

**CORPORATE GOVERNANCE MECHANISM, CEO POWER AND  
EARNINGS MANAGEMENT AMONG PUBLICLY LISTED  
FIRMS IN KENYA**

**BY**

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**A RESEARCH THESIS SUBMITTED TO THE SCHOOL OF BUSINESS AND  
ECONOMICS, DEPARTMENT OF ACCOUNTING AND FINANCE IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY IN  
BUSINESS MANAGEMENT (FINANCE)**

**MOI UNIVERSITY**

**2021**

## DECLARATION

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## **DEDICATION**

This research is dedicated to my family, parents, relatives, colleagues and the entire Moi University, for it is through their assistance that this was achieved.

## **ACKNOWLEDGEMENTS**

This research thesis is the result of support from several sources and I wish to acknowledge them all. First, my success in completing this thesis is due to the almighty God who gave me the courage to face different challenges in developing the document. Special thanks to my supervisors Dr. Josephat Cheboi and Dr. Joyce Komen for their professional guidance and suggestions which made my work possible. My gratitude also goes to my dear friends, colleagues and classmates for being helpful and to whom in their own small unique ways made the completion of this research work possible. To you all, May the Almighty God shower you with His blessings. Thank you very much.

## ABSTRACT

Earnings management has attracted recent research discourse due to the financial scandals that emanate from compromised quality of financial reports and untrue firm values. Opportunistic managers use their discretion to make financial reporting choices that maximize their own utilities at the expense true economic reflection of the firm. This practice has been depicted to have an adverse implication on the shareholders as it misleads them on the true value of their investment which eventually affects their decision making. In its quest to address this pertinent issue, the study sought to investigate the moderating role of CEO power on the relationship between corporate governance mechanism and earnings management. The study's specific objectives were to determine the effects of audit committee's; independence, meeting frequency, financial expertise, blockholder ownership and institutional ownership on earnings management, as well as to assess the moderating role of CEO power on each of the relationships. A positivism research paradigm was adopted in the study. The research was guided by agency, entrenchment and stakeholder theories. Explanatory research design and a panel approach was used to conduct a survey of listed firms at the NSE that met the inclusion criteria. The study population comprised of 65 listed firms out of which the research focused on the 35 firms that were consistently in operation during the study period between 2004 and 2017, resulting in a total of 490 firm-year observations. Secondary data obtained from the financial reports were analyzed using both descriptive and inferential statistical techniques. Corporate governance mechanism was found to have a significant effect on earnings management with its effects moderated by CEO power. The study results specifically indicate a negative and significant effect of audit committee's; independence ( $\beta = -0.813$ ,  $\rho < 0.05$ ), meeting frequency ( $\beta = -0.028$ ,  $\rho < 0.05$ ), financial expertise ( $\beta = -2.064$ ,  $\rho < 0.05$ ), and blockholder ownership ( $\beta = -1.778$ ,  $\rho < 0.05$ ) on earnings management, while institutional ownership ( $\beta = 2.952$ ,  $\rho < 0.05$ ) indicated a positive and significant effect. CEO power moderates the relationships between; audit committee's independence ( $\beta = 0.214$ ,  $\rho < 0.05$ ,  $\Delta R^2 = 2.83\%$ ), meeting frequency ( $\beta = -0.087$ ,  $\rho < 0.05$ ,  $\Delta R^2 = 1.7\%$ ), financial expertise ( $\beta = 0.144$ ,  $\rho < 0.05$ ,  $\Delta R^2 = 0.1\%$ ), blockholder ownership ( $\beta = -0.079$ ,  $\rho < 0.05$ ,  $\Delta R^2 = 1.22\%$ ), institutional ownership ( $\beta = -0.101$ ,  $\rho < 0.05$ ,  $\Delta R^2 = 0.7\%$ ) and earnings management. Corporate governance mechanisms specifically the audit committee attributes and shareholder activism present monitoring mechanisms that aid in constraining earnings management. More independence, higher financial expertise and a higher level of activity which is indicated by the meeting frequency is desirable in reducing earnings management. Blockholders play a crucial role in monitoring managerial activities, and therefore increased blockholder ownership structure reduces earnings management to a greater extent due to their activism. The findings further supports agency theory propositions which suggests monitoring mechanisms as a measure to reduce divergence of interests in the firm. Institutional investors who were found to increase earnings management due to their transient nature. It is therefore in the best interest of the firm for institutions to refrain from pressurizing management for higher short-term performance, but instead focus on the long-term prosperity of the firm. Based on the study findings, CEO power reduces the effectiveness of audit committee attributes and blockholders in constraining earnings management. It is therefore recommended that corporate governance mechanisms should be allowed to operate without undue influence of the CEOs.

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**ACRONYMS AND ABBREVIATIONS**

<b>AC</b>	Audit Committee
<b>CBK</b>	Central Bank of Kenya
<b>CEO</b>	Chief Executive Officer
<b>CG</b>	Corporate Governance
<b>CGC</b>	Corporate Governance Council
<b>CMA</b>	Capital Markets Authority
<b>IPO</b>	Initial Public Offer
<b>IRA</b>	Insurance Regulatory Authority
<b>LBO</b>	Leverage Buy Out
<b>NSE</b>	Nairobi Stock Exchange
<b>SASRA</b>	Sacco Societies Regulatory Authority
<b>UK</b>	United Kingdom
<b>US</b>	United States
<b>USA</b>	United States of America
<b>VIF</b>	Variance Inflation Factor
<b>R&amp;D</b>	Research and Development
<b>SG&amp;A</b>	Selling General and Administrative
<b>ROA</b>	Return on Assets

## OPERATIONAL DEFINITION OF TERMS

**Audit Committee Financial Expertise** is the financial qualification and competencies of the audit committee members (Al-Dhamari & Ismail, 2017). It is the proportion of members in the audit committee with financial expertise.

**Audit Committee Independence** refers to the presence of autonomous directors in the audit committee (Singh, Aggarwal & Anand, 2016). It is operationalized as the proportion of independent directors in the audit committee.

**Audit Committee** is a sub-committee of the board of directors that has the oversight responsibility for the firm's financial reporting process (Bradbury, Mak & Tan, 2006).

**Audit committee Meeting Frequency** refers to how often the audit committee members meet to discuss various issues facing the firm in a year (Katmon & Al Farooque, 2017). It is the number of meetings held in a financial year, indicating the activity of the committee.

**Blockholder** refers to the owner of a large block of a company's shares and/or bonds. In the study, it was operationalized as the shares held by owners who hold more than 5% of the total shares of a firm (Dou *et al.*, 2016; Isenmila & Elijah, 2012; Al-fayoumi *et al.*, 2010)

**CEO Power** refers to the authority of the CEO to influence the board's decisions and shape the strategy of the organization (Malekzadeh, Williams & Sen, 1998). The study operationalized it as the power of the CEO to influence financial reporting in the firm.

**Corporate Governance** is a structure in which managers at the top of the organization are controlled by the board of directors, who control the managers through a corporate structure, executive incentives, and an assortment of tools for monitoring the performance of organizational functions (Donaldson, 2008).

**Corporate Governance Mechanism** refers to the policies and procedures that a company implements to control and protect the interests of internal and external business stakeholders (Vitez Osmond, 2020). In the study, it refers to the audit committee and shareholder activism measures put in place as an oversight for financial reporting.

**Earnings Management** refers to managerial action to increase (or decrease) revenues, profits or earnings for different share categories through accounting adjustments to suit their own interests (Lin *et al.*, 2010).

**Institutional Ownership** refers to the shares held by the financial institutions, institutional legal entities, foreign institutions and trusts, and other institutions at the end of the year (Widigdo, 2013). It was operationalized as the ratio of shares owned by institutions to the total shares.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Overview**

This chapter presents the background of the study, statement of the problem, research objectives and hypotheses, significance of the study and the scope of the study.

#### **1.1 Background of the Study**

The shareholder wealth maximization objective often comes beforehand for many firms, meaning shareholders can rate their investment through indicators such as periodic reported earnings. The rating is crucial especially where there is separation of ownership and control. Firms' stakeholders who are not involved in the day-to-day running of the firm depend on the reported earnings to reflect the status of the firm. At the end of every financial period, reporting on earnings is therefore expected of every listed firm, where reporting is made basing on the prescribed practices and procedures set by the accounting bodies. Earnings are the most significant accounting items in financial reporting since they are key in determining dividend policies and investment decisions. It is a measure of firm's performance, a criterion for stock pricing and eventually an instrument utilized to make predictions (Mohammady, 2010). Its significant roles therefore accounts for the recent scholarly attention towards earnings and earnings management.

Financial reporting standards provide a window for managers to exercise their discretion in financial reporting, such as the choice of assets impairment methods, depreciation approach, revenue recognition methods and recording of receivables. Given this discretion to make accounting choices, opportunistic managers engage in discretionary earnings management (adjustments to cash flows selected by the

management) when preparing and presenting financial statements to fulfill their specific purposes (Lin, Liu & Noronha, 2016).

