

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

PRESENTED BY:

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DECLARATION

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

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

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DEDICATION

This thesis is dedicated to my family members. Thank you for always believing in me and supporting me in all situations. May God always bless you.

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LIST OF ABBREVIATIONS

CEO-Chief Executive Officer

CMA - Capital Market Authority

DAC- Discretionary Accruals

EM-Earnings Management

EVA- Economic Value Added

GAAP-General Accepted Accounting Principles

IFRS- International Financial Reporting Standard

MVA- Market Value Added

NASI- NSE All Share Index

NSE - Nairobi Security Exchange

PPE- Property Plants and Equipment

R& D- Research and Development

ROA-Return on Asset

ROE - Return on Equity

ABSTRACT

Board governance directly impacts on managers' decision making and activities. It can also impact the selection of external auditors as well as internal control systems by the audit committee. Also, board governance can use internal control systems to monitor earnings management practices in a firm. Past studies have reported that board independence can constrain earnings management by managers; this is because independent directors are not after their personal gain. The aim of the study was to establish the effect of corporate governance on earnings management of the quoted firms at the NSE. The population of the study was all the 64 firms quoted at the NSE as at 31st December 2017. Data was obtained from 53 out of the 64 listed companies giving a response rate of 82.81%. The independent variable for the study was corporate governance with four measures: board independence as measured by the ratio of independent directors to total directors, board size as measured by natural logarithm of the total number of board members, ownership concentration as measured by proportion of ownership held by main shareholders of institutional nature of the listed firm and board activity as measured by the number of board meetings in an year. The control variable was firm size as measured by natural logarithm of total assets. Earnings management was the dependent variable which the study sought to explain and it was measured using the financial structure model. Secondary data was collected for a 5-year time frame (January 2013 to December 2017) annually. The descriptive cross-sectional research design was employed for the study and the association between the study variables established using multiple linear regression model. Statistical package for social sciences version 22 was used to analyse the data. The results of the study produced R-square value of 0.314 which means that about 31.4 percent of the variation in the earnings management of companies quoted at NSE could be explained by the five selected independent variables while 68.6 percent in the variation of earnings management was associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with earnings management ($R=0.560$). ANOVA findings show that the F statistic was significant at 5% level with a $p=0.000$. Therefore, the model was fit to explain the association between the selected variables. The results further revealed that board independence and board activity produced negative and statistically significant values for this study while firm size produced positive and statistically significant values for this study. Board size and ownership characteristics were found to be not statistically significant determinants of earnings management of firms at the NSE listing. The study's recommendations were that measures should be put in place to enhance board independence and board activity as this will significantly reduce earnings management among firms at the NSE listing. The researcher suggests that future researchers can focus on corporate governance and earnings management of non-listed firms.

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Accounting frauds has been exposed in the stock markets throughout the world, they have confirmed the presence of unethical business practices. There is a need for transparency, reliability and accountability of financial information provided to the stock market, investors and to the public (Lang and Lundholm,2000). According to Dechow, Sloan, & Sweeney, (1996) Financial information is more reliable and informative when there is a variety of monitoring systems to control managers opportunistic behaviour. Corporate governance can directly influence managers' decisions and activities through audit committee. Moreover, quality board governance can take advantage of internal control systems to monitor opportunistic behaviors by management (Brickley et al., 1997). Jesus and Emma, (2013) argued that, a weak corporate governance structure results in opportunistic managers engaging in actions that would result in poor reported earnings.

Various theories have guided the study for a long time. Agency theory suggests that corporate governance and earnings management are related, though their relationship is negative. Jensen and Meckling, (1976) argued that, shareholders believe that managers will make desirable decisions if they were to be given appropriate incentives and rewards and effective monitoring. Increased monitoring by directors can lower earnings manipulation practices thus supporting the argument that corporate governance and earnings management are related. Entrenchment theory suggests that managers will try to increase their discretionary position to maximize their welfare and make their replacement expensive and difficult (Mard and Marsat, 2009).

According to Watts & Zimmerman, (1986) Corporate governance is important in making sure that managers align their goals and objectives to those of the company. It also improves the consistency of financial reports and the integrity of the financial reporting process. The study seeks to understand how corporate governance practices (quality) affect EM of firms enlisted at NSE in Kenya. The research will be carried out in Kenya due to many recent cases of directors being accused of poor corporate governance leading to scandals like Nakumatt supermarket mismanagement issues, Uchumi supermarket was placed under receivership in 2004, the placement of Chase bank under receivership, the closure of Imperial bank due to misappropriation of funds by directors, in 2017, the mismanagement issues in Kenya Airways, the misappropriation of funds in Mumias Sugar Company and many more recently.

1.1.1 Corporate Governance

This is the way in which firms are operate in an open and honest manner. It is a combination of guidelines, strategies and processes by which a firm is managed. The Cadbury Committee of U.K (2002) defines CG as the mechanisms by which firms are directed and controlled. The purpose is promoting transparency and accountability and to meet shareholder's needs. It involves compliance with the law and maintaining ethical standards as required. The framework of corporate governance requires that companies utilize available resources efficiently and there is accountability for the stewardship Corporate governance structure is used to control and manage activities of the company with the sole goal of improving prosperity and accountability thus realizing the goals of shareholders while considering other stakeholders' interests (CMA, 2002).

Capital Markets Act of Kenya (Cap.485A) has put in place the following practices to be incorporated by listed companies in Kenya. Firms should be headed and monitored

by effective board of directors and committees, director's remuneration should be structured in line with remuneration for other directors in the same industry and in alignment with business strategy and long-term goals of the company. Also, Age of directors, board diversity, board size, board activities, appointment procedures and board independence should be adhered to, a third of the directors to be independent and non-executive (CMA, 2006).

1.1.2 Earnings Management

Earnings Management refers to ways in which managers in the company manipulate figures in financial reporting to end up with their desired earnings value. Some of these activities may not be illegal, but due to managerial cunning behaviour to improve their compensation plans (Baker et al., 2003). Managers can overstate profits to show that the firm is performing well so that they can obtain incentives like bonuses. Consequently, reported profits can be understated to lower the current market price of the shares traded. When a firm reports low earnings, it leads to reduction in the share price, resulting to lower exercise price of stock options (Baker et al., 2003).

Past studies reported that managers can select accounting methods that can lead to an increase in income thus concealing poor performance of the firm (Campello et al., 2013). In addition, through the flexibility offered by both IFRS and GAAP, managers are at liberty to select preferred accounting methods when computing earnings management procedures.

Although most studies have reported on the side effects of EM, some studies still differ from the argument by suggesting that earnings management can be practised in a positive way. For example, used to convey information that is not included in the

financial statements (Dutta and Gigler, 2002). Also, reported earnings can be smoothed with EM practices to reduce unpredictability (Magrath and Weld, 2002).

1.1.3 Corporate Governance and Earnings Management

Corporate governance has an impact on the growth of the economy and how capital markets are run. In this age of increasing capital movement and globalization, it has also become an important condition affecting the economic growth and development and industrial competitiveness of countries (Mayer, 1996).

Board governance directly impacts on managers' decision making and activities. It can also impact the selection of external auditors as well as internal control systems by the audit committee. Also, board governance can use internal control systems to monitor earnings management practices in a firm (Brackley et al., 1994). Past studies have reported that board independence can constrain earnings management by managers, this is because independent directors are not after their personal (Dechow & Dichev, 2002).

Williamson, (1981) argued that board independence helps in overseeing managerial activities to ensure interest of stakeholders are taken care of. According to Roe, (1991) to limit managers' abusive power, corporate boards should be independent. Similarly, Beasley, (1996) observed that when independent directors are included on the board, they could mitigate the likelihood of manager's opportunistic behaviour. In agreement, Baber et al., (1998) emphasizes that in firms where there is high compensation value, they have many components of earnings practices.

Furthermore, Cheng, (2004) described a positive relationship between changes in compensation values and research and development expenses during the final years for managers tenure. However, Huson et al., (2012) and Man and Wong, (2013) noted that compensation committees look into discretionary expenditure in the final year of

executive's term when settling cash compensation for them and also arbitrates to minimize payments when managers come up with abnormal accruals.

1.1.4 Firms Listed at NSE

The study focuses on companies listed at the (NSE). The NSE has the fourth largest trading volume across the African continent and performs a major task in the economic growth in Kenya. NSE was established as an association of stock brokers, it was later registered under the societies Act in 1954. The NSE was registered under the companies Act of Kenya in 1991 as a company limited by guarantee, there was no share capital (Kibuthu, 2005). Subsequently, the market has evolved with an increase in the number of stockbrokers, investment banks, establishment of custodian institutions, credit rating agencies and the number of enlisted companies over time. Securities traded in the market include, equities, bonds and preference shares (NSE, 2018).

Currently, there are 65 companies listed at NSE, 63 of which have been actively trading at NSE for the last five years. The companies operate in various sectors of the economy namely; Agricultural, Automobile and Accessories, Banking, Commercial and Services, Construction and allied, Investment services, Manufacturing and allied, Telecommunication and Technology, Real Estate Investment Trust, Exchange Traded Fund etc. Listed companies are grouped in three sectors; Main Investment Market segment (MIMS), Alternative Investment Market segment (AIMS) and Fixed Income Security Market segment (FISMS). Companies listed at NSE are registered under companies act and they operate as public Act Cap486 (CMA handbook, 2010).

The study targeted firms listed at NSE specifically as it represents almost all sectors in the economy. Corporate governance considerations are among requirements at NSE before listing any company NSE website (2018). However, the Kenyan economy has

experienced a wave of company failures due to mismanagement of resources and managers opportunistic behavior in carrying out earnings management practices. Some of the affected firms are listed at NSE, this has resulted in job loss, closure of companies and a negative effect on the Kenyan Economy (Njogu, 2016).

Although Kenya has a vibrant informal sector and parastatals, the study focuses on formal sector specifically NSE, this is because listed companies have established formal systems. Also, it is easier to obtain their earnings management reports as they are audited regularly and published (Njogu, 2016).

1.2 Research Problem

According to Kothari et al., 2005 Corporate Governance and factors leading to earnings management have implications for regulators, academics and practitioners. To come up with solutions to financial scandals, there is a need to take measures to protect and encourage transparency of reported information and to mitigate conflicts of interests. This will ensure auditors remain independent so as to protect investors interests (Leuz et al., 2003). When a weak governance structure exists, it creates a chance for managers to engage in behaviours to fulfill their personal interests thus, eventually contributing to poor quality of reported earnings (Iraya et al., 2015).

