8.000	19.810	7.269
Kenya Power & Lighting Co Ltd	2015	9.000	0.889	1.000	50.086	15.000	19.430	6.466
	2016	9.000	0.889	1.000	50.086	14.000	19.510	7.079
	2017	9.000	0.889	1.000	50.086	15.000	19.650	7.306
	2018	9.000	0.889	1.000	50.086	15.000	19.630	7.663
	2019	9.000	0.889	1.000	50.086	15.000	19.610	7.450

Total Kenya Ltd	2015	6.000	0.667	1.000	92.260	4.000	17.350	6.775
	2016	7.000	0.857	1.000	92.260	4.000	17.400	5.620
	2017	7.000	0.857	1.000	92.260	4.000	17.450	6.222
	2018	7.000	0.857	1.000	92.260	4.000	17.490	5.574
	2019	7.000	0.857	1.000	92.260	4.000	17.440	6.366
Britam Holdings Plc	2015	9.000	0.890	1.000	23.340	9.000	18.170	5.772
	2016	8.000	0.750	1.000	23.340	7.000	18.240	5.252
	2017	9.000	0.780	1.000	18.730	10.000	18.410	6.203
	2018	11.000	0.818	1.000	17.550	10.000	18.460	5.957
	2019	11.000	0.810	1.000	17.550	10.000	18.650	5.843
Jubilee Holdings Ltd	2015	11.000	0.727	1.000	37.980	4.000	14.920	7.036
	2016	9.000	1.000	1.000	37.980	4.000	18.320	5.912
	2017	9.000	1.000	1.000	37.980	4.000	18.470	6.360
	2018	9.000	1.000	1.000	37.980	4.000	18.550	5.860
	2019	9.000	1.000	1.000	37.980	5.000	18.680	6.181
Kenya Re Insurance Corporation Ltd	2015	11.000	0.909	1.000	60.000	11.000	17.400	5.921
	2016	11.000	0.909	1.000	60.000	21.000	17.470	6.223
	2017	11.000	0.909	1.000	60.000	13.000	17.570	6.039
	2018	11.000	0.909	1.000	60.000	22.000	17.610	6.270
	2019	11.000	0.909	1.000	60.000	11.000	17.730	5.289

Centum Investment Co Plc	2015	9.000	0.889	1.000	22.970	4.000	18.100	6.340
	2016	8.000	0.875	1.000	22.970	7.000	18.170	7.066
	2017	11.000	0.909	1.000	22.970	4.000	18.300	6.198
	2018	10.000	0.900	1.000	22.970	5.000	18.380	5.401
	2019	10.000	0.900	1.000	22.970	4.000	18.440	5.711
Home Afrika Ltd	2015	9.000	0.889	1.000	5.000	4.000	15.170	4.785
	2016	7.000	0.857	1.000	5.000	5.000	15.180	5.828
	2017	7.000	0.857	1.000	5.000	5.000	15.310	5.396
	2018	7.000	0.857	1.000	5.000	5.000	15.320	5.508
	2019	7.000	0.857	1.000	5.000	4.000	15.290	5.691
Olympia Capital Holdings ltd	2015	6.000	0.500	0.667	24.860	4.000	14.240	4.052
	2016	6.000	0.500	0.667	25.470	4.000	14.240	4.659
	2017	5.000	0.400	0.500	25.470	4.000	14.290	4.903
	2018	4.000	0.500	0.500	25.800	4.000	14.310	3.271
	2019	5.000	0.600	0.500	25.900	4.000	14.300	4.799
Nairobi Securities Exchange Plc	2015	11.000	0.909	1.000	16.090	9.000	14.470	5.476
	2016	11.000	0.909	1.000	16.090	8.000	14.520	5.599
	2017	11.000	0.909	1.000	16.090	7.000	14.560	5.614
	2018	11.000	0.909	1.000	16.090	7.000	14.610	4.761
	2019	11.000	0.909	1.000	16.090	10.000	14.620	5.538

B.O.C Kenya Plc	2015	10.000	0.700	1.000	65.380	5.000	14.560	4.330
	2016	8.000	0.750	1.000	65.400	5.000	14.520	5.459
	2017	8.000	0.750	1.000	65.380	6.000	14.520	5.261
	2018	8.000	0.750	1.000	65.380	6.000	14.480	4.941
	2019	8.000	0.750	1.000	65.380	5.000	14.500	4.966
British American Tobacco Kenya Plc	2015	10.000	0.700	1.000	60.000	7.000	16.740	6.224
	2016	10.000	0.700	1.000	60.000	5.000	16.720	6.146
	2017	10.000	0.700	1.000	60.000	5.000	16.690	6.119
	2018	8.000	0.750	1.000	60.000	5.000	16.690	5.886
	2019	8.000	0.750	1.000	60.000	5.000	16.900	6.629
Carbacid Investments Ltd	2015	5.000	1.000	1.000	9.360	4.000	14.900	5.020
	2016	5.000	1.000	1.000	9.360	4.000	14.940	4.333
	2017	5.000	1.000	1.000	9.360	4.000	15.010	5.365
	2018	5.000	1.000	1.000	9.950	5.000	15.030	3.737
	2019	5.000	1.000	1.000	9.950	4.000	15.070	5.566
East African Breweries Ltd	2015	12.000	0.750	1.000	42.820	7.000	18.020	7.034
	2016	11.000	0.727	1.000	42.820	6.000	17.930	6.512
	2017	11.000	0.727	1.000	42.820	7.000	18.050	5.651
	2018	11.000	0.727	1.000	42.820	6.000	18.080	6.882

	Year							
	2019	10.000	0.700	1.000	42.820	5.000	18.280	6.875
Eveready East Africa Ltd	2015	9.000	0.667	1.000	34.960	6.000	14.220	5.448
	2016	8.000	0.875	1.000	34.960	8.000	13.900	5.160
	2017	7.000	0.857	1.000	34.960	6.000	13.560	4.716
	2018	6.000	0.830	1.000	34.960	9.000	13.260	4.724
	2019	6.000	0.830	1.000	34.960	9.000	12.420	5.125
Flame Tree Group Holdings Ltd	2015	5.000	0.400	1.000	1.010	4.000	14.130	5.050
	2016	5.000	0.400	1.000	1.350	4.000	14.240	4.970
	2017	5.000	0.400	1.000	1.890	4.000	14.330	5.137
	2018	5.000	0.400	1.000	1.850	4.000	14.420	5.012
	2019	5.000	0.400	1.000	1.610	4.000	14.640	5.090
Unga Group Ltd	2015	8.000	0.875	1.000	50.930	4.000	15.980	4.447
	2016	8.000	0.875	1.000	50.930	4.000	16.030	4.885
	2017	8.000	0.875	1.000	50.930	4.000	16.140	6.227
	2018	8.000	0.875	1.000	50.930	4.000	12.820	5.167
	2019	8.000	0.875	1.000	50.930	4.000	16.180	5.788
Safaricom Plc	2015	9.000	0.890	1.000	40.000	4.000	18.870	7.423
	2016	9.000	0.890	1.000	40.000	4.000	18.890	7.312
	2017	10.000	0.900	1.000	40.000	4.000	18.910	7.452
	2018	10.000	0.900	1.000	40.000	5.000	18.940	7.566
	2019	10.000	0.900	1.000	40.000	7.000	19.080	7.423