Lin and Hwang (2010) asserted that earnings management is the action to increase (or decrease) revenues, profits or earnings for different share categories through aggressive accounting tactics, while Healy and Wahlen (1999) defined earnings management as the use of judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers. Managers' superior access and control over the firm's resources gives them an upper hand and they take decisions which are aligned with their personal objectives instead of those of the shareholders (Nazir & Afza, 2018).

The probity of financial statements has been an issue of constant concern among financial analysts, regulators and accounting professionals, especially after a series of high-profile accounting scams and frauds involving well-known firms (Singh, Aggarwal & Anand, 2016). According to Kang and Kim (2011), management could influence reported earnings by making accounting choices or by making operating decisions discretionally, hence it can be posited that firms with inaccurate information may engage in earnings management, since a higher degree of asymmetric information makes it more difficult for the shareholders to monitor their managers (Jiraporn, Liu & Kim, 2017).

Earnings management comprises two perspectives, that is opportunistic and the informative earnings management. The opportunistic perspective holds that managers seek to mislead stakeholders through manipulating periodic earnings so as to maximize their own utilities (Burgstahler & Dichev, 1997; Healy & Whalen, 1999; Lin *et al.*,



2016), and on the contrary, information perspective holds that managerial discretion is a means for managers to communicate their own expectations about the firm's future cash flows or profitability (Bajra & Cadez, 2017). Opportunistic earnings management involve accrual earnings management which is the managerial manipulation of earnings via accounting estimates and methods, which has no direct impact on cash flows and by contrast, real earnings management is the earnings manipulation through operational activities, which directly affects cash flows (Sun *et al.*, 2014)

According to Gajevszky (2014), manipulation of accounting figures as an outcome of ordinary operational practices appears to arise from the management's motivation to mislead shareholders, to ensuring that the organization's financial targets have been met in the course of business. Due to the information asymmetry which exists between the company's insiders and outsiders, individuals within an organization can rely on their control in financial reporting and their access to financial information within the company to overstate the income or to mask obtaining unfavorable results. From this viewpoint, management may use different methods such as hiding the changes in economic performance by creating reserves for future periods, hence reducing income volatility (Leuz *et al.*, 2013; Hijazi & Al-Thuneibat, 2015). According to (Sun *et al.*, 2014), executives would decrease R&D, advertising, or maintenance expenditures to hit earnings targets, even though these actions could harm the firm value in the long run.

As much as financial disclosure is relied upon by investors in portraying a true picture of the firm's performance and asset information, Jiraporn *et al.* (2008) argued that firms with unclear information may engage in more earnings management since a higher degree of asymmetric information makes it more difficult for the owners to monitor

managers. The information asymmetry is a manifest of agency conflict where management are more informed about the firm than the owners. Cornett, McNutt and Tehranian (2009) further contended that earnings management is practiced to window dress financial statements prior to public securities offerings so as to increase corporate managers' compensation and job security, to avoid violating lending contracts, or to reduce regulatory costs or to increase regulatory benefits. Earnings management affects firm performance and can even tamper with the shareholders' wealth. Thus, in the absence of effective control procedures within the firm, managers are more likely to take decisions that deviate from the interests of shareholders and as a result, they may abuse their discretion over earnings by engaging in earnings management. This generates the necessity to incur monitoring costs borne by the shareholders. The motivation for misrepresentation of firm performance arises because of the conflict of interest between managers and shareholders (Albu & Girbin, 2015) resulting into agency conflicts.

There exists an agency relationship between the shareholders and the management. Jensen and Meckling (1976) argue that if both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal, and thus the principal can limit divergences from his interest by establishing appropriate incentives for the agent mainly by incurring monitoring costs designed to limit the aberrant activities of the agent. The agency conflict emanates almost naturally because of the separation of ownership and control of the modern-day business places and therefore managers are at a privileged position that gives them the latitude to take decisions that could either converge with or entrench the value maximization objective of the firm (Hassan & Ahmed, 2012). Sound financial disclosure diminishes agency problems by bridging the information asymmetry gap that

exists between management and the shareholders (Karamanou & Vafeas, 2005). In order to constrain any divergence in interests and to ensure appropriate accountability of resources, an organization needs a comprehensive structure of controls that encourages efficient performance and responsible behavior.

Corporate governance is the system by which business corporations are directed and controlled (Cadbury, 1992; Iraya, Mwangi & Wanjohi, 2014). Governance practices limit a manager's ability to manipulate earnings (Peasnell *et al.*, 2005; Kim and Yi, 2006; Chen *et al.*, 2007; Huang *et al.*, 2007 and Jaggi *et al.*, 2009). A good corporate governance mechanism is expected to deter any conflict of interests between shareholders (principals) and managers (agents) that may result in earnings management and reduction of shareholders' wealth. In support, Nazir and Afza (2018) argue that corporate governance mechanisms are essential for effective monitoring of managers as well as ensuring reliable accounting information disclosures. The key device protecting stakeholders against unrepresentative or even fraudulent financial claims is the corporate governance system. This system comprises a range of actors and/or mechanisms, including the board of directors, management board, audit committee, internal audit function, the regulators and others (Bajra & Cadez, 2017).

Effective corporate governance structure to control the opportunistic behavior of managers can presumably make accounting earnings more reliable and more informative for the stakeholders and hence, increases firm value (Nazir & Afza, 2018). Singh *et al.*, (2017) Quantified corporate governance mechanism through its different attributes, that is, board size, board committee meeting frequency, board independence, role duality (CEO / chairman), audit committee meeting frequency and audit committee independence. According to Garcia-Meca and Sanchez-Ballesta (2009), and Denis and

McConnell (2003), corporate governance mechanisms can be classified into two categories that is, boards of directors and ownership structure, which were the focus of the current study.

Davidson, Goodwin-Stewart and Kent (2005) suggest that the practice of earnings management could be related to the strength of internal corporate governance mechanisms, including the board of directors, the audit committee, the internal audit function and the choice of external auditor. The study focused on the audit committee function of the board as it is mandated with the monitoring role of financial reporting and the active ownership structures. The US and the UK require all audit committee members to be independent, Singapore and many other countries such as Australia and China have been only requiring a majority of audit committee members to be independent (Kusnadi *et al.*, 2016). Since the audit committees' duty is the oversight of managerial activities, there are expectations on audit committee members to constrain earnings management (Sun *et al.*, 2014).

Studies have emphasized on the role of audit committee and its attributes in monitoring managerial activities in the firm. For instance, Klein (2002) argues that audit committee independence enhances the effectiveness of the committee in monitoring financial reporting, therefore justifying the crucial role for which the audit committees are instituted and strengthened so as to execute its role effectively. Equally, other studies (e.g. Bradbury *et al.*, 2006; Abbott *et al.*, 2000; Vafeas, 2005; Yang & Krishnan, 2005; Zhang, 2012) have highlighted the need for a greater independence in the audit committee. However, there is mixed results where others (e.g. He *et al.*, 2007; Lin *et al.*, 2006; Davidson *et al.*, 2005) evidenced an insignificant role of the audit committee independence, stating that independent members are too busy externally and have less time to commit to firm, therefore proving ineffective in their roles. Furthermore, Xie *et*

*al.* (2003) found that the audit committees that conduct more meetings in a year are better overseers of the financial reporting process. However other studies such as Rashidah and Fairuzana (2006), Yang and Krishnan (2005), Davidson *et al.* (2005) and Baxter and Cotter (2009) found that audit committee meeting frequency does not have a significant role, and hence the relationship on the relationship is not conclusive.

According to Chen & Komal (2018), a component of the audit committee which is its financial expertise has a positive relationship with earnings quality, and further asserts that accounting financial experts have a stronger relationship with earnings quality than non-accounting financial experts. This notwithstanding is also characterized by mixed reactions on its role since other authors (e.g. Rainsbury *et al.*, 2008; Jamil & Nelson, 2011; Ghosh *et al.*, 2010) find it not to have any role in constraining earnings management. Equally, Bradbury *et al.* (2006) suggests that blockholders and institutional owners play an active role in monitoring management but others find an insignificant role. More accounting discretion (Bradbury *et al.*, 2006) and mixed findings on the role of these corporate governance variables provides a more powerful research setting in which to test the effectiveness of the role of audit committees and ownership structures as the mechanisms to enhance financial reporting.