Despite tight regulatory framework by NSE and CMA, Corporate Governance continues to weaken in Kenya (Mang'unyi, 2011). Many companies have been characterized with scandals resulting in resignations/ convictions of CEOs, Petrobras,2015; Mumias Sugar, 2015; Toshiba, 2015; CMC Motors, 2011; Worldcom, 2002; Enron 2001; Imperial bank, 2016; Chase bank, 2016; Kenya Airways; Nakumatt Supermarket,2017 Uchumi supermarket, among others. There is an increased interest from regulators, academicians and researchers on the quality of corporate governance practices on firms' performance.

Kenya adopted the International Financial Reporting Standards effective January 1999 (Riro & Waweru, 2013). Furthermore, companies are still practising earnings management. Managers like in other countries have the choice to select accounting standards that suits their financial needs. One of the major financial scandals that caused performance of listed firms to decline between 2000 and 2012 was the practice of earnings management. Such practices injured the investor confidence in Kenya thus, the performance of the country went down from position 102 to position 106 of the most competitive economy (World Economic Forum,2012).

Evidence in studies done globally by Klein, (2012) looking at the association between audit committee and board characteristics on EM. Liu &Lu (2007), studied Chinese listed companies between 1999-2005. He was interested in the association between corporate governance and EM. Shah et al., (2009) went further and examined quality of corporate governance on earnings management among Pakistan companies. Moreover, Wet, (2012) reported on the relations between executive remuneration and economic value added (EVA) and market value added (MVA). He also looked at traditional performance measures like ROA and ROE. A powerful relationship exists between corporate governance and EM. These studies were conducted in different countries, within different economic conditions and used different models.

Locally, there are several studies on the topic though, most studies have concentrated on governance and performance of various sectors in the economy for example, insurance and banking industry. Iraya et al., (2015), went ahead and researched on corporate governance and EM for enlisted firms at NSE. The findings disclosed that the relationship that exists between EM and ownership concentration, board size, and board independence is negative though a positive relation exists between to board activity and CEO duality. The study did not identify ways used by managers in conducting earnings

management thus a study is required so that corporate governance practices can focus on them.

Kobonyo, (2013) researched on factors that motivate earnings management and its relationship with macroeconomic variables for listed firms on NSE. The study focuses on corporate governance as a tool for control rather than a tool for enhancing performance. This study is guided by the question does shareholders and directors understand what earnings management is and techniques used by managers?

Furthermore, Njogu, (2016) examined factors influencing earnings management practices among companies listed at NSE. She found that the practice EM by managers is attributed to the pressure to maintain high profits and meet shareholders obligations. The study also noted that, EM was higher in firms facing financial challenges.

Extensive research has been conducted on the relationship of the two variables; Corporate governance and earnings management, but little attention has been paid to quality of corporate governance in the Kenyan economy as a measure to reduce earnings management. Moreover, Price Water House Coopers (2011) carried out a survey in November 2011 and ranked Kenya among leading countries perpetrating fraud, with creative accounting being the main cause in reduction of performance. Based on this, it can be argued that companies in the Kenyan economy practice earnings management. However, the extent of practice occurring in listed firms and the quality of measures put in place presents a knowledge gap that prompted the study.

1.3 Research Objective

The study aimed to assess effects of corporate governance on earnings management of firms enlisted at NSE in Kenya. Specific objectives of the study were to determine the:

- i. Extent to which earnings management is practiced among listed firms
- ii. Techniques used in conducting earnings management.
- iii. Quality of corporate governance practices and how it affects earnings management in listed companies.

1.4 Value of the study

The research offers valuable knowledge to shareholders on causes of malpractices on earnings management thus they should come up with effective ways to mitigate bad earnings management.

Since auditors have a responsibility to give an opinion on whether financial statements are true and fair, the study will be relevant to ICPAK when formulating audit requirements that auditors should comply with.

The study helps the government and the policy makers especially on the need to rationalize the corporate governance requirements to monitor the national and the county expenditure as well as controls to reduce mismanagement of funds.

To the academic sector, the study is an addition to the existing body of knowledge of corporate governance and earnings management. It has encouraged students and researchers to replicate the study in other areas of the economy.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter, literature relevant to the study will be discussed. Also, it describes the theoretical framework, empirical reviews of various scholars and comes up with a conceptual framework. The chapter is guided by the research objectives highlighted in chapter one

2.2 Theoretical Review

Several theories have been used to explain the relationship between Corporate Governance and EM. Agency Theory by Jensen and Meckling, (1976), Stewardship theory by Donaldson, (1990), Stakeholder theory by Freeman, (1989) and Transaction Cost theory by Cyert and March, (1963).

2.2.1 Agency Theory

Agency theory is the relationship between the agent and the principal. Originally the theory was proposed by Ross, (1973) to explain the relationship between two parties whose goals are not similar. The principal hires the agent to transact on his behalf including decision making. In listed companies, shareholders act as principles while CEOs as their agents (Anthony & Govindarajan, 2007). Generally, shareholders goal is to maximize their wealth, managers also want to increase their wealth. This results in a conflict of interest between shareholders and managers (Laksmi & Kamila, 2018).

Jensen and Meckling, (1976) expounded on the theory and stating that it is a contract between managers and investors. They further indicated that separation of ownership from control creates an agency problem whereby managers operate the firm according to their own interests and not those of the shareholders. Varying interests of agents and principals leads to both managers and shareholders working towards increasing their

profits. Principals want many returns on their investments which is manifested in increase in dividends per share. Agency conflicts can arise among different stakeholders; shareholders can get into conflicts with bondholders, shareholders and independent auditors, majority shareholders versus minority shareholders, shareholders and the government as well as shareholders versus directors.

In the topic of Corporate governance and Earnings Management, agency issues have been seen to influence managerial decisions towards imbalanced information acquisition leading to information asymmetry between managers and owners which creates an opportunity for managers to manage earnings thus misleading economic performance of the company (Sari & Mimba, 2015). Agency theory resolves two problems, First, when the interests of agents and principal conflict and secondly, when the principal finds it costly to verify what the agent does maybe because of lack of knowledge. Prudent corporate governance systems align goals of directors to those of shareholders and all the stakeholders in the firm.

This theory illustrates that managers have the discretion of performing earnings management practices. Additionally, it provides ways that can be used to reduce earnings management practices. Since the study involves identifying the role of corporate governance on earnings management, this theory will be adopted as it helps in understanding why managers engage in earnings management (Njogu, 2016).

2.2.2 Stakeholder Theory

Freeman, (1989) defined a stakeholder as a group or an individual who can influence or is influenced by the organisational activities and goals. The theory considers an extensive group of stakeholders rather than focusing on shareholders only like agency theory. Focusing on shareholders alone has a consequence such that shareholders' value

is paramount, whereas according for Stakeholder theory, the firm has different responsibilities owed to employees, creditors, customers, suppliers, government and local community where it operates. The focus on the shareholder value becomes less self-evident as other stakeholders' interests are taken care of (Freeman, 1989).

Corporate law in many economies does not support the argument that shareholders are just another stakeholder group. In Kenya, the companies act (Cap 486) views shareholders as company's owners. They are mandated with electing board of directors who then approves or dismiss crucial policies and strategies of the company. Effectively, shareholders can view the firm to maximize their wealth. Board of directors should make sure that the firm respects legal and contractual obligations to other stakeholders as well as work towards the goal of maximizing profit and shareholder value (Freeman, 1989). Stakeholder theory focuses on equilibrium of stakeholder interest as the major influencer of corporate policy making it relevant to the study.

2.2.3 Big Bath Theory

The theory states that when the operating income is poor, firms often decide to engage in income decreasing strategies rather than income increasing ones (Kinney & Tezevant, 1997). For instance, in a year where there are low earnings, managers may decide to report a bad news creating a situation which will lead to earnings in the next period to look good. Literature has shown the existence of Big bath, the study of discretionary write offs supported the theory of Elliot & Shaw, (1988) and it agrees with Healy's, (1985) study of management bonuses.

Return on assets and return on stocks are the indicator ratios for big bath theory (Gounaris, 2005). Management of earnings was present in the overall sample chosen for the study but when the sample was divided into sizes, it appeared that smaller firm's

profitability ratios decreases more than that of larger firms. The theory is applicable in the study as it assists in understanding factors that influence managers' choice in taking a big bath without looking at the consequences.

2.2.4 Transaction Cost Theory

The theory was developed by Cyert and March, (1963), it was improved by Williamson, (1996) as an inter-disciplinary alliance of law, economics and organisations. The theory states that firms are viewed as organisations comprising of people with different goals and objectives. It argues that organisation structure determines prices and production of goods and services in the economy. It further suggests that the combination of people and transactions creates managers with opportunistic behaviour to arrange firm's transactions to their own benefits.

The relevance of this theory to the study is that, since firms listed at NSE are owned by shareholders, run by managers appointed by the board of directors and have different obligations to various stakeholder groups with different views and objectives and the fact that managers can arrange transactions to their interests, there is a need of an optimal solution to the allocation and control of scarce resources through Corporate Governance.

2.3 Determinants of Earnings Management

Earnings management does not always mean a negative action because it is not entirely oriented towards managers opportunism. There are various factors that lead to earnings management in firms

2.3.1 Agency Conflicts and Earnings Management

According to agency theory, the level of managerial ownership in a company will affect how they align their objectives to the company's strategies (Fama and Jensen, 1983) & (Jensen and Meckling, 1976). Past studies have shown that when managers have some ownership of the company through ESOP, this can be considered as a mechanism to limit managerial opportunism. It leads to a negative correlation with earnings management (Alzoubi, 2016). Warfield et al., (1995) also found that earnings management practices increases when managers have low ownership in the company. Based on this finding, we can conclude that the higher managerial ownership, the lower the earnings management.

2.3.2 Management Bonus and Earnings Management

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

2.3.3 Debt and Earnings Management

Managers sometimes practice earnings management to avoid violating their debt covenants. Financial institutions may require to assess the earnings management of firms before giving them loans to determine their credit status. In past research, the impact of debt financing on earnings management is still a controversy. In one way, studies suggest that firms with high levels of debt are more likely to manipulate their earnings (Becker & Defond, 1998); (Sweeney, 1994) and (Watts & Mohrman, 1996). From the studies, there is evidence that high leveraged firms are positively associated with violating debt covenants in order to delay the default.

Contrary, Jensen, (1986) argues that debt reduces managers opportunistic behavior. Dechow & Richardson, (2000) suggest that firms with high levels of accruals are characterized by low leverage. Likewise, managers of highly leveraged firms are assumed to have low motivation to play around with earnings because their creditors are motivated by the debt services rather than accounting information.