Scholarly work on agency theory has suggested good corporate governance mechanism in firms as a measure to reduce the agency cost that arises as a result of the conflict of interest existing between managers and shareholders. Active institutional and blockholder owners are more likely to constrain self-serving manipulations of accounting numbers by managers in a two-fold manner: first, by increasing the risk of detection that managers face, and second, by reducing the pressures for short-term performance (Hadani, Goranova & Khan, 2011). Therefore from the foregoing, it can be argued that managers cannot use their control over the firm to achieve personal

objectives at the expense of stakeholders in cases where there is a good corporate governance mechanism. In contrast with the existing firm practices, Habbash (2010) argue that opportunistic managers produce less reliable accounting earnings that do not reflect a firm's financial performance. Hence, that kind of earnings management is likely to reduce the quality of reported earnings and its usefulness for investment decisions. This has an implication of reducing investor confidence in the financial reports. Furthermore, accounting earnings are more reliable and of higher quality when managers' opportunistic behavior is reduced using monitoring systems by specifically enhancing corporate governance and the independence of external auditors (Habbash, 2010).

While corporate governance has been portrayed by extant literature to reduce Earnings Management, the question on whether CEO power may interfere with the nexus arises. Prior research have extensively documented that the CEO's power such as tenure, experiences and profession, compensation have direct link with earnings management (e.g. Bergstresser & Philippon, 2016; Cornett *et al.*, 2018; Laux & Laux, 2019; Chiu, Teoh & Tian, 2013). Powerful CEOs with more experience and knowledge could enhance firm performance through effective management and thus obtain a premium pay (Falato, Li & Milbourn, 2015; Wang, Holmes, Oh, & Zhu, 2016), which may also decrease the possibility of earnings management. Although CEOs are not directly involved in overseeing the accounting process, they can set the tone from the top and influence the decisions of chief financial officers (Feng *et al.*, 2011; Gounopolous & Pham, 2018). In support of the argument as alluded by the entrenchment theory, CEO power can generate ineffective monitoring and hence increase the chance for earnings management.

Earnings overstatement is greater in the early years than in the later years of CEOs' service, and this relation is less pronounced for firms with greater external and internal monitoring (Ali & Zhang, 2015). Moreover, given the motivation to wealth maximization CEOs are more likely to manage earnings when they have higher shareholdings or stock option tied to stock price (Aboody & Kasznik, 2000; Klein, 2002; Kedia, 2003; Cheng & Warfield, 2005; Shuto, 2007). In this respect, Jensen and Meckling (1976) have devised a theoretical framework suggesting that shareholders' active monitoring would constitute an effective means through which the interests of both executives and shareholders can be aligned.

Cornett *et al.*, (2008) further suggest that increase in firm performance may reduce the usage of discretionary accruals, consistent with the finding of a lower level of earnings management in the later years than in the early years of CEOs service (Kuang, Qin & Wielhouwer, 2014; Ali & Zhang, 2015). As highly intense and proactive public campaigns can threaten executives' reputations and professional standing (Neubaum & Zahra, 2006), in such instances managers face higher incentives to manage public impressions and may engage in earnings management in an attempt to transform both the corporate image and the image of the organizational leader, thus reducing the impact of the negative attention (Davidson *et al.*, 2014).

Gillan and Starks (2007) posits that diligent CEOs have smooth communication with directors and outsiders. A longer tenure within the firm means more power, and thus helps the CEO to establish reputation since a longer tenure is an indicator that the CEO has survived previous retention/dismissal decisions by the board of directors (Milbourn, 2003). After a CEO establishes her reputation, he/she becomes less concerned with reputation building and becomes more concerned with reputation protection (Diamond,

1989). Furthermore, any detection of aggressive reporting can make activist shareholders to doubt the credibility of the CEO's previously reported performance and can substantially impair the CEO's reputation. Therefore, closely monitored CEOs are more likely to refrain from aggressive financial reporting. Empirical research on CEO power is equivocal about its moderating effect on the relationship between corporate governance mechanism and earning management.

In Kenya, earnings management has been evidenced by prior studies, for instance Muchoki (2013) found out that earnings management for Kenyan listed firms reflects an upward increase with the highest registered in the year 2012. Corporate governance has been defined as the "process and structure used to direct and manage business affairs of the company towards enhancing prosperity and corporate accounting with the ultimate objective of realizing shareholder ultimate value, while taking into account the interests of other stakeholders" (CMA, 2015). The Kenyan Corporate governance policies and practices promote the concept of separation of ownership and control, especially in publicly traded firms. Separation of ownership and control often leads to agency costs and conflict of interests between shareholders and management, where management may engage in earnings management. Corporate governance in Kenya is mainly informed by the Anglo-US model, which is characterized by ownership by individuals and institutions, as well as, a legal system that defines the rights and responsibilities of stakeholders (Koech, Namusonge & Mugambi, 2016). The stakeholders in the model include the boards of directors, management, shareholders, government agencies (usually regulators), and consultancy firms that provide advice to companies on corporate governance. However, boards of directors, management, and shareholders are the main stakeholders in Kenya.



For publicly traded firms, the Capital Markets Authority (CMA) is a key player since it sets and enforces the corporate governance regulations that firms have to adhere to among them is the disclosure requirements. This includes providing information on the annual firm reports concerning financial performance, composition of the board, capital structure among others. CEO duality is no longer a practice welcomed in listed companies. Thus, boards are usually elected to act as fiduciaries of shareholders by monitoring and supervising the management. Corporate resolutions that require shareholder approval include, but are not limited to appointment of new board members, appointment of external auditors, and raising new capital. Application of these governance strategies however, varies among private firms. Companies also establish their own internal control mechanisms to mitigate risks and ensure achievement of corporate objectives such as improvement in firms' stock liquidity. Given that ownership structure is an effective governance mechanism (Latif & Abdullah, 2015), the study sought to check on its effectiveness in constraining earnings management spawning from managerial self-interests.

## **1.2 Nairobi Securities Exchange (NSE)**

The Nairobi Securities Exchange (NSE) was founded in the year 1954 and it is one of the leading African securities exchange, based in Kenya. It is charged with the responsibility of developing the securities market and regulating trading activities. With a total of 65 publicly trading listed firms, the NSE is playing a vital role in the growth of Kenya's economy by encouraging savings and investment, as well as helping local and international companies to access cost-effective capital.

The scandals in Kenya from 2000 to 2012 involving companies listed at the Nairobi Securities Exchange (NSE) dented investor confidence which resulted in the

downgrading the country's global competitiveness (World Economic Forum, 2012). The securities exchange has experienced periods of high and low returns on shareholders' investments due to among other factors the prevailing political environments in the economy. One of the major functions of the NSE is to provide earnings to shareholders, and in order to achieve this, firms are encouraged to employ good corporate governance practices as a way of reducing information asymmetry and therefore improving earnings. The CMA issued new guidelines on CG in 2015.

Kenya which was ranked 93<sup>rd</sup> position in 2018 was downgraded to 95<sup>th</sup> competitive economy in the 2019 World Economic Forum report out of the 141 economies surveyed. This drop might have been a result of among other factors; unethical behavior and governance practices of firms that led to fraud and corruption thus doubting the integrity of auditing and reporting standards, strength of investor protection and the protection of minority shareholders.

Boardroom wars over the period resulted to negative publicity that has adversely affected investor's perception of listed companies (Mugwe, 2012). Among the Kenyan firms such as CMC motors, East Africa Portland Cement, Zuku, Brand Kenya, Kenya Airways and Chase bank are the organizations that have been cited before to be victims of ineffective Corporate Governance practices. Further, a number of companies have collapsed including Uchumi Supermarkets Limited (under receivership), Francis Thuo & Partners, Nyaga Stock Brokers, Discount Securities and Ngenye Kariuki Stock Brokers among others, where corporate governance issues and falsification of financial information were cited as the root causes (Wamwea, 2010). Additionally, companies involved could collapse along with billions of shillings in public investments, if rogue

auditors are left to release misguided reports. Ineffective CG is the beginning of the failure of many businesses (Abdullahi, 2015).

Previous studies done in Kenya have concentrated on the relationship between CG and firm performance with limited studies focusing on the influence of corporate governance mechanism on earnings management. Greater literature attention has been on the board structure aspect of corporate governance with a few studies concentrating on audit committee and the ownership structure aspect of corporate governance. Furthermore, these studies obtained varied results on the nexus between the variables. This study therefore sought to fill this gap by examining the influence of corporate governance mechanisms on earnings management and the moderating role of CEO power by using CG proxies other than just board structure, as well as also comparing the period before and after the issuance of the new guidelines by the CMA.

### **1.3 Statement of the Problem**

Earnings management is considered as an underlying reason for a wide range of pervasive financial scandals, raising a big concern on the quality of financial information (El Diri, 2017). Managers use their discretion to make accounting choices that invariably affect the true economic reality of the organization. This intentional alteration and manipulation of accounting earnings emasculate the reliability and trustworthiness of disclosed financial reports (Nazir & Afza, 2018). Indeed, opportunistic managers may produce less reliable accounting earnings that may not reflect a firm's financial performance (Habbash, 2010), which is a great concern to the shareholders since they are misled on the true value of their investment.

Earnings management is one of the factors that can reduce the credibility of financial statements, profit management, add bias in the financial statements and may interfere

with users of financial statements to believe earnings figures as a result of financial engineering (Muliati, 2011). Earnings management reduces the quality of reported earnings and its usefulness for decisions making as well as lowering investor confidence. Reported earnings have powerful influence on a full range of business activities of a firm and its management decisions (Lei, 2008) as it could either affect investors' evaluation of the firm, compensation of managers and it proves detrimental to shareholders whose firm decisions are based on the reports.

Accounting earnings are more reliable and of higher quality when managers' opportunistic behavior is reduced through the monitoring systems by enhancing corporate governance and the independence of external auditors (Habbash, 2010). Although audit committees play a key role in the oversight of the financial reporting process, it is unclear as to whether audit committees can effectively constrain earnings management (Sun *et al.*, 2014). The committee's effectiveness in executing its role is likely to depend on its characteristics such as the level of activity, independence and financial expertise.

The independence and technical competence of the audit committee members is very important for effective monitoring of opportunistic earnings management (Zhang, 2012). Bédard *et al.* (2004) found out that aggressive earnings management is negatively associated with fully independent audit committees. However, other studies such as Bryan *et al.* (2004), Beasley (1996) and Kusnadi *et al.* (2016) did not find audit committee independence to be significant in determining the degree of earnings management. Equally, audit committee meeting frequency which reflects the committee's activity is also likely to determine the level of effectiveness in monitoring earnings management. Baxter and Cotter (2009) also noted the important role of audit

committee financial expertise in assessing accounting issues. In contrast, Song and Windram (2004), Jamil and Nelson (2011), Yang & Krishnan (2005) and Lin *et al.* (2006) found this expertise to have an insignificant role. Iraya, Mwangi and Muchoki (2015) found out that the presence of blockholders in a firm is significant in reducing earnings management, whereas Al-fayoumi, Abuzayed and Alexander (2010) found this relationship to be insignificant. Some studies have established significant relationships while others depicted insignificant relationships between the variables. The relationships between these corporate governance constructs and earnings management are therefore inconclusive due to existing varied results.

Recent studies have shown that corporate governance practices are key determinants of earnings management (Lei, 2008; Iqbal & Strong, 2010; Cormier *et al.*, 2012) but powerful CEOs would want to reduce the same control mechanisms that are meant to monitor them. Therefore interference by powerful CEOs on the effectiveness of audit committees in monitoring earnings management cannot be overlooked especially where there is separation of ownership and control that is characterized by agency conflicts. Ali and Zhang (2015) found out that more earnings management is evident in the early than the later years of CEOs' service. As suggested by the entrenchment theory, management become entrenched over time and as a result, they can use their decision making power over the firm to achieve personal objectives at the expense of the shareholders. Agency problem occurs due to the conflict of interest between the agent and the principal.

The findings generate an array of mixed reactions concerning the effects of audit committee and ownership structures on earnings management. Furthermore, extant literary works have focused on the nexus between CEO power and Earnings

management leaving out a gap as to its moderating role in the interplay between corporate governance mechanism and earnings management. Additionally, most of the previous studies were conducted in the developed nations with less of these studies being conducted in the developing and emerging markets. This study therefore sought to fill the gaps by conducting a study in the listed firms at the NSE focusing on the moderating role of CEO power on the relationship between corporate governance mechanism and earnings management.

## **1.4 Objectives of the Study**

### **1.4.1 General Objective**

The general objective of the study was to assess the moderating role of CEO power on the relationship between corporate governance mechanism and earnings management among publicly listed firms in Kenya.

### **1.4.2 Specific Objectives**

The specific objectives of the study were to determine the effect of:

1. Audit committee independence on earnings management among publicly listed firms in Kenya.
2. Audit committee meeting frequency on earnings management among publicly listed firms in Kenya.
3. Audit committee financial expertise on earnings management among publicly listed firms in Kenya.
4. Blockholder ownership on earnings management among publicly listed firms in Kenya.
5. Institutional ownership on earnings management among publicly listed firms in Kenya.

6. To investigate the Moderating role of CEO power on the relationship between:
  - a. Audit committee independence and earnings management among publicly listed firms in Kenya.
  - b. Audit committee meetings frequency and earnings management among publicly listed firms in Kenya.
  - c. Audit committee financial expertise and earnings management among publicly listed firms in Kenya.
  - d. Blockholder ownership and earnings management among publicly listed firms in Kenya.
  - e. Institutional ownership and earnings management among publicly listed firms in Kenya.

### **1.5 Research Hypotheses**

- Ho<sub>1</sub>:** Audit Committee Independence has no significant effect on Earnings Management among publicly listed firms in Kenya.
- Ho<sub>2</sub>:** Audit Committee Meeting frequency has no significant effect on Earnings Management among publicly listed firms in Kenya.
- Ho<sub>3</sub>:** Audit Committee Financial Expertise has no significant effect on Earnings Management among publicly listed firms in Kenya.
- Ho<sub>4</sub>:** Blockholder ownership has no significant effect on Earnings Management among publicly listed firms in Kenya.
- Ho<sub>5</sub>:** Institutional ownership has no significant effect on Earnings Management among publicly listed firms in Kenya.

- Ho<sub>6a</sub>:** CEO power does not moderate the relationship between Audit Committee Independence and earnings Management among publicly listed firms in Kenya.
- Ho<sub>6b</sub>:** CEO power does not moderate the relationship between Audit Committee Meeting frequency and earnings Management among publicly listed firms in Kenya.
- Ho<sub>6c</sub>:** CEO power does not moderate the relationship between Audit Committee Financial Expertise and earnings Management among publicly listed firms in Kenya.
- Ho<sub>6d</sub>:** CEO power does not moderate the relationship between blockholder ownership and earnings Management among publicly listed firms in Kenya.
- Ho<sub>6e</sub>:** CEO power does not moderate the relationship between institutional ownership and earnings Management among publicly listed firms in Kenya.

### **1.6 Significance of the Study**

The study sought to establish the moderating role of CEO power on the relationship between corporate governance mechanism and earnings management among publicly listed firms in Kenya. The findings indicated that corporate governance mechanisms significantly affect earnings management and that CEO power significantly moderates the relationships.



These findings of the study are important to future researchers and scholars in explaining the relationship between corporate governance mechanism and earnings management, as well as on the moderating role of CEO power on the nexus. It also suggests on the areas for further research and scholars benefit from the study since its recommendations triggers more research and debate creating a wider avenue for criticism and expansion of knowledge.

Secondly, the findings and recommendations of the study provides insights on the codes of best practice that companies listed in the Nairobi Securities Exchange (NSE) should develop and implement in order to ensure quality reporting and reduced earnings Management. The recommendations of the study therefore are expected to improve on their competitive edge, boost investor reputation and eventually attract more capital.

The study findings are also significant to the firms' management as it provides the means through which they are informed on the best corporate governance practices that can ensure less earnings management behaviors towards enhancing firm performance. The findings also benefit investors by explaining the mechanisms through which corporate governance operates towards reducing the agency conflicts between managers and shareholders of a firm.

It is also beneficial to the shareholders of the company since the study informs them on how to best monitor management, while aligning towards convergence and achievement of mutual interests, in an environment where there is separation of ownership and control. Therefore, the findings assist investors to familiarize themselves with the best areas of interest to scrutinize before they make investment decisions.

Lastly, the study is of great importance to the regulators. The study findings and recommendations highlight the areas of corporate governance reforms and indicate whether any reforms earlier implemented are working. These findings and recommendations enables the regulators to ensure that companies listed at the NSE operate under a regulated framework and threshold of good corporate governance mechanism that is aligned to the international best practices. Regulators of these firms being the Capital Markets Authority (CMA), Central Bank of Kenya (CBK), Insurance Regulatory Authority (IRA) and the Nairobi Stock Exchange (NSE).

### **1.7 Scope of the Study**

The study sought to examine the moderating role of CEO power on the nexus between corporate governance mechanism and earnings management among firms listed at the Nairobi Securities Exchange. The audit committee dimensions that were investigated in the study were; the Audit Committee Independence, Audit Committee Meeting frequency and Audit Committee Financial Expertise, while the ownership structure constructs were blockholder ownership and Institutional ownership. The study focused on the data for listed firms operating at the Nairobi Securities Exchange (NSE) for the years 2004 to 2017. The period is suitable for the study since it covers the era during which the new code of corporate governance guidelines of 2015 came into force. It also accounts for the collapse of most of the firms listed in the NSE due to board wars, poor corporate governance practices, financial reports manipulation and corruption scandals among other factors. The study used secondary data and a panel approach which involves observing a broad cross-section of firms over time.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Overview

This chapter presents the concepts of earnings management, corporate governance and CEO power, the theoretical review, empirical review and the conceptual framework.