2.3.4 Firm Size and Earnings Management

Firm size is measurement by which small and big firms can be classified (Nurdinah et al., 2015). Results on firm size and earnings management are consistent in the past research. Monem, (2003) found that large companies use accruals to balance between gains and losses and to avoid reduction in earnings while (Klein, 2002) believes that firm size and earnings management are negatively correlated. Hang & Wang, (1998) provided evidence that large firms smooth earnings more than small firms. Thus, a notable connection exists between firm size and EM

2.4 Empirical Studies

Beasley, (1996) researched on how the board of directors' composition helps in monitoring accounting fraud. He used logit regression to separate fraudulent and non-fraudulent firms. Audit committee was found not to minimize the likelihood of accounting frauds, whereas independent directors can minimize fraud. Also, if independent directors are many, there is a high chance that, accounting fraud will reduce significantly. Park & Shin, (2004) researched on how board composition affects earnings management practices in Canada. The results differ from Beasleys' findings that independent directors cannot control earnings management. They went ahead and pointed out that firms whose directors are from financial institutions have lower levels of abnormal accruals. CMA, (2016) requires diversity in board membership in form of education background. The current study will look at techniques used by managers to conduct earnings management so as directors can have an idea of what to look at.

Young et al., (2005) studied the objective of how monitoring managers by the board affects the level of earnings management for firms in United Kingdom using the discretionary accruals, Jones model. There is no direct relationship between the role of independent directors or audit committee and the levels of EM in a firm. However, the link between independent directors and audit committee is of high importance to the firm. Despite corporate governance being one of the requirements to be followed by firms before listing at NSE, Kenya still experiences failures due poor corporate governance. What are the measures that should be put in place to mitigate investors from losses?

Xie et al., (2003) on the how board of directors and audit committee controls the level of EM using discretionary accruals model. Board members with financial background and board committees who hold meetings frequently, have been found to lower the

levels of discretionary accruals. This finding supports the role of board and audit committee to control managers' opportunistic behaviours using earnings management.

Abdul and Ali, (2006) researched on earnings management in relation to board size among Malaysian listed firms. The model used in the study to calculate discretionary accruals was Cross-sectional model which is a modification of the original Jones model. The findings resulted in a positive relationship between the level of EM and the size of the board. The evidence implies how larger boards are ineffectiveness in dispensing their duties.

Shen and Chih, (2007) found that firms that are considered to have good corporate governance had lower practices of earnings management, their study was conducted in Asian countries. Moreover, large firms and firms with a higher growth rate showed high EM for both smoothing and aggressiveness. They also argued that good corporate governance helps to reduce management's engagement in EM.

Iraya et al., (2015) researched on the effects of corporate governance activities on EM among firms enlisted on NSE from 2010 to 2012. The study found that block holders in the organisation could restrict managements' opportunistic behaviour like earnings management. There was a negative relationship between board independence and EM from the study. In conclusion, outside directors improve on governance as they are helpful in monitoring.

Kamran and Shah, (2015) studied the impact of corporate governance and ownership structure on earnings management among firms listed in Pakistan for the period 2003–2010. Discretionary accruals was used as a measure of EM. The results indicated that managers who have stayed for long in a firm are likely to influence corporate decisions so as to serve their interests. These findings are consistent with other past research

which have found evidence that dominant directors in expropriate external minority shareholders. Furthermore, the results indicate that institutional directors are significant in constraining earnings management practices. There was no evidence that CEO duality, board size and ownership concentration influence discretionary accruals.

Irungu, (2010) investigated the relationship between macroeconomic variables and EM for companies enlisted at NSE. The study used correlation and linear regression for analysis. It was discovered that there exists a weak connection between earnings management and specified macroeconomic variables. Additionally, other factors other than macro-economic variables motivates managers to engage in earnings management. The current study seeks to look at the degree to which EM is applied in Kenya.

2.5 Conceptual Framework

Conceptual framework explains the relations between variables. The dependent variable is earnings management. Independent variables include; size of the board, agency conflicts, debt level, size of the firm, management bonus and corporate governance quality.

2.5.1 Independent Variables

Corporate governance will be measured by the variables below

Ownership concentration

Ownership concentration impacts earnings management in two ways: alignment and entrenchment impacts. According to alignment, in a concentrated ownership structure, owners have incentives to monitor management because its less costly. Their greater voting power allows them to control decisions (Pearson,2006). Liu and Lu (2007)

argues that the deprivation of minority shareholders by majority shareholders is directly linked to the power held by majority shareholders.

Board Independence

Corporate governance recognises that specific interests of the executive management and those of the wider firm may at times diverge and an independent committee plays an important role in such a situation (Cadbury committee, 1992). According to Fama and Jensen (1983) the focus of board independence is articulated in agency theory that recognises oversight function of the board as the most critical role of directors.

CEO Duality

This is whereby the same person serves as both the CEO of the firm and the chairman of the board. The centralization of authority may attract exercise excessive influence by the CEO over the board, for example, setting board agendas, managing meetings, and regulating information made available to board members (Persons, 2006).

Board size

According to Bacon, (1973) and Herman, (1981) board size can be used to measure board expertise, while, Jensen, (1993) argues that size should be used to determine the value of corporate boards and not to measure expertise. Smaller board composition work more effectively than larger boards (Jensen,1993). However, Monks & Monow, (1995) argued that larger boards are more effective to smaller boards.

2.5.2 Control Variables

ROA can be used to monitor long-term growth with respect to EM (Dechow et al., 1995). However, Bartov et al., (2000) argue that firms that are experiencing financial struggles and are performing poorly have a high incentive to practice in earnings

management on ROA and cash flow. The study expects a positive relationship between ROA and earnings management. Other control variables include growth in sales and Firms performance which is the overall performance of the firm measured through profitability of a company (Kothari et al.,2015).

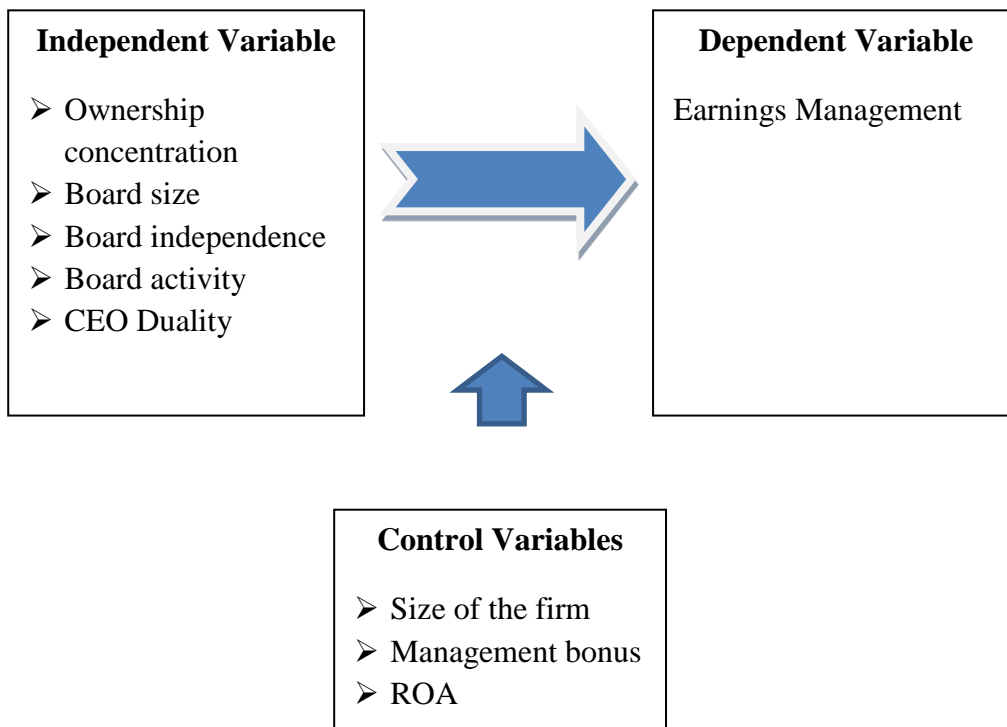
Firms performance= Profit after tax/Sales

Size of the firm

Moses, (1997) argues that large firms are more visible to the public compared to smaller firms meaning large firms are likely to manage their earnings to become less visible. However, Ashari et al., (1994) argues that large firms are more vulnerable to inspection and watching by the analysts and investors thus earnings management practice is low. From above, we expect a negative relationship between firm size and EM This can be measured by total annual sales of the firm (Nurdiniah et al.,2015).

Managers bonus: This is the sum of all bonusses paid to managers of the firm. Return on assets will be used to measure management bonus (Nurdiniah et al., 2015).

ROA=EBIT/Total assets



2.6 Summary of the Literature Review

In conclusion, previous studies have provided evidence that governance reduces managerial opportunism to manipulate reported earnings. Most of these studies used accrual-based earnings management, which is based on modified Jones model. Corporate governance plays an important role in ensuring there is minimal level of earnings management. In general, corporate governance can act as a control to mitigate managerial opportunism.

Although, previous studies focused on corporate governance as a tool to reduce the level of earnings management, there exists both good and bad earnings management. Corporate governance should focus on mitigating bad earnings management. Therefore, corporate governance can also be used to reduce the negative effect of earnings management on the firm and its shareholders.

2.6.1 Table I: Summary of the Literature Review

Author of the study	Focus of the study	Methodology	Findings	Knowledge Gaps	Focus of current study
Beasley (1996)	How the composition of board of directors can control accounting fraud	Logit regression	Independent directors can mitigate accounting fraud	Not all earnings management practices can be said to be accounting fraud	The study aims to look more into earnings management so that users of the research can understand the topic.
Park & Shin (2004)	Effects of board composition on earnings management in Canada	Jones Model	Independent directors cannot mitigate earnings management.	Most directors do not understand what Earnings management entails	The current study will look at techniques used by managers to conduct earnings management practices and the extent to which managers are willing to go.

Young et al. (2005)	How earning management are monitored by the boards for firms in United Kingdom	Discretionary accruals, Jones model	The role of independent directors and audit committee are not related to levels of EM in a firm	The study concluded that board contributes to the integrity of financial statements as predicted by agency theory	Despite corporate governance being one of the requirements to be followed by firms before listing at NSE, Kenya still experiences failures due poor corporate governance. What are the measures that should be put in place to mitigate investors from losses.
Xie, Davidson and Da	Control of the levels of earnings	Discretionary accruals model	Firms that have board members with financial	The study focused only on two	The current study will investigate the

dalt (2003)	management by board of directors and audit committee		background have low discretionary accruals	Corporate governance practices on earnings management	effects of corporate governance and its quality on Earnings management.
Abdul and Ali (2006)	Is there an association between board size and earnings management in Malysian stock market	Cross- sectional model	A positive connection exists between size of earnings and the number of board of directors.	The study focused on Corporate governance practices than earnings management	The study focuses more on earnings management side as the end goal is the investor
Shen & Chin (2007)	What impact does corporate governance have on earnings management in Asian countries	Regression analysis	Strong corporate governance practices lead to less earnings management levels	The study was done in Asian countries	The current study aims to replicate the same in the Kenyan industry and compare results.
Iraya et al. (2005)	Impact that corporate governance	Discretionary accruals	The presence of block holders in the organization	The Study used secondary	The current study will employ both

	practices have on earnings management in listed firms at NSE	model, Jones model	could effectively restrict managements' opportunistic behaviour	data only. The study was conducted at a point when NSE had not put corporate governance practices as a requirement for listing. For example, CEO Duality is not recommended	primary and secondary data to measure both corporate governance and earnings management. It will further look at the quality of corporate governance since this measures are already in place but we still experience issues in firms.
Kamran and Shah (2015)	Influence of corporate governance and ownership	Jones model, Dechow, Sloane and Sweeney,	Managers who stay in a firm and in a position for long can easily	There was no evidence that CEO duality, board size	The current study will use the modified Jones model

	structure on earnings management	Kasznik and Kothari et al model	influence corporate decisions and accounting figures in a way that may serve their interests	and ownership concentration influence discretionary	(Yoons' model)
Irungu (2010)	Does macroeconomic variables have an impact on earnings management for companies quoted at NSE	Linear regression and correlational analysis	There is a weak relationship between variables	Investors and board members need to understand what earnings management means and its influence on financial statements.	The current study seeks to look at the extent of EM and techniques used in conducting earnings management in listed firms in Kenya

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The section discusses the research methodology applied. It presents the research design that was used for the study and it gives the population and sample for the study. Furthermore, data collection methods, analysis and presentation used in the study are discussed.

3.2 Research Design

The study came up with relationship between two variables namely corporate governance practices and earnings management in quoted firms at NSE. Descriptive research design was adopted because it answers the question “What is”. It can either be quantitative or qualitative since it deals with obtaining data that describes a phenomenon then organises, and tabulates the results coming up with predictions regarding the relationships

3.3 Population and Sample

Currently there are 63 quoted companies at NSE (NSE website, 2018). The study focused on 64 companies listed on NSE to answer specific objectives of the study. Sampling was not done because population is small instead a census approach was adopted to study those companies which have complete information needed. The reason for selecting the 64 companies is because they are within the period of the study. This is illustrated in Appendix I. The period of the study was 2013 to 2017.

3.4 Data Collection

Secondary data was used to analyse the effects of corporate governance on EM while looking at the specific objectives of the study. Secondary data was acquired by

extraction method from audited financial statements for the 64 firms as published by CMA.

Collected data from published results included number of directors (board size), number of meetings held per annum, major shareholders composition, proportion of executive and nonexecutive directors, CEO duality status, number of meetings held in a year. Financial data collected included.

3.5 Data analysis

Analysis was done based on the research problem. Inferential statistics like the regression were used to test the relationship between earnings management and corporate governance characteristics that fits the NSE.

According to Du Charme et al. (2000) accruals model is a preferred choice of accounting methods as it shows income management techniques that managers carry out to avoid detection by outsiders. Various accruals represent the choice of accounting method and the effect of recognition and timing for revenues and expenses, asset write-downs and changes in accounting estimates. Discretionary accruals can be used to determine the extent of EM but there is a need to differentiate between discretionary and non-discretionary accruals. Past research used the modified Jones model (Dechow et al., 1995) and documented its effectiveness. However, Yoon et al., (2006) argued that the modified Jones model does not work for Asian firms. He then proposed a new model by which will be used in this research.

The study adopted the financial structure model which is a current modification of the modified Jones model to detect the extent of EM. The model has shown that it achieves superior performance than the industry approach in terms of coefficient stability and the robustness of discretionary accruals (Yoon et al.,2012).

Financial Structure Model:

$$TA_t / REV_{t-1} = \beta_0 + \beta_1(\Delta REV - \Delta REC_{t-1}) / REV_{t-1} + \beta_2(\Delta EXP_{t-1} - \Delta PAY_{t-1}) / REV_{t-1} + \beta_3(\Delta DEP_{t-1} - \Delta RET_{t-1}) / REV_{t-1} + \varepsilon$$

In which:

TA = total accruals measured by the difference between earnings and cash flow from operating activities

REV = Lagged revenue, controls heteroscedasticity

REC = Lagged accounts receivables

DEP = Lagged Depreciation expenses

EXP = Lagged cost of sales and expenses excluding non-cash expenses.

PAY = Lagged accounts payables

RET = Lagged retirement benefits expenses

Δ = change operator.

ε = Error term

A multiple linear regression was adopted to explain the relationship between corporate governance characteristics and earnings management. Multiple regression analysis explains the influence of several independent variables to the dependent variable (Nurdiniah et al., 2015). The following regression equation determined the relationship between EM and corporate governance characteristics.

$$EM = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

In which-;

EM = Discretionary accruals (earnings management)

β = Parameters for each variable

X_1 = Ownership Concentration

X_2 = Board Size

X_3 = Board Independence

X_4 = Board Activity

X_5 = Size of the firm

Pearson correlation, adjusted R-squared, Test of significance using F statistic coefficients of independent variables and their P-values were used to analyse the regressed values

3.6 Operationalisation of Variables

3.6.1 Independent Variables

Ownership Concentration: The proportion of ownership held by main shareholders of institutional nature of the listed.

Board size was calculated by the total number of directors in the board

Board Independence was calculated by the proportion of the non-executive directors in the board.

Board independence = Non-executive directors/ Total Directors

Board activity was calculated by the number of board meetings during the year

Size of the Firm was calculated by annual total sales or the natural logarithm of total assets. In this study, size of the firm was measured by the natural logarithm of total assets (Nurdiniah et al.,2015).

Size of the firm = Natural logarithm of the Total assets

3.6.2 Dependent Variable

The extent of earnings management is measured by the spread of discretionary accruals. Most researchers have adopted the Jones or modified Jones model in analysing discretionary accruals. This study aimed to use the financial structure model that is an improved version of the modified Jones model (Yoon et al., 2012).

In determining EM, this study applied concepts presented by Burgstahler and Dichev (1997) who mentioned that the distribution of annual earnings is associated with unusually high frequency of zero and minor positive surprises as well as unusually low frequency of minor negative surprises. The researchers' proxies the range within which earnings management are presumed to occur. In this study, companies that scored less than 0.05 or -0.05 were assumed to practice EM while the rest above set interval were assumed to participate in negative earnings management that is, scoring between 0 to -0.05 or positive earnings management scoring within 0 to 0.05 (Axenbrant et al.,2015).

3.7 Chapter Summary

This chapter focused on explaining the research methodology that was adopted in carrying out the research. The research design adopted is descriptive. The target population entails all companies listed on the NSE within the period of 2013 to 2017.

Both secondary and primary data were collected for analysis. Methods of analysing the data collected have also been expounded on in the chapter.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This section investigated the analysis of the collected data from the Capital Markets Authority and individual companies' annual financial reports to unveil the impact of corporate governance on EM of firms quoted at the NSE. Using descriptive statistics, regression analysis and correlation analysis, the results of the study were presented in table forms as shown in the following sections.

4.2 Response Rate

This study targeted all the 64 firms listed at the NSE as at 31st December 2017. Data was obtained from 53 firms representing a response rate of 82.81%. From the respondents, the researcher was able to obtain secondary data on corporate governance, firm size, and EM of enlisted firms at the NSE.

4.3 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. The research assumed a 95 percent confidence interval or 5 percent significance level (both leading to identical conclusions) for the data used. These values helped to verify the truth or the falsity of the data. Thus, the closer to 100 percent the confidence interval (and thus, the closer to 0 percent the significance level), the higher the accuracy of the data used and analyzed is assumed to be.

A test of Multicollinearity was undertaken. Tolerance of the variable and the VIF value were used where values more than 0.2 for Tolerance and values less than 10 for VIF means that there is no Multicollinearity. For multiple regressions to be applicable there should not be strong relationship among variables. From the findings, the all the

variables had a tolerance values >0.2 and VIF values <10 as shown in table 4.1 indicating that no Multicollinearity exists among the independent variables.

Table 4.1: Multicollinearity Test for Tolerance and VIF

Variable	Collinearity Statistics	
	Tolerance	VIF
Board independence	0.310	1.326
Board size	0.380	1.367
Ownership concentration	0.706	1.417
Board activity	0.398	1.982
Firm size	0.503	1.99

Source: Research Findings (2018)

Shapiro-walk test and Kolmogorov-Smirnov test was used in normality test. The null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The test findings are as illustrated in table 4.2.

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 implying that the data used in research was distributed normally and therefore the null hypothesis was rejected. This data was therefore appropriate for use to conduct parametric tests such as Pearson's correlation, regression analysis and analysis of variance.

Table 4.2: Normality Test

Earnings management	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Board independence	.149	265	.300	.857	265	.853
Board size	.156	265	.300	.906	265	.822
Ownership concentration	.172	265	.300	.869	265	.723
Board activity	.176	265	.300	.892	265	.784
Firm size	.165	265	.300	.880	265	.784

a. Lilliefors Significance Correction

Source: Research Findings (2018)

Autocorrelation tests were executed so as to check for correlation of error terms across time periods. Autocorrelation was tested using the Durbin Watson test. A durbin-watson statistic of 1.867 indicated that the variable residuals were not serially correlated since the value was within the acceptable range of between 1.5 and 2.5.

Table 4.3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.560 ^a	.314	.301	.17251603	1.867

a. Predictors: (Constant), Firm Size, Board activity, Board independence, Ownership Concentration, Board Size

b. Dependent Variable: EM

Source: Research Findings (2018)

4.4 Descriptive Analysis

Descriptive statistics gives a presentation of the average, maximum and minimum values of variables applied together with their standard deviations in this study. Table 4.4 shows the descriptive statistics for the variables applied in the study. An analysis of all the variables was acquired by use of SPSS software for the period of five years (2013 to 2017) for 53 firms listed at the NSE that provided data for this study. The mean, maximum and minimum, skewness, kurtosis and standard deviation for all the variables selected for this research are as shown in the table.

It was discovered that EM recorded an average of 0.2189 over the study period. Over the same period, board independence recorded an average of 0.7927 while board size recorded an average of 8.9811. Further, ownership concentration, firm size and board activity recorded an average of 0.3806, 7.6622 and 6.91 respectively. The standard deviation indicated that earnings management, board independence, board size, firm size, board activity and ownership concentration varied over the study period. The greatest variation was recorded by board size (2.2571) followed by firm size (0.5089)

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
EM	265	-.53200	.67000	.218850	.2063164	-1.060	1.538
Board independence	265	.4000	.9167	.792738	.1079378	-1.133	1.230
Board Size	265	4.000	16.000	8.98113	2.257064	.844	.982
Ownership Concentration	265	.140	.948	.38064	.125179	1.392	2.654
Firm Size	265	6.794	8.703	7.66223	.508919	.083	-1.238
Board activity	265	4	33	6.91	3.642	2.546	10.751
Valid N (listwise)	265						

Source: Research Findings (2018)

4.5 Correlation Analysis

The association between any two variables used in the study is established using correlation analysis. This relationship ranges between (-) strong negative correlation and (+) perfect positive correlation. Pearson correlation was employed to analyze the level of link between the listed firms' earnings management and the independent variables for this study (board independence, board size, firm size, board activity and ownership concentration).