#### 2.1 Concept of Earnings management

Earnings Management is defined as the deliberate altering of financial information to either mislead investors on the underlying economic status of a firm or to gain some contractual benefits that depend largely on accounting numbers (Healy & Wahlen, 2009; Sunet & Yong-Shik, 2011; Dechow *et al.*, 2012). According to Healy and Wahlen (1999), earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers. Managers can manipulate earnings by exercising discretion over accounting choices (accrual earnings management) or by engaging in real economic activities (real earnings management) with the intention to mislead stakeholders on the underlying economic performance (Sun *et al.*, 2014). Accruals are the most important earnings management instruments that are used by managers to either increase or decrease reported income. This is because they are components of earnings that are not reflected in current cash flows, and a great deal of managerial discretion goes into their construction (Jiang *et al.*, 2010). Earnings management practices are recognized as attempts by management to influence or manipulate reported earnings (Akers *et al.*, 2007). These practices include activities to overstate income to the desired number and other practices to understate income to the desired amount.

Managers have two mechanisms for avoiding negative earnings surprises they can manage earnings upward if unmanaged earnings fall short of expectations (income-increasing) or they can guide analysts' expectations downward (income-decreasing) to avoid overly optimistic forecasts (Matsumoto, 2002). It refers to managerial action to increase (or decrease) revenues, profits or earnings for different share categories through aggressive accounting tactics (Lin *et al.*, 2011). The International Financial Reporting Standards (IFRS) give firm managers greater flexibility in choosing from among alternative accounting treatments and these affects a firm's reported income (Latif & Abdullah, 2015). Although earnings management is typically regarded as a negative concept by virtue of its deteriorating effect on earnings quality, some studies have also identified positive aspects of earnings management (Beatty *et al.*, 2002). While acknowledging this stream of literature, this study adopts the mainstream assumption that earnings management conceals the true financial position of businesses and obscures facts stakeholders are entitled to know (Beasley *et al.*, 2000; Dechow & Skinner, 2000). In effect, it is beneficial to establish mechanisms to prevent such manipulation from occurring (Lin *et al.*, 2011; Ashbaugh-Skaife *et al.*, 2008; Chang *et al.*, 2008).

The incentives for earnings manipulation have been documented in the literature in a wide variety of contexts. Bhat (2006) linked it to the attempt to enhance shareholders' value and to maximize executive compensation through income smoothing and earnings management respectively. Healy and Wahlen (2009) noted that the incentives to window dress financial statements encompass the motivation to increase managers' compensation and job security, to avoid the violation of debt covenants, and to decrease regulatory costs or increase regulatory benefit (Koch & Wall, 2010).

A number of high profile corporate scandals (e.g. Enron, WorldCom, and Tyco International) raised public concerns on the integrity of accounting information disseminated in capital markets and the ethics of accounting practice and financial reporting (Sun *et al.*, 2014). Most recently, Chang, Shen and Fang (2008) noted three incentives to manage earnings. Firstly, because of the capital market motivation, which includes initial public offerings, seasoned equity offerings, management buoyant plans and plans for mergers to meet earnings forecast, to smooth earnings etc. Secondly, contracts motivation such as management compensation, debt agreement or job security also constitutes the incentive for earnings management. Thirdly, laws and regulations such as import regulation, industrial regulation, antitrust laws etc., also can serve as an incentive.

Cornet *et al.* (2008) asserts that managers use discretionary accruals as a motivation for options (the incentive for bonus income by attaining some level of performance) and affecting stock prices to enhance managers' wealth through restricted stock compensation. Other incentives for managers' opportunistic behavior that are established in the literature include bonus plans, meeting analyst's expectations or raising funds on more favorable terms (Shah, Zafar & Durrani, 2009).

Healy and Wahlen (1999), in their article stated that earnings management is often done by the management to increase compensation and job security. Beside it, earnings management is also done to avoid rules breaking in a loan contract, reduce regulatory cost, or increase regulatory benefit (Cornett *et al.*, 2008). Cornett *et al.*, (2008) find that adjusting for impact of earnings management substantially improves the relevance of governance variables and significantly declines the importance of incentive-based compensation for firm performance. However, Zhu and Tian (2009) find that the

coefficient of CEO compensation significantly falls when firm performance is adjusted to exclude discretionary accruals.

Scott (2000) and Jaryanto (2008) stated some motivations, which make companies perform EM to include: bonus purposes: Managers adjust reported earnings to firstly maximize bonuses that they will receive. Secondly is for political motivations whereby EM is used to reduce or increase reported earnings in a public company for political reputation. Companies tend to reduce reported earnings for their public pressure resulting into governments setting more stringent regulations. Large companies and other strategic industries tend to lower their profits to reduce its visibility especially during periods of high prosperity. This action is done to gain the government incentives and facility, taxation motivations Taxation is also one of the main reasons why companies reduce reported earnings. Tax savings motivates most by reducing reported earnings, the company can minimize the amount of paid tax to the government. Change of CEO; who is out of duty or retired will conduct a profit-maximizing strategy to increase the bonus. Similarly, low performance of the CEO will tend to maximize profits in order to prevent or cancel his dismissal. Lastly for initial public offering (IPO) incentive, at the time the companies are going public, the financial information contained in the prospectus is an important source of information. This information can be used as a signal to potential investors about the company's value. Managers can influence the decision of potential investors by seeking to increase reported earnings.

According to Luhglatno (2008), EM is often performed by the company, namely taking a bath: this technique occurs during the reorganization. Cost in future periods will be recognized in the current period and so future profit will be high despite of the unfavorable conditions. Secondly, income minimization: company policies to remove

capital goods and intangible assets, the imposition of advertising expense, and rapid development. The patterns can minimize the profit because of political motivation, or minimize taxes. Thirdly, income maximization: management will maximize profit to receive larger bonus. This action can also be done to avoid a breach of the long-term debt contract and lastly, income smoothing: companies prefer to report the stable earnings growth trend rather than earnings indicating a drastic change.

The foregoing presents the reasons as to why it is generally believed by the regulators and the public that managers manipulate reported earnings (Levitt, 2008; Loomis, 2009). A large body of academic research has examined the existence of earnings management, in particular, around specific corporate events in which agency problem is most likely to occur. Perry and Williams (2004) provides evidence of managers' manipulation of earnings in the predicted direction in the year preceding the public announcement of management's buyout intention. Erickson and Wang (2009) found that acquiring firms manipulate accounting earnings upward prior to stock corporate mergers. Teoh *et al.*, (2008) find that managers raise reported earnings before initial public offerings and seasoned equity offerings.

The quality of accounting figures is intrinsically linked to the quality of corporate governance (Sloan, 2001). Accounting reports provide information, among other aspects, concerning executives' performances that are needed by most corporate governance mechanisms to effectively operate in addressing agency problems (Bushman & Smith, 2001; Sloan, 2001). Previous studies have shown that the board of directors and its structure and composition, as well as that of its committees, affect the quality of accounting figures, indicating that good corporate governance mechanism eventually benefit shareholders (Trapp, 2009; Vafeas, 2000; Xie, Davidson & Dadalt,

2003). In addition, the efforts to grasp the function of the audit committee (an advisory body of the board of directors directly responsible for the supervision of accounting processes (Instituto Brasileiro de Governança Corporativa, 2009, 2010; U.S. Government, 2002) have also increased. Dabo and Adeyemi (2009) found that audit committee is positively related with discretionary accruals in Nigerian manufacturing firms. The firm owners also present an important variable that is often examined by researchers in the corporate governance literature.

Earnings management have been measured differently and gradually using varied models developed by different authors. Most importantly though is that all these models agree with the fact that earnings management is proxied by accruals which are further decomposed into both discretionary accruals (DA) and non-discretionary accruals (NDA). The first model was developed by Paul Healy a 1985 paper entitled “The effect of bonus schemes on accounting decisions” which computed earnings management by using the average total accruals. Further, DeAngelo developed a closer model in the year 1986 in a paper entitled “Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders”, which computed the first difference in total accruals and equated it with non-discretionary accruals. Instead, total accruals should be decomposed into discretionary and non-discretionary components. However, the two models of Healy (1985) and DeAngelo (1986) were criticized for equating total accrual with non-discretionary accruals. In advancement, Jennifer Jones developed an expectation model in the year 1991 that breaks down accruals into Discretionary and Non-discretionary components. Nonetheless, this model of Jones (1991) was criticized for treating revenue as non-discretionary while in reality, it engages managerial discretion. This further saw the advancement of another new model known as the modified version jones model which was developed by Dechow, Sloan



and Sweeney in the year 1995. This model became more acceptable as it deducted receivables from the revenue. This study therefore adopted the modified Jones model of Dechow *et al.* (1995) to measure discretionary accruals which is the proxy for earnings management.

## **2.2 Concept of Corporate Governance**

The word 'Governance' is derived from the Latin word 'Gubernare' which means to rule or steer (Hunt *et al.*, 2008). Corporate governance is "the mechanism by which companies are directed and controlled" (Cadbury, 1992) so as to protect the interest of all stakeholders and ensure reasonable return on investments (Sullivan, 2009). Dwivedi and Jain (2005) postulated that considerable amount of research on corporate governance focuses on ownership structure and board characteristics of companies and linking these to their performance. Some particular characteristics in the dimension of boards of directors that may affect the magnitude of earnings management include board independence, board size, executive compensation, and audit committee attributes, while external governance mechanism includes ownership concentration, block holder and institutional dimensions of ownership structure. Over the years, it has found significant relevance in the corporate world (Hunt *et al.*, 2008; Bhavik, 2012).

When a corporation is understood as an association of explicit and implicit contracts, corporate governance can be defined as "a socially constructed force of field of driving and preventing forces that shape a firm's strategic behavior (Choy, Gul & Yao, 2011). Denis and McConnell (2003) define corporate governance as "the set of mechanisms that maintain an appropriate balance between the rights of shareholders and the needs of the board, and management to direct and manage the corporations' affairs. It has also been defined as a system including people, processes and activities that would help in

ensuring stewardship over assets (Messier *et al.*, 2008). According to Donaldson (2008), corporate governance is as a structure in which managers at the top of the organization are controlled by the board of directors, who control the managers through a corporate structure, executive incentives and an assortment of tools for monitoring the performance of organizational functions.

It is considered by many researchers as an important tool for monitoring management activities (Lin & Hwang, 2010; Messier *et al.*, 2008; Liu & Lu, 2007; Chen *et al.*, 2006; Davidson *et al.*, 2005; Skousen *et al.*, 2005; Chung *et al.*, 2002). Good governance is crucial in monitoring managerial activities because it helps reduce agency costs by aligning the interests of the management and owners (Latif & Abdullah, 2015). According to Lin & Hwang (2010), a good corporate governance mechanism helps in ensuring that management utilize assets in the best interest of the principals and communicate relevant and reliable financial statements to the stakeholders. It has been described as the system by which organizations are directed and controlled (Büyüksalvarcı & Abdioglu, 2010; Messier *et al.*, 2008), or as a set of relationships between a company's management, its board, its shareholders and other stakeholders (OECD, 2004; Tricker, 2009).

Over the past decade, governance of companies have attracted much attention. Countries around the world are characterized by alternative corporate governance systems, and there is a considerable debate relating to how good, superior or effective these systems are (Yasser & Mamun, 2016). Previous research, largely conducted using international data, have suggested that better governed firms outperform poorly governed firms in a number of key areas (Lin & Hwang, 2010; Brown & Gorgens, 2009; Messier *et al.*, 2008; Liu & Lu 2007; Chen *et al.*, 2006; Davidson *et al.*, 2005;

Skousen *et al.*, 2005; Chung *et al.*, 2002). Brown and Gorgens (2009) argued that corporate governance structure influences a number of aspects of its business model including: the setting of company objectives and how those objectives are to be achieved; the monitoring and assessment of risk; and performance optimization. Minna (2011) found that analysts tend to issue favorable recommendations for firms with better corporate governance mechanisms. It is expected also that corporate governance mechanism improves corporate oversight over earnings and reduces management manipulations and improves financial statements reliability (Leuz & Wysocki, 2003; La Porta *et al.*, 2000).

Corporate governance is about building credibility, ensuring transparency and accountability, as well as maintaining an effective channel of information disclosure that would foster good corporate performance (Jimoh & Iyoha, 2012). Internal governance structure of a firm consists of the functions and processes established to oversee and influence the actions of the firm's management (Davidson *et al.*, 2005). It is also about how to build trust and sustain confidence among the various interest groups that make up an organization (Rogers, 2008). Agency concepts suggests that strong corporate governance structure will provide strong monitoring tools over managerial decision making and limit earnings management activities. The basic objectives of corporate governance are to build credibility, ensure transparency and accountability as well as maintain an effective channel of information disclosure that would foster good corporate performance (Jimoh & Iyoha, 2012; Leuz *et al.*, 2003; La Porta *et al.*, 2000).

### **2.3 Concept of CEO Power**

The scope for CEOs in corporations is vast. The CEO is a high ranking individual in a firm who is responsible for making managerial decisions. Malekzadeh *et al.* (1998)

defined CEO power as the power of the CEO to influence the Board's decisions and shape the strategy of the organization, while Pathan (2009) refers to CEO power as the CEO's ability to influence board decisions. Power is a meaningful area of investigation because it gives a CEO the freedom to scan the institutional environment, determine which actors are more salient (Mitchell, Agle & Wood, 1997), and which pressures to prioritize (Clarkson, 1995). Power is a tool that can be used to influence others to do (or believe) something that they otherwise would not (Dahl, 1957; House, 1988).

Agency theory views CEOs as individuals (agents) with self-interests which diverge from the interests of the shareholders, thus resulting into agency problems. A conflict of interest happens when they become more entrenched. The CEOs gain experience and reputation over time as they serve in the same position and thus their ability and capability to influence outcome as argued by the entrenchment theory. While agency theory suggests monitoring as a solution, Powerful CEOs engage in changing the very governance that monitors and evaluates their actions, since powerful executives are able to engage in changing the very governance that monitors and evaluates their actions (Hermalin & Weisbach, 1998; Hellwig, 2010).

Chief Executive Officers have the most power over a wide range of decisions and that they often determine what and when information should be disclosed (Cheng & Lo, 2006), as well as how the information should be disclosed. Bamber, John and Wang (2010) further contended that firm's CEOs are even more influential over the style of financial reporting disclosure, suggesting that a CEO can manipulate reported earnings and thus can engage in earnings management to suit their reporting interests. Additionally, in a study conducted on firms listed in Egyptian stock exchange, Khlif and Samaha (2014) reported that on average, it takes 25 days after year-end to prepare financial reports for an external audit and 47 days for the CEO to file and sign the audit

report. Prior literature identifies many CEO characteristics, such as age, experience, education, tenure, career background, duality and shareholding to influence the behavior of the CEO (Baatwah, *et al.*, 2015).

There is an increased likelihood that with time, experience, stock ownership and duality the CEO becomes powerful. Entrenched executives therefore gain the ability to appoint members to the board, direct, and influence the selection process for board members (Jensen & Meckling, 1976; Hambrick & Fukutomi, 1991; Finkelstein & Hambrick, 1996), thus winning their loyalty. This enables the Chief Executive Officer to make decisions that are seconded by the board without any member's probe. Without interference from a powerful CEO however, directors engage in more discussions and independent debates that allows more diverse viewpoints to surface (Zahra and Pearce, 1989). This study therefore followed the definition of Malekzadeh, Williams and Sen, (1998) which describes CEO power as the authority of the CEO to influence the board's decisions and shape the strategy of the organization, and the measurement adopted by Baatwah, Salleh & Ahmad (2015) which used CEO tenure as the proxy.

## **2.4 Theoretical Review**

The study was guided by the agency, entrenchment and stakeholder theories, which were used to ground the concepts and the nexus existing between the study variables.

### **2.4.1 Agency theory**

Agency theory was developed by Michael Jensen and William Meckling in the year 1976. In their seminal paper entitled "Theory of the firm: managerial behavior, agency costs and ownership structure", the scholars suggested that, where there is a conflict of interest (agency conflicts) between the principal (shareholders) and the agents

(management), monitoring should be conducted by the owners to reduce agency costs. In relation to the study therefore, the management who are the agents manage reported earnings to suit their own interests, hence bringing about the agency conflicts between the parties. In such scenarios of disagreement between the parties due to self-interests, agency theory suggests monitoring such as a good corporate governance mechanism as a solution. Corporate governance mechanism is one of the considerations by firm owners as a means to deter opportunistic earnings management. Governance practices limit a manager's ability to manipulate earnings (Peasnell *et al.*, 2005; Kim and Yi, 2006; Chen *et al.*, 2007; Huang *et al.*, 2007 and Jaggi *et al.*, 2009).

Researchers in corporate finance have long recognized the widespread separation of ownership and control in firms that has created the potential agency problem which may be costly for the firms (Nazir & Afza, 2018). The owners entrust their day-to-day running of their businesses to the managers that separates ownership and control. Agency theory state that managers pursue self-interest strategies and will not act to maximize shareholders' wealth unless an appropriate governance structure is implemented to safeguard the latter's interests (Jensen & Meckling, 1976; Latif & Abdullah, 2015). According to the theory, conflict of interests arising between the principal and agent can be avoided or minimized through the implementation of good corporate governance mechanism (Setiawan, 2006), such as the audit committee, the board, ownership structures and other internal controls. Agency model suggests that, as a result of self-interests, the principals lack reasons to trust their agents and will seek to resolve these concerns by putting in place mechanisms to align the interests of agents with those of the principals, as well as to reduce the scope for information asymmetries and opportunistic behavior (Fama & Jensen, 1983; Eisenhardt, 1989). Khanh and Khuong (2018) states that the issues of information asymmetries and market

transparency are considerable challenges to financial reporting quality. The propensity for earnings management is lower when management's interests and owners' interests are more closely aligned through effective governance structure (Cheng & Warfield, 2005; Nazir & Afza, 2018).