Table 4.5: Correlation Analysis

		EM	BI	BS	OC	BA	Firm Size
EM	Pearson						
	Correlation	1					
	Sig. (2-tailed)						
Board independence	Pearson						
	Correlation	-.050	1				
	Sig. (2-tailed)	.419					
Board Size	Pearson						
	Correlation	.072	.525**	1			
	Sig. (2-tailed)	.246	.000				
Ownership Concentration	Pearson						
	Correlation	.182**	-.009	.035	1		
	Sig. (2-tailed)	.003	.889	.566			
Board activity	Pearson						
	Correlation	-.133*	-.043	.030	-.181**	1	
	Sig. (2-tailed)	.030	.488	.625	.003		
Firm Size	Pearson						
	Correlation	.513**	.097	.177**	.128*	.080	1
	Sig. (2-tailed)	.000	.115	.004	.038	.192	

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

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

c. Listwise N=265

Source: Research Findings (2018)

The study found out that ownership concentration and firm size has a positive and significant correlation with earnings management of companies quoted at the NSE as evidenced by ($r = .182, p = .003$; $r = .513, p = .000$) respectively. The study also found out that board activity has a negative and statistically significant correlation with earnings management as evidenced by ($r = -.133, p = .030$). Board independence exhibited a negative and statistically insignificant correlation with earnings management while board size exhibited a positive and non-statistically significant correlation with EM among quoted firms. Although the independent variables had an association with each other, the association was not strong to cause Multicollinearity as evidenced by coefficient correlations that were less than 0.70. This implies that the independent variables can be used together in regression analysis.

4.6 Regression Analysis

Earnings management was regressed against five predictor variables; board independence, board size, firm size, board activity and ownership concentration. The regression analysis was executed at a significance level of 5%. The critical value obtained from the F – table was measured against the one acquired from the regression analysis.

The study obtained the model summary statistics as reflected in table 4.6 below.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.560 ^a	.314	.301	.17251603	1.867

a. Predictors: (Constant), Firm Size, Board activity, Board independence, Ownership Concentration, Board Size

b. Dependent Variable: EM

Source: Research Findings (2018)

R squared, being the coefficient of determination shows the deviations in the response variable due to changes in predictor variables. From the outcome in table 4.6 above, the value of R square was 0.314, a discovery that 31.4 percent of the deviations in earnings management of firms quoted at the NSE are caused by changes in board independence, board size, board activity, firm size and ownership concentration. Other variables not included in the model justify for 68.6 percent of the variations in EM of the firms enlisted at the NSE. Also, the results revealed that there is a strong relationship among the selected independent variables and the earnings management as shown by the correlation coefficient (R) equal to 0.560. A durbin-watson statistic of 1.867 indicated that the variable residuals were not serially correlated since the value was within the accepted range of between 1.5 and 2.5.

Table 4.7: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3.529	5	.706	23.717	.000 ^b
Residual	7.708	259	.030		
Total	11.238	264			

a. Dependent Variable: EM

b. Predictors: (Constant), Firm Size, Board activity, Board independence, Ownership Concentration, Board Size

Source: Research Findings (2018)

The p value is 0.000 which is less than $p=0.05$. This implies that the model was statistically significant in predicting how board independence, board size, board

activity, firm size and ownership concentration affects EM among the companies listed at the NSE.

Coefficients of determination were used as indicators of the direction of the relationship between the independent variables and the companies listed at the NSE' EM. The p-value under sig. column was used as an indicator of the significance of the association between the dependent and the independent variables. At 95% level of confidence, the p value is less than the conventional value 0.05 was interpreted as a measure of statistical significance. As such, a p-value above 0.05 indicates that the dependent variables have a non-statistically significant association with the independent variables. The results are indicated in table 4.8

Table 4.8: Model Coefficients

Model	Unstandardized		Standardized	T	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	-1.213	.176		-6.901	.000
Board independence	-.265	.120	-.134	-2.206	.028
Board Size	.005	.006	.052	.846	.398
1 Ownership					
Concentration	.137	.087	.083	1.566	.119
Board activity	-.009	.003	-.167	-3.173	.002
Firm Size	.211	.021	.519	9.803	.000

a. Dependent Variable: EM

Source: Research Findings (2018)

From the above results, it is evident that firm produced positive and statistically significant values (high t-values, $p < 0.05$). Board independence and board activity were also found to have a significant but negative effect on EM as evidenced by p values of less than 5%. Board size and ownership concentration were found to be non-statistically significant determinants of EM for this study as evidenced by p values that are above 5%.

The following regression equation was estimated:

$$Y = -1.213 - 0.265X_1 - 0.009X_2 + 0.211X_3$$

Where,

Y = EM

X₁ = Board independence

X₂ = Board activity

X₃ = Firm size

On the estimated regression model above, the constant = -1.213 shows that if selected dependent variables (board independence, board size, board activity, firm size and ownership concentration) were rated zero, the companies listed at the NSE' EM would be -1.213. A unit increase in board independence or board activity would result to a decrease in EM by 0.265 and 0.009 respectively. A unit increase in firm size will result in an increase in EM of the Kenyan companies quoted at the NSE by 0.211 while a unit increase in either board size or ownership concentration would not have a significant influence on EM.

4.7 Interpretation of Findings

The study explored the association between corporate governance and EM of the firms enlisted at the NSE. Corporate governance in this study was the independent variable with four measures. Board independence as measured by the ratio of independent

directors to total directors, board size as measured by natural logarithm of the total number of board members, ownership concentration as measured by proportion of ownership held by main shareholders of institutional nature of the listed and board activity as measured by the number of board meetings in a year. The control variable was firm size as measured by natural logarithm of total assets. EM was the dependent variable that the study intended to explain, and it was measured using the financial structure model.

The Pearson correlation coefficients between the variables revealed that board independence and board activity have a significant and negative correlation with EM while firm size exhibited a significant and positive correlation with EM of firms quoted at the NSE. The study also found out that a positive and insignificant correlation exists between board size and ownership concentration with EM of firms quoted at the NSE.

The model summary revealed that the independent variables: board independence, board size, board activity, firm size and ownership concentration explains 31.4% of the variation in the dependent variable as shown by the R^2 value which means that there are other variables not factored in this model that account for 68.6% of changes in the companies enlisted at the NSE' EM. At 95% level of confidence, the model was fit as shown by an F-value of 23.717. This means that the overall multiple regression model was statistically significant and is an adequate model for explaining the influence of the chosen independent variables on the companies enlisted at the NSE' EM.

The results of this study concur with Kamran and Shah (2015) who studied the impact of corporate governance and ownership structure on EM among firms enlisted in Pakistan for the period 2003–2010. Discretionary accruals was used as a measure of EM. The results indicated that managers who have stayed for long in a firm are likely

to influence corporate decisions so as to serve their interests. These findings are consistent with other past research which have found evidence that dominant directors in expropriate external minority shareholders. Furthermore, the results indicate that institutional directors are significant in constraining EM practices. There was no evidence that CEO duality, board size and ownership concentration influence discretionary accruals.

The study is also in agreement with Iraya et al., (2015) who researched on the effects of corporate governance practices on EM among firms enlisted on NSE from 2010 to 2012. The study found that block holders in the organisation could restrict managements' opportunistic behaviour like EM. There was a negative relationship between board independence and EM from the study. In conclusion, outside directors improve on governance as they are helpful in monitoring.

The findings also concur with Xie et al., (2003) who conducted a study on the how board of directors and audit committee controls the level of EM using discretionary accruals model. Board members with financial background and board committees who hold meetings frequently, have been found to lower the levels of discretionary accruals. This finding supports the role of board and audit committee to control managers' opportunistic behaviours using EM.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section gives a summary of the findings, conclusions, recommendations and study's limitations. This section also elucidates the policy recommendations that policy makers can implement to achieve the expected EM of the companies quoted at the NSE. Lastly the chapter presents suggestions for further research which can be useful to future researchers.

5.2 Summary of Findings

The study sought to explore the effect of corporate governance on EM of firms enlisted at the NSE. The independent variables for the study were board independence, board size, board activity, firm size and ownership concentration. Descriptive cross-sectional research design was employed for the study. Secondary data was obtained from the Capital Markets Authority and was analyzed using SPSS software version 22. The study used annual data for 53 companies enlisted at the NSE covering a five-year time frame from January 2013 to December 2017.

From the results of correlation analysis, firm size and ownership concentration were found to have a significant and positive correlation with EM of firms quoted at the NSE. The findings further reveal that board independence has a weak positive and statistically insignificant correlation with EM of firms quoted at the NSE. The study also found out a positive and insignificant correlation exists between board size and EM of firms quoted at the NSE. Board activity produced negative and statistically significant correlation with EM of quoted companies.

The co-efficient of determination R-square value was 0.314 which means that about 31.4 percent of the variation in EM of the companies at the NSE listing can be explained

by the five selected independent variables while 68.6 percent in the variation of EM was associated with other factors not covered in this research. The study also found a strong correlation between the independent variables and the companies enlisted at the NSE' EM ($R=0.560$). ANOVA results indicate that the F statistic was at 5% significance level with a $p=0.000$. Therefore, the model was fit in explaining the association between the selected variables.

The regression results show that when all the independent variables selected for the study have zero value the listed firm's EM will be -1.213. A unit increase in board independence or board activity would result to a decrease in EM by 0.265 and 0.009 respectively. A unit increase in firm size will result in an increase in EM of the Kenyan companies quoted at the NSE by 0.211 while a unit increase in either board size or ownership concentration would not have a significant influence on EM.

5.3 Conclusion

It can be concluded from the findings that the companies enlisted at the NSE' EM is significantly influenced by board independence, board activity and firm size. The study therefore concludes that a unit increase in either board independence or board activity leads to a significant decrease in EM of companies enlisted at the NSE while a unit increase in firm size leads to a significant increase in EM. The study found that ownership concentration and board size are statistically insignificant determinants of EM and therefore this study concludes that these variables do not influence to a large extent the companies enlisted at the NSE EM.