An agency relationship occurs when one party gives the other party delegation to do a job or service and gives the authority in decision-making (Jensen & Meckling, 1976; Jao & Pagalung, 2011). By this theory, the investor believes that managers benefit as the reciprocal of the investments that have been given and not deviate to the advantage of the investment. The problem in this concept is the separation between the owners and management rights. Conflicts arise when managers are not performing any work that can provide benefits to owners or shareholders at their expense. This conflict will lead to information asymmetry because management does not disclose the information in an honest and transparent way to the shareholders. Formation of audit committees derives its impetus from the agency theory. When the management functions of the firms are delegated by shareholders to the agents, it creates agency relationships. This ceding of responsibility by the principal and the resultant separation of responsibilities are beneficial in enhancing an efficient and rewarding entity (Jensen & Meckling, 1976). However, delegation requires the principal's trust to the agent to act in the latter's best interest.

There may be conflict of interest between the principal's expectation and the desires of the agent (Jensen & Meckling, 1976; Ross, 1973). The core objective of the shareholders is the return on their invested capital, whereas managers are likely to be focused on their own personal goals such as consummation of perquisites of the position (Jensen & Meckling, 1976), power and prestige of running a large organization

(Hubbard & Palia, 1995), and monetary incentives resulting out of better performance (Nazir & Afza, 2018). The agent may also possess superior information on the activities of the entity than the principal. These divergences could occur because of financial reward, labor market opportunities and relationships with other parties that are not beneficial to the principal. Also, agents could be more risk averse than principals. These scenarios could create conflicts and thus the opportunity for the principal to institute monitoring functions to curtail the activities of the agent and ensure goal congruence when there is divergence of views and motives.

Within the framework of the agency theory, there are information asymmetries and conflicts of interest between management and shareholders, enabling management to use its judgment in financial reporting to either mislead investors about the underlying economic performance of the firm or to influence contractual outcomes that depend on the reported earnings numbers (Healy & Wahlen, 1999). Therefore, they can enhance the supervisory board's monitoring strength and reduce agency costs by directly monitoring financial reporting quality (Archambeault *et al.*, 2008). Beside the supervisory board, internal and external auditing are further monitoring mechanisms that can benefit from audit committees, which can strengthen the external and internal auditor's position in cases of conflicts with management, regarding accounting issues.

#### **2.4.2 Entrenchment Theory**

The concept of entrenchment was first developed by Andrei Schleifer and Robert Vishny in the year 1989. In their seminal paper entitled "management entrenchment, the case of manager-specific investments", the scholars argued that excessive growth of the firm in the directions suggested by the CEO's talents and experience which can be earned through tenure and investments, is a means of entrenchment. It views the



CEO as a party who uses his/her power obtained over time to pursue personal interests. Although firms' annual reports are supposed to provide an unbiased and accurate picture of their financial position, entrenched managers may be induced to engage in earnings management in order to circumvent expectations (Latif & Abdullah, 2015). According to Schleifer & Vishny (1989) it is in the interest of a powerful manager to make the control mechanisms such as the board of directors less effective, and by so doing the management are able to reduce monitoring activities put in place by the owners.

Management entrenchment is defined as a deliberated behavior realized by the manager who is considered as a more informed actor, which consists of serving own interests at the expense of the shareholders who are less informed actors (Dhaoui & Jouini, 2011), whereas Berger, Ofek and Yermack (1997) also defined entrenchment as the extent to which managers fail to experience discipline from the full range of corporate governance and control mechanisms. Entrenched managers are more likely to choose investment and financial policies that are not in the best interests of firms' various stakeholders (Kumar & Rabinovitch, 2013) such as investments, leverage and financial reporting. Entrenched CEOs therefore engage in earnings management by influencing the accounting results through increasing or decreasing them according to their individual needs.

In relation to the study, entrenchment theory suggests that CEO power resulting from more tenure of the CEO makes it difficult for boards to wrest control from long-serving CEOs (Kumar & Zattoni, 2014). While corporate governance mechanisms has been documented by extant literature as monitoring techniques, that is; through internal mechanisms, such as an effective board of directors (Adams *et al*, 2010; Pugliese *et al.*, 2009; Van Den Berghe & Levrau, 2004), and external mechanisms, such as monitoring

by large shareholders and institutional investors (Gillan & Starks, 2000; McLaren, 2004), entrenched CEOs may interfere with the very monitoring functions meant to oversight their activities in the firm. Entrenched CEOs can therefore engage in earnings management and interfere with the effectiveness of corporate governance mechanisms. The longer the tenure, the higher is their entrenchment and the more powerful is the CEO.

The entrenchment degree depends significantly on the age and the tenure of the manager as well as on the relative power of the managerial ownership (Ellili, 2012). From the theory's point of view, powerful CEOs engage more discretion in their reporting so as to suit their utilities. The theory also implies that the executives are able to neutralize the various control mechanisms in order to increase their power such as the discretionary latitude. Farooque, Eko and Uke (2014) in their study found out that earnings management has a considerable adverse effect on the market return. In preventing earnings management, board size has more impact than institutional ownership. Powerful managers have incentives to act in their own best interests and pursue personal benefits usually at the expense of shareholders, therefore they cannot easily be dismissed by the board of directors, as they are costly to replace.

### **2.4.3 Stakeholder Theory**

The theory was developed by Freeman in the year 1984. Stakeholder theory advocates that managers in organizations have a network of relationships to serve; this include employees, shareholders, suppliers, business partners and contractors. Earnings management has an implication to both internal and external parties such as the employees, shareholders, investors, lenders, suppliers, customers and governments. The theory advocates for firms' concern towards these parties.

Stakeholder theory is at variance with agency theory which advocates that there is contractual relationship between managers and shareholders; whereby managers have the sole objective of maximizing shareholders' wealth. Stakeholder theory considers this view to be too narrow, as manager actions impact other interested parties, other than shareholders. In essence, the stakeholder theory emphasizes the need for managers to be accountable to stakeholders. Stakeholders are "any group or individual that can affect or is affected by the achievement of a corporation's purpose" (Freeman, 1984). To ensure adequate protection of stakeholders' interest, stakeholder theory proposes the representation of various interest groups on the organization's board to ensure consensus building, avoid conflicts, and harmonize efforts to achieve organizational objectives (Donaldson & Preston, 1995).

Stakeholder theory have been criticized for over saddling managers with responsibility of being accountable to several stakeholders without specific guidelines for solving problems associated with conflict of interests. However, Freeman (1984) contends that the network of relationships with many groups can impact decision making processes, as stakeholder theory is concerned with the nature of these relationships in terms of processes and outcomes for the firm and its stakeholders. Likewise, Donaldson and Preston (1995) assert that stakeholder theory focuses on managerial decision making, and that the interests of all stakeholders have intrinsic value and no sets of interests is assumed to dominate others. This suggests that managers are expected to consider the interests and influences of people who are either affected or may be affected by a firm's policies and operations (Frederick *et al.*, 1992). Similarly, Jensen (2001) affirms that managers should pursue objectives that would promote the long-term value of the firm by protecting the interest of all stakeholders.

## **2.5 Empirical Review**

The study reviewed existing literature on audit committee characteristics and ownership structure in relation to earnings management, as well as the moderating role of CEO power.

### **2.5.1 Audit Committee Independence and Earnings Management**

According to Bradbury *et al.*, (2006), audit committees are effective only when all members are independent directors. The Sarbanes-Oxley Act of (2002) emphasizes on the importance of independence of the audit committee for effective monitoring of financial reporting, and requires all audit committee members to be independent. Prior literature argues that less financial misstatements are associated with more independent audit committees (e.g. Abbott *et al.*, 2000; Vafeas, 2005; Yang & Krishnan, 2005). Also, prior literature suggested that a fully independent audit committee would be better able to protect shareholders' interests and fulfill its monitoring role because of its ability to view issues objectively (e.g. Bédard *et al.*, 2004; Abbott *et al.*, 2004; Yang & Krishnan, 2005). Non-executive members of audit committees have incentives to maintain and enhance their reputation and therefore they are interested in achieving high degree of financial reporting quality, which leads to reduced involvement in earnings management (Vafeas, 2005; Yang & Krishnan, 2005).