This study concludes that independent variables selected for this study board independence, board size, board activity, firm size and ownership concentration influence to a large extent the listed firm' EM at the NSE. It is thus sufficient to

conclude that these variables significantly affect the EM of companies enlisted at the NSE as depicted by the p value in the ANOVA summary. The fact that the five independent variables explain 31.4% of changes in EM imply that the variables not included in the model explain 68.6% of changes in EM of firms at the NSE listing.

This finding concurs with Kamran and Shah (2015) who studied the impact of corporate governance and ownership structure on EM among firms enlisted in Pakistan for the period 2003–2010. Discretionary accruals was used as a measure of EM. The results indicated that managers who have stayed for long in a firm are likely to influence corporate decisions to serve their interests. These findings are consistent with other past research which have found evidence that dominant directors in expropriate external minority shareholders. Furthermore, the results indicate that institutional directors are significant in constraining EM practices. There was no evidence that CEO duality, board size and ownership concentration influence discretionary accruals.

5.4 Policy Recommendations

This study found that a negative and statistically significant effect of board independence on EM exists. This implies that an increase in board independence will have a significant influence on EM. This study recommends that policy makers and directors of listed firms should work towards having more independent boards as this will lead to a significant reduction in EM.

This study found that board activity has a negative and significant effect on EM among quoted companies at the NSE. This implies that an increase in number of board meetings held in a year will lead to a statistically significant decline in EM. This study recommends that policy makers such as the CMA and directors of listed companies

should work towards increasing the number of meetings held in a year as this will translate to decreased EM.

The study found out that a positive association exists between EM and size of a firm. This study recommends that policy makers such as CMA and directors of large firms should come up with measures aimed at reducing EM among large firms as this study has found statistically significant evidence of a positive effect of firm size on EM.

5.5 Limitations of the Study

The scope of this research was for five years 2013-2017. It has not been determined if the results would hold for a longer study period. Furthermore, it is uncertain whether similar findings would result beyond 2017. A longer study period is more reliable as it will consider major economic conditions such as booms and recessions.

The greatest limitation for the study was the quality of data as it is hard to make a conclusive deduction since the data employed might not present the true facts about the present reality. The data that has been used is only assumed to be accurate. The reality is that these measures change annually depending on the prevailing condition.

The study employed secondary data in the public domain, which had already been obtained, unlike the first-hand information presented by primary data. Primary data would have improved this study by helping the researchers get qualitative data from respondents on how they perceive the impact of board diversity on EM.

The study also considered selected determinants of and not all the factors affecting the EM of listed firms mainly due to limitation of data availability. There are other factors that affect EM of listed firms which were not considered for this research as they were not quantifiable.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

This study only investigated corporate governance and EM of companies enlisted at the NSE in Kenya and relied on secondary data. A research study where data collection relies on primary data i.e. in-depth questionnaires and interviews covering all the 64 companies enlisted at the NSE is recommended so as to compliment this research.

The study was not exhaustive of the independent variables affecting EM of firms quoted at the NSE and this study recommends that further studies be conducted to incorporate other variables like management efficiency, growth opportunities, industry practices, age of the firm, political stability and other macro-economic variables. Establishing the effect of each variable on EM will enable policy makers know what tool to use when controlling the EM.

The study concentrated on the last five years since it was the most recent data available. Future studies may use a range of many years e.g. from 2000 to date and this can be helpful to confirm or disapprove this study's findings.

The study limited itself by focusing on listed firms. The recommendations of this study are that further studies be conducted on other non-listed institutions operating in Kenya to confirm or disapprove the findings of this study.

Finally, due to the inadequacies of the regression models, other models like the Vector Error Correction Model (VECM) can be applied in explaining the different associations between the variables.

REFERENCES

- Ali shah et al., (2009). The Impact of Corporate Governance and Ownership Structure on Earnings Management Practices. *Evidence from Listed Companies in Pakistan*
- Ashari, N., Koh, H. C., Tan, S. L., & Wong, W. H. (1994). Factors affecting income smoothing among listed companies in Singapore. *Accounting Business Research*, 24(96), 291–301.
- Bartov, E., Gul, F. A., & Tsui, J. S. L. (2000). Discretionary accruals models and audit qualifications. *Journal of Accounting and Economics*, 30, 421–452.
- Beasley, (2006). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71(4), 443-465
- Brickley et al., (1994). Ethics, Incentives and organisational design. *Journal of Applied Corporate Finance* vol. 7.2
- Cadbury, A. (1992). Report of the committee on the Financial Aspects of Corporate Governance. *London: Gee & Co. Ltd.*
- Capital Markets Authority (2002). Guidelines on corporate governance practices by public listed Companies in Kenya, *Gazette Notice No. 3362*
- Chen, K. Y., Lin, K. L., & Zhou, J. (2007). Audit quality and earnings management for Taiwan IPO firms. *Managerial Auditing Journal*, 20(1), 86–104.
- Chen, X., Cheng, Q., & Wang, X. (2010). *Does increased board independence reduce earnings management? Evidence from recent regulatory reforms* (Mimeo). University of Wisconsin-Madison and Chinese University of Hong Kong.
- Cheng, C. A., & Reitenga, A. (2000, July). *Institutional investors and discretionary accruals*. Paper presented at the 2nd AAA/BAA Globalization Conference, Cambridge, UK.
- Chin et al., (2006). Earnings management, corporate governance, and the market performance of seasoned equity offerings in Hong Kong. *Journal of Contemporary Accounting and Economics*, 2(1), 73–98.
- Dechow, P. M., & Skinner, D. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons*, 14(2), 235–250.

- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *The Accounting Review*, 70, 193–225.
- Drobetz, W. Schillhofer, A. Zimmermann, H. (2004). Corporate Governance and Expected stock Returns: Evidence from Germany European Financial management, *European Journal of Business and Management* www.iiste.org ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online) Vol.7, No.33, 2015 96 (1998)
- DuCharme, L.L., P.H. Malatesta, & S.E. Sefcik. (2000). Earnings Management: IPO Valuation and Subsequent Performance, *Working paper, University of Washington*.
- Fama, E. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 88–107.
- Fama & Jensen, (1983) Separation of Ownership and Control, *Journal of law and economics Vol. 88*
- Healy, P. M., & Wahlen, J. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–384.
- Iraya et al., (2015). Effects of Corporate Governance practices on earnings management of companies listed at the Nairobi securities Exchange. *European Scientific Journal January 2015 edition vol.11, No.1 ISSN: 1857 – 7881*
- Irungu (2010). Relationship between related macroeconomic variables and Earnings management for companies quoted at NSE.
- Jensen & Meckling, (1976). Theory of the Firm: Managerial behaviour, agency costs and ownership. *Journal of Financial Economics*, 4, 305-360.
- Jesus & Emma, (2013) Does Corporate Governance Influence Earnings Management in Latin American Markets? *Journal of Business Ethics*, 10(6) 851-892.
- Kaszniak, R. (1999). On the association between voluntary disclosure and earnings management. *Journal of Accounting Research*, 37(1), 57–81.
- Kim, Y., Liu, C., & Rhee, S. G. (2003). *The relation of earnings management to firm size* (Working paper). University of Hawaii.
- Klein, A. (2002). Audit committee, board of director characteristics and earnings management. *Journal of Accounting and Economics*, 33, 375–400.

- Ko'boyo, O.W. (2013). Motivation Factors for Earning Management Practice in Kenyan Firms: Case for Public Listed Corporations. *Unpublished MBA Project, Strathmore University*.
- Lang, M. &Lundholm, R. (2000). Voluntary Disclosure and Equity Offerings: Reducing Information Asymmetry or Hying the Stock. *Contemporary Accounting Research*, 17(4), 623–669.
- Leuz, C., Nanda, D. &Wysocki, P. D. (2003). Earnings Management and Investor Protection: An International Comparison. *Journal of financial economics*, 69(3), 505-527.
- Liu, Q. & Lu, Z. J. (2007). Corporate Governance and Earnings Management in the Chinese Listed Companies: A Tunnelling Perspective. *Journal of Corporate Finance*, 13(5), 881-906.
- Mang'unyi, (2011). Ownership Structure and Corporate Governance and Its Effects on Performance: A Case of Selected Banks in Kenya. *International Journal of Business Administration Vol. 2, No. 3; August 2011*
- Moses, O. D. (1987). Income smoothing and incentives: Empirical tests using accounting changes. *The Accounting Review*, 62(2), 259–377.
- Shah, S. Z. A., Butt, S. A., & Hassan, A. (2009). Corporate governance and earnings management: An empirical evidence from Pakistani listed companies. *European Journal of Scientific Research*, 26(4), 624–638.
- Shah, S. Z. A., Zafar, N., & Durrani, T. K. (2009). Board composition and earnings management: An empirical evidence from Pakistani listed companies. *Middle Eastern Finance and Economics*, 3, 28–38
- Shen, C.-H., & Chih, H.-L. (2007). Earnings management and corporate governance in Asia's emerging markets. *Corporate Governance: An International Review*, 15(5), 999–1021.
- Sweeney, A. P. (1994). Debt-covenant violations and managers' accounting responses. *Journal of Accounting and Economics*, 17(3), 281–308.
- Wet J.H,(2012) Executive Compensation and the EVA & MUA Performance of South Africa listed companies, *Southern Africa's Business Review L6 No. 3*.
- Xie, Davidson &Dadalt, (2003) Earnings Management and Corporate Governance: The Role of the Board and the Audit Committee. *Journal of corporate finance*, 9(3), 295-316
- Yoon, S., G. Miller & Jiraporn P. (2006). Cash from Operations and Earnings Management in Korea, *Journal of International Financial Management and Accounting*, pp. 85-109.

APPENDICES

Appendix I: List of Companies Listed at NSE

	COMPANY	SECTOR	YEAR OF LISTING
1	Deacons (East Africa)	Consumer Services	2016
2	Nairobi Business Ventures	Consumer Services	2016
3	Stanlib Fahari I-REIT	Financials	2015
4	Atlas African Industries	Industrials	2014
5	Flame Tree Group Holdings	Basic Materials	2014
6	Kurwitu Ventures	Financials	2014
7	Nairobi Securities Exchange	Financials	2014
8	Home Afrika	Financials	2013
9	I&M Holdings	Financials	2013
10	CIC Insurance Group	Financials	2012
11	Umeme	Utilities	2012
12	Britam (Kenya)	Financials	2011
13	TransCentury	Industrials	2011
14	Co-operative Bank of Kenya	Financials	2008
15	Safaricom	Telecommunications	2008
16	Kenya Re-Insurance Corporation	Financials	2007
17	Liberty Kenya Holdings	Financials	2007
18	Equity Group Holdings	Financials	2006
19	Eveready East Africa	Consumer Goods	2006
20	KenGen Company	Utilities	2006
21	WPP Scangroup	Consumer Services	2006
22	Mumias Sugar Co	Consumer Goods	2001
23	ARM Cement	Industrials	1997
24	TPS Eastern Africa	Consumer Services	1997
25	Kenya Airways	Consumer Services	1996
26	National Bank of Kenya	Financials	1994
27	Sameer Africa	Consumer Goods	1994
28	Longhorn Publishers	Consumer Services	1993
29	Crown Paints Kenya	Basic Materials	1992
30	HF Group	Financials	1992
31	Uchumi Supermarkets	Consumer Services	1992
32	KCB Group	Financials	1989
33	Standard Chartered Bank Kenya	Financials	1988
34	Total Kenya	Oil & Gas	1988
35	Barclays Bank of Kenya	Financials	1986

36	Jubilee Holdings	Financials	1984
37	Express Kenya	Consumer Services	1978
38	Olympia Capital Holdings	Industrials	1974
39	East African Cables	Industrials	1973
40	Nation Media Group	Consumer Services	1973
41	Carbacid Investments	Basic Materials	1972
42	Diamond Trust Bank Kenya	Financials	1972
43	Eaagads	Consumer Goods	1972
44	East African Breweries	Consumer Goods	1972
45	East African Portland Cement	Industrials	1972
46	Kapchorua Tea Kenya	Consumer Goods	1972
47	Kenya Power & Lighting	Utilities	1972
48	Williamson Tea Kenya	Consumer Goods	1972
49	NIC Group	Financials	1971
50	Unga Group	Consumer Goods	1971
51	Bamburi Cement	Industrials	1970
52	Stanbic Holdings	Financials	1970
53	B O C Kenya	Basic Materials	1969
54	BAT Kenya	Consumer Goods	1969
55	Centum Investment	Financials	1967
56	Limuru Tea	Consumer Goods	1967
57	Sasini	Consumer Goods	1965
58	Sanlam Kenya	Financials	1963
59	KenolKobil	Oil & Gas	1959
60	Kenya Orchards	Consumer Goods	1959
61	Standard Group	Consumer Services	1954
62	Kakuzi	Consumer Goods	1951
63	Car & General (K)	Consumer Services	1940

[https://www.african-markets.com/en/stock-markets/nse/listed-companies on](https://www.african-markets.com/en/stock-markets/nse/listed-companies)
[27.08.2018](#)

Appendix III: Secondary Data Collection Sheet

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
Athi river mining	2013	0.26900	0.8182	11.000	0.42	7.280	6
	2014	0.21900	0.8182	11.000	0.38	7.293	6
	2015	0.12600	0.8889	9.000	0.30	7.331	5
	2016	0.12300	0.8182	11.000	0.21	7.344	5
	2017	0.07070	0.8333	12.000	0.27	7.351	5
Bamburi	2013	0.33000	0.7273	11.000	0.55	7.664	4
	2014	0.41000	0.6250	8.000	0.60	7.716	5
	2015	0.39000	0.7000	10.000	0.60	7.792	4
	2016	0.31000	0.7000	10.000	0.61	7.834	5
	2017	0.39000	0.7000	10.000	0.65	7.919	5
Car & General	2013	0.49800	0.7778	9.000	0.46	8.267	7
	2014	0.38900	0.7778	9.000	0.45	8.316	8
	2015	0.38700	0.7778	9.000	0.44	8.354	8
	2016	0.36000	0.7778	9.000	0.34	8.382	8
	2017	0.28400	0.7778	9.000	0.28	8.414	10
Carbacid	2013	0.11000	0.9167	12.000	0.25	7.690	4
	2014	0.15000	0.9167	12.000	0.34	7.722	4
	2015	0.02500	0.9167	12.000	0.28	7.794	4
	2016	-0.16000	0.9167	12.000	0.41	7.841	5
	2017	0.00170	0.9167	12.000	0.42	7.748	5
Crown Berger	2013	0.41000	0.6667	6.000	0.65	7.716	5

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2014	0.39000	0.6667	6.000	0.75	7.792	4
	2015	0.31000	0.6667	6.000	0.74	7.834	5
	2016	0.39000	0.6667	6.000	0.56	7.919	5
	2017	0.49800	0.7500	4.000	0.61	8.267	7
East Africa Cables	2013	0.21100	0.8889	9.000	0.43	7.691	4
	2014	0.25000	0.8750	8.000	0.41	7.884	4
	2015	0.25200	0.8750	8.000	0.46	8.030	4
	2016	0.03000	0.8750	8.000	0.43	7.150	17
	2017	-0.15100	0.8750	8.000	0.41	7.144	15
E.A Portland	2013	0.61400	0.7143	7.000	0.47	7.842	7
	2014	0.42600	0.7143	7.000	0.27	7.853	11
	2015	0.32400	0.8333	6.000	0.36	7.900	18
	2016	0.40600	0.7143	7.000	0.32	7.945	17
	2017	0.35900	0.7143	7.000	0.25	8.014	15
Eveready	2013	0.28700	0.8182	11.000	0.82	8.002	4
	2014	0.30900	0.8182	11.000	0.62	8.096	4
	2015	0.25100	0.8182	11.000	0.79	8.245	5
	2016	0.24700	0.8182	11.000	0.76	8.298	5
	2017	0.32200	0.8000	10.000	0.94	8.324	6
Kakuzi	2013	0.08400	0.8750	8.000	0.47	7.255	7
	2014	-0.06300	0.8750	8.000	0.41	7.225	11
	2015	-0.17700	0.8750	8.000	0.34	7.178	18
	2016	0.03000	0.8750	8.000	0.36	7.150	17

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2017	-0.15100	0.8750	8.000	0.45	7.144	15
Kengen	2013	0.25100	0.5714	7.000	0.47	6.807	5
	2014	0.24700	0.5714	7.000	0.27	6.864	5
	2015	0.32200	0.5714	7.000	0.36	6.948	6
	2016	0.08400	0.5714	7.000	0.32	7.012	7
	2017	0.09400	0.7143	7.000	0.25	7.086	4
Kenolkobil	2013	0.19000	0.8889	9.000	0.48	7.491	5
	2014	0.33000	0.8889	9.000	0.36	7.638	6
	2015	0.34000	0.8889	9.000	0.32	7.791	7
	2016	0.27000	0.8889	9.000	0.16	7.910	10
	2017	0.04400	0.8889	9.000	0.32	7.842	10
KPLC	2013	0.49800	0.7143	7.000	0.40	8.267	7
	2014	0.38900	0.7143	7.000	0.31	8.316	8
	2015	0.38700	0.7143	7.000	0.39	8.354	8
	2016	0.36000	0.7143	7.000	0.40	8.382	8
	2017	0.28400	0.7143	7.000	0.33	8.414	10
KQ	2013	0.33000	0.7143	7.000	0.35	7.664	4
	2014	0.41000	0.7143	7.000	0.34	7.716	5
	2015	0.39000	0.7143	7.000	0.28	7.792	4
	2016	0.31000	0.7143	7.000	0.27	7.834	5
	2017	0.39000	0.7143	7.000	0.22	7.919	5
Safaricom	2013	-0.35800	0.8333	6.000	0.39	7.502	6
	2014	-0.25700	0.8750	8.000	0.37	7.567	7

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2015	-0.07730	0.8750	8.000	0.41	7.662	5
	2016	0.01840	0.8750	8.000	0.31	7.720	5
	2017	-0.40700	0.8750	8.000	0.14	7.673	5
Sameer	2013	-0.35700	0.7143	7.000	0.40	7.149	5
	2014	0.03750	0.7143	7.000	0.28	7.192	5
	2015	-0.20300	0.7143	7.000	0.29	7.220	5
	2016	-0.31300	0.7500	8.000	0.22	7.160	5
	2017	-0.53200	0.7500	8.000	0.39	7.140	5
Sasini	2013	0.19000	0.8333	6.000	0.38	7.491	5
	2014	0.33000	0.8750	8.000	0.46	7.638	6
	2015	0.34000	0.8750	8.000	0.54	7.791	7
	2016	0.27000	0.8750	8.000	0.57	7.910	10
	2017	0.04400	0.8750	8.000	0.35	7.842	10
Standard Group	2013	0.18000	0.7778	9.000	0.28	7.234	9
	2014	0.15000	0.7778	9.000	0.33	7.409	9
	2015	0.18000	0.7778	9.000	0.29	7.518	9
	2016	0.15000	0.7500	12.000	0.38	7.468	5
	2017	0.15000	0.7500	12.000	0.30	7.472	5
Total Kenya	2013	0.24000	0.7500	12.000	0.42	6.998	9
	2014	0.12000	0.8889	9.000	0.32	7.053	9
	2015	0.03800	0.7778	9.000	0.31	7.184	9
	2016	-0.00810	0.7500	8.000	0.30	7.163	5
	2017	-0.03800	0.9091	11.000	0.35	7.175	5

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
TransCentury	2013	0.40000	0.9091	11.000	0.33	7.290	4
	2014	0.42000	0.8889	9.000	0.31	8.043	4
	2015	0.23000	0.8750	16.000	0.30	8.138	4
	2016	0.41000	0.8750	16.000	0.30	8.170	4
	2017	0.41000	0.8750	16.000	0.35	8.215	5
Uchumi	2013	0.18000	0.8750	16.000	0.34	7.234	9
	2014	0.15000	0.4000	5.000	0.30	7.409	9
	2015	0.18000	0.5000	6.000	0.34	7.518	9
	2016	0.15000	0.5714	7.000	0.37	7.468	5
	2017	0.15000	0.5714	7.000	0.34	7.472	5
Unga Group	2013	0.16000	0.5000	6.000	0.42	7.167	4
	2014	0.19000	0.8571	7.000	0.38	7.108	4
	2015	0.19000	0.8571	7.000	0.23	7.163	4
	2016	0.16000	0.8750	8.000	0.20	7.165	4
	2017	0.16000	0.8750	8.000	0.36	7.167	4
Nation Media	2013	0.44900	0.8889	9.000	0.33	8.291	7
	2014	0.44600	0.9167	12.000	0.30	8.343	8
	2015	0.47100	0.9167	12.000	0.28	8.347	10
	2016	0.27800	0.9167	12.000	0.21	8.369	8
	2017	0.37400	0.9167	12.000	0.46	8.399	9
BOC Kenya	2013	0.26500	0.9167	12.000	0.34	6.945	9
	2014	0.17100	0.8000	10.000	0.30	6.985	8
	2015	0.12600	0.7778	9.000	0.29	7.010	6