It is generally believed that an independent audit committee provides effective monitoring of the financial discretion exercised by management and ensures credibility of the financial statements. In this regard Deli and Gillan (2000) argued that an audit committee serves as a reinforcing agent to the independence of internal as well as external auditor. Audit committees are expected to be more effective in the oversight of financial reporting when they are independent. Also, Xie *et al.* (2003) suggested that

a more independent audit committee will provide better governance as compared to a less independent AC. These arguments, suggestions and expectations are supported by the provision in Sarbanes-Oxley Act requiring publicly traded companies to have completely independent ACs.

However, some previous research found no evidence of a negative relationship and importance of having more number of independent members in the audit committee, and its role in reducing earnings misstatements (e.g. He *et al.*, 2007; Lin *et al.*, 2006; Davidson *et al.*, 2005). Even though others found a negative relationship other studies (e.g. Bryan *et al.*, 2004; Beasley, 1996; Kusnadi *et al.*, 2016) did not find evidence that incremental independence of audit committees enhances financial reporting quality. Justifying the insignificant relationship, the scholars argue that the time available to those outside members is not enough to keep them monitoring management activities related to the financial statements.

The literature provides mixed results on the association between AC independence and the levels of earnings management. For example, Klein (2002) in USA, Xie *et al.* (2003) in USA, Davidson *et al.* (2005) in Australia, Lin and Hwang (2010), and Soliman and Ragab (2014) in Egypt reported a negative association between ACs' independence and earnings management practices. Additionally, Abbott *et al.* (2004) found that there is a negative association between AC independence and financial reporting fraud and misstatement. Fodio *et al.* (2013) found that AC independence has a positive association with earnings management. However, AbdulRahman and Ali (2006) in Malaysia, Lin *et al.* (2006) in the USA, Siregar and Utama (2008) in Indonesia, Habbash (2011) in Saudi Arabia and Waweru and Riro (2013) in Nairobi found an insignificant relationship between ACs' independence and earnings management.

Audit committee independence have had varied measurements in different studies. Katmon and Al Farooque (2017) measured it as a dummy variable with 1 if the percentage of independent directors in audit committee is 100% and 0 = if otherwise, whereas a majority of other studies measured the independence of the audit committee as a percentage of independent members in the audit committee, or the ratio of independent to the total number of members in the committee. For instance, Ismail and Saleh (2012) measured as the percentage of members that are independent in the audit committee. Equally, Al-Dhamari and Ismail (2013) computed as the proportion of independent directors to the total number of directors on an audit committee, Klein (2002) measured as the percentage of outside directors on the audit committee or on the board, while Singh, Aggarwal and Anand (2016) measured as the number of independent directors in the audit committee to the total number of directors in the audit committee, and Shah, Butt and Hasan (2009) measured as a ratio of independent directors on the audit committee to the total number of directors on the audit committee. The study therefore measured audit committee independence as the ratio of independent directors in the AC to the total number of directors in the audit committee.

### **2.5.2 Audit Committee Meeting Frequency and Earnings Management**

Majority of the audit committee meetings are held to improve the effectiveness of audit committee in overseeing the management and not an attempt to optimize own interests. Agency theory suggests monitoring controls such as the audit committee to provide effective oversight of management. When the audit committee has more meetings and is more independent, the manager may not be able to manipulate earnings. Xie *et al.* (2003) find that audit committee that meets regularly becomes better supervisors in overseeing the financial reporting process. The number of audit committee meetings (meeting frequency) is a proxy for the committee's activity level. Activity is determined

by the willingness of audit committee members to fulfill their monitoring duties appropriately. Even with suitable composition and resources, a committee is obviously not capable of attaining positive effects on financial reporting quality if it is not active. Choi *et al.* (2004) stated that active audit committees are more likely to detect earnings management than dormant committees.

Lin and Hwang (2010) suggest that an important objective of the audit committee is to provide its members with sufficient time to perform their duties of monitoring their firm's financial reporting process. In relation to monitoring the financial discretion of the management, it is the audit committee that is likely to provide shareholders with the greatest protection in maintaining the credibility of a firm's financial statements (Davidson *et al.*, 2005). Karamanou and Vafeas (2005) suggest that an audit committee that meets more frequently is more likely to effectively accomplish its monitoring role. Li *et al.* (2012) adds that, an active audit committee that meets frequently during the year would provide its members with greater opportunities for discussing and evaluating the issues placed before them concerning the company's financial reporting practices.

Xie *et al.* (2003) suggest that, ACs that meets regularly during the financial year are associated with effective monitoring. Also, Klein (2002) suggests that an active audit committee as measured by the number of meetings is positively associated with audit committee independence, and also suggests that audit committee independence influences the effectiveness of the committee in monitoring financial reporting. Accordingly, it is generally agreed that an audit committee that meets more frequently is more likely to be effective in detecting and preventing earnings management practices. For instance, Abbott *et al.*, (2000) finds a negative association between the

audit committee meeting frequency and the occurrence of fraudulent financial reporting. Abbott *et al.* (2004) found out that ACs that meet at least four times per year demonstrate a significant and negative association with the occurrence of financial reporting restatements. Abdul Rahman and Ali (2006), Lin and Hwang (2010), Metawee (2013) and Soliman and Ragab (2014) also found a significant negative association between audit committee meetings and earnings management practices.

The literature provides an array of mixed results on the association between audit committee meetings and earnings management. These results are inconclusive. For instance the U.S. studies of Xie *et al.* (2003), Vafeas (2005) and Yang and Krishnan (2005) find a significant negative association between the number of meetings and earnings management and a positive relationship between meeting frequency and earnings quality, whereas Yang and Krishnan (2005) do not find a significant relationship. For Australia, Davidson *et al.* (2005) and Baxter and Cotter (2009) also did not find a significant impact of meeting frequency on earnings management. The results of further studies from Singapore and Malaysia are also mixed, ranging from a negative association (Van der & Tower, 2004; Md Yusof, 2010) to no association between meeting frequency and earnings management (Rashidah & Fairuzana, 2006). Bédard *et al.* (2004), Davidson *et al.* (2005) and Lin *et al.* (2006) found no significant relationship between audit committees' meetings and the level of earnings management. Despite the inconsistent findings in the literature reported in the foregoing, the current study proposed a negative association between the frequency of audit committee meetings and earnings management.

Audit committee meeting frequency was measured by Katmon and Al Farooque (2017) as 1 if the number of board meetings in a year is greater than 3 and 0 if otherwise, while



several other studies measured it as the number of annual meetings held by the audit committee. For instance; Singh, Aggarwal and Anand (2017) measured it as the number of audit committee meetings held during the year, Grassa (2017) as the number of meetings held by the audit committee during the estimation year, and Al-Dhamari and Ismail (2013) as the number of audit committee meetings held annually. The studies therefore guided the research's measurement of audit committee meeting frequency as the number of audit committee meetings held during the year of consideration.

### **2.5.3 Audit Committee Financial Expertise and Earnings Management**

The financial expertise of the audit committee members has gained the attention of regulators around the world in recent years (Kusnadi *et al.*, 2016). Specialized knowledge in accounting and auditing (financial expertise) is desirable for audit committee members to independently and meaningfully assess accounting issues presented to them (Baxter & Cotter, 2009), to evaluate alternative accounting treatments or estimates or to discuss accounting estimates and assumptions involved in implementing new accounting policies (Beasley *et al.*, 2009).

The Sarbanes-Oxley Act of (2002) mandates that at least one member of the audit committee must be a financial expert. In Bahrain, the Bahrain CGC states that, a majority of the AC should have the financial literacy qualifications. Financial expertise leads audit committee members to identifying and asking knowledgeable questions that challenge management and the external audit to a greater extent of financial reporting quality (Bédard & Gendron, 2010). It is generally agreed that the key duty of the AC is to review the financial reporting process so as to ensure the best quality of financial reports is achieved, thus availability of an accounting and financial expertise in the audit committee would enhance its efficiency and its ability in detecting and preventing

earnings management. Kusnadi *et al.*, (2016) asserts that financial reporting quality will be higher if audit committees have mixed expertise in accounting, finance, and/or supervisory. Literature reveals that the effectiveness of the audit committee is enhanced through the presence of financial experts within the committee (Naiker & Sharma, 2009; Dhaliwal *et al.*, 2010).

Several U.S. studies find that financial expertise of committee members is associated with lower earnings management ( e.g. Xie *et al.*, 2003; Bédard *et al.*, 2004; Dhaliwal *et al.*, 2010; Krishnan *et al.*, 2011; Keune & Johnstone, 2012; Bryan *et al.*, 2013). Karamanou and Vafeas (2005) show a positive influence of expertise on earnings quality, using the quality of earnings forecasts as a quality measure. Beyond the USA, Choi *et al.* (2004) show for Korea, that earnings management is lower when the audit committee has sufficient expertise. This result is confirmed by Woidtke and Yeh (2013) using data from three East Asian countries, and Sharma