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2016	0.16200	0.7778	9.000	0.47	7.019	7
	2017	0.10500	0.8750	8.000	0.35	7.016	9
EABL	2013	0.44900	0.8889	9.000	0.32	8.291	7
	2014	0.44600	0.8000	10.000	0.33	8.343	8
	2015	0.47100	0.8000	10.000	0.37	8.347	10
	2016	0.27800	0.8000	10.000	0.33	8.369	8
	2017	0.37400	0.8000	10.000	0.46	8.399	9
Eaagads Ltd	2013	0.41700	0.8000	10.000	0.67	8.035	4
	2014	0.41400	0.8182	11.000	0.41	8.083	6
	2015	0.42700	0.8182	11.000	0.73	8.164	6
	2016	0.38600	0.8889	9.000	0.54	8.219	5
	2017	0.36400	0.8182	11.000	0.39	8.229	5
Williamson Tea	2013	0.11000	0.8333	12.000	0.34	7.827	33
	2014	0.14000	0.7273	11.000	0.44	7.966	10
	2015	0.07400	0.6250	8.000	0.42	8.089	8
	2016	-0.09600	0.7000	10.000	0.38	8.096	11
	2017	0.01200	0.7000	10.000	0.23	8.061	14
Kapchorua Tea	2013	0.37800	0.7000	10.000	0.20	8.484	11
	2014	0.39600	0.7778	9.000	0.36	8.509	11
	2015	0.45400	0.7778	9.000	0.33	8.576	11
	2016	0.39100	0.7778	9.000	0.30	8.670	10
	2017	0.40700	0.7778	9.000	0.28	8.703	10
Limuru Tea	2013	0.40000	0.7778	9.000	0.21	7.290	4

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2014	0.42000	0.9167	12.000	0.46	8.043	4
	2015	0.23000	0.9167	12.000	0.34	8.138	4
	2016	0.41000	0.9167	12.000	0.30	8.170	4
	2017	0.41000	0.9167	12.000	0.29	8.215	5
Marshalls	2013	0.44900	0.9167	12.000	0.47	8.291	7
	2014	0.44600	0.6667	6.000	0.35	8.343	8
	2015	0.47100	0.6667	6.000	0.32	8.347	10
	2016	0.27800	0.6667	6.000	0.33	8.369	8
	2017	0.37400	0.6667	6.000	0.37	8.399	9
Stan Chart	2013	0.18900	0.7500	4.000	0.33	7.609	4
	2014	0.18500	0.8889	9.000	0.37	7.670	5
	2015	0.16200	0.8750	8.000	0.67	7.782	4
	2016	0.21200	0.8750	8.000	0.41	7.001	4
	2017	0.11300	0.8750	8.000	0.73	7.000	4
Express	2013	0.56000	0.8750	8.000	0.54	8.334	5
	2014	0.56000	0.7143	7.000	0.39	8.377	7
	2015	0.67000	0.7143	7.000	0.34	8.441	7
	2016	0.52000	0.8333	6.000	0.44	8.533	8
	2017	0.42000	0.7143	7.000	0.60	8.579	6
Nation Media	2013	0.40000	0.7143	7.000	0.48	8.300	5
	2014	0.42000	0.8182	11.000	0.40	8.360	7
	2015	0.33000	0.8182	11.000	0.34	8.451	7
	2016	0.34000	0.8182	11.000	0.24	8.531	8

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2017	0.38000	0.8182	11.000	0.23	8.544	5
TPS	2013	0.23300	0.8000	10.000	0.20	7.670	5
	2014	0.29000	0.8750	8.000	0.36	7.782	4
	2015	0.32000	0.8750	8.000	0.33	8.234	4
	2016	0.25400	0.8750	8.000	0.30	8.298	4
	2017	0.21900	0.8750	8.000	0.28	8.312	4
Scan Group	2013	0.21000	0.8750	8.000	0.21	6.980	4
	2014	0.32000	0.5714	7.000	0.46	7.121	4
	2015	0.35000	0.5714	7.000	0.34	7.199	4
	2016	0.21000	0.5714	7.000	0.30	7.281	4
	2017	0.01400	0.5714	7.000	0.36	7.320	6
Atlas	2013	0.15200	0.7143	7.000	0.39	6.861	4
	2014	0.12400	0.8889	9.000	0.38	6.905	4
	2015	0.16000	0.8889	9.000	0.46	7.017	4
	2016	0.15100	0.8889	9.000	0.54	7.022	4
	2017	0.10700	0.8889	9.000	0.57	6.974	4
Hutchings	2013	0.16800	0.8889	9.000	0.35	6.794	4
	2014	0.21200	0.7143	7.000	0.28	6.846	4
	2015	0.09680	0.7143	7.000	0.33	6.895	5
	2016	0.05250	0.7143	7.000	0.29	6.929	4
	2017	0.03660	0.7143	7.000	0.38	6.997	5
Business Ventur e	2013	0.15200	0.7143	7.000	0.30	6.861	4

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2014	0.12400	0.7143	7.000	0.42	6.905	4
	2015	0.16000	0.7143	7.000	0.32	7.017	4
	2016	0.15100	0.7143	7.000	0.31	7.022	4
	2017	0.10700	0.7143	7.000	0.30	6.974	4
Jubilee	2013	0.21200	0.7143	7.000	0.35	6.846	4
	2014	0.09680	0.8333	6.000	0.33	6.895	5
	2015	0.33000	0.8750	8.000	0.31	7.740	6
	2016	0.34000	0.8750	8.000	0.30	7.813	8
	2017	0.29000	0.8750	8.000	0.30	7.815	6
Pan Africa	2013	0.26500	0.8750	8.000	0.35	6.945	9
	2014	0.17100	0.7143	7.000	0.34	6.985	8
	2015	0.12600	0.7143	7.000	0.30	7.010	6
	2016	0.16200	0.7143	7.000	0.34	7.019	7
	2017	0.10500	0.7500	8.000	0.37	7.016	9
Umeme	2013	0.40000	0.7500	8.000	0.42	7.290	4
	2014	0.42000	0.8333	6.000	0.38	8.043	4
	2015	0.23000	0.8750	8.000	0.23	8.138	4
	2016	0.41000	0.8750	8.000	0.20	8.170	4
	2017	0.41000	0.8750	8.000	0.36	8.215	5
Kenya Re	2013	0.54600	0.8750	8.000	0.33	7.014	6
	2014	0.48900	0.7778	9.000	0.30	7.135	7
	2015	0.41100	0.7778	9.000	0.28	7.237	9
	2016	0.49300	0.7778	9.000	0.21	7.301	10

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2017	0.37500	0.7500	12.000	0.20	7.350	13
Liberty	2013	0.26900	0.7500	12.000	0.42	7.280	6
	2014	0.21900	0.7500	12.000	0.38	7.293	6
	2015	0.12600	0.8889	9.000	0.30	7.331	5
	2016	0.12300	0.7778	9.000	0.21	7.344	5
	2017	0.07070	0.7500	8.000	0.27	7.351	5
Britam	2013	0.33000	0.9091	11.000	0.55	7.664	4
	2014	0.41000	0.9091	11.000	0.60	7.716	5
	2015	0.39000	0.8889	9.000	0.60	7.792	4
	2016	0.31000	0.8750	16.000	0.61	7.834	5
	2017	0.39000	0.8750	16.000	0.65	7.919	5
CIC	2013	0.49800	0.8750	16.000	0.46	8.267	7
	2014	0.38900	0.8750	16.000	0.45	8.316	8
	2015	0.38700	0.4000	5.000	0.44	8.354	8
	2016	0.36000	0.5000	6.000	0.34	8.382	8
	2017	0.28400	0.5714	7.000	0.28	8.414	10
Olympia	2013	0.11000	0.5714	7.000	0.25	7.690	4
	2014	0.15000	0.5000	6.000	0.34	7.722	4
	2015	0.02500	0.8571	7.000	0.28	7.794	4
	2016	-0.16000	0.8571	7.000	0.41	7.841	5
	2017	0.00170	0.8750	8.000	0.42	7.748	5
Centum	2013	0.33000	0.8750	8.000	0.35	7.664	5
	2014	0.41000	0.8889	9.000	0.34	7.716	4

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
	2015	0.39000	0.9167	12.000	0.28	7.792	5
	2016	0.31000	0.9167	12.000	0.27	7.834	5
	2017	0.39000	0.9167	12.000	0.22	7.919	7
Home Africa	2013	-0.35800	0.9167	12.000	0.39	7.502	4
	2014	-0.25700	0.9167	12.000	0.37	7.567	4
	2015	-0.07730	0.8000	10.000	0.41	7.662	4
	2016	0.01840	0.7778	9.000	0.31	7.720	17
	2017	-0.40700	0.7778	9.000	0.14	7.673	15
Kurwitu	2013	-0.35700	0.8750	8.000	0.40	7.149	7
	2014	0.03750	0.8889	9.000	0.28	7.192	11
	2015	-0.20300	0.8000	10.000	0.29	7.220	18
	2016	-0.31300	0.8000	10.000	0.22	7.160	17
	2017	-0.53200	0.8000	10.000	0.39	7.140	15
NSE	2013	0.19000	0.8000	10.000	0.38	7.491	4
	2014	0.33000	0.8000	10.000	0.46	7.638	4
	2015	0.34000	0.8182	11.000	0.54	7.791	5
	2016	0.27000	0.8182	11.000	0.57	7.910	5
	2017	0.04400	0.8889	9.000	0.35	7.842	6
BAT	2013	0.18000	0.8182	11.000	0.28	7.234	7
	2014	0.15000	0.8333	12.000	0.33	7.409	11
	2015	0.18000	0.7273	11.000	0.29	7.518	18
	2016	0.15000	0.6250	8.000	0.38	7.468	17
	2017	0.15000	0.7000	10.000	0.30	7.472	15

COMPANY	Year	E.M.	B. I	B. Size	O.C	F. Size	B.
MUMIAS	2013	0.24000	0.7000	10.000	0.42	6.998	5
	2014	0.12000	0.7000	10.000	0.32	7.053	5
	2015	0.03800	0.7778	9.000	0.31	7.184	6
	2016	-0.00810	0.7778	9.000	0.30	7.163	7
	2017	-0.03800	0.7778	9.000	0.35	7.175	4
Longhorn Publis hers Limite d	2013	0.40000	0.7778	9.000	0.33	7.290	5
	2014	0.42000	0.7778	9.000	0.31	8.043	6
	2015	0.23000	0.9167	12.000	0.30	8.138	7
	2016	0.41000	0.9167	12.000	0.30	8.170	10
	2017	0.41000	0.9167	12.000	0.35	8.215	10
Deacons (East Africa) PLC	2013	0.15200	0.9167	12.000	0.39	6.861	7
	2014	0.12400	0.9167	12.000	0.38	6.905	8
	2015	0.16000	0.6667	6.000	0.46	7.017	8
	2016	0.15100	0.6667	6.000	0.54	7.022	8
	2017	0.10700	0.6667	6.000	0.57	6.974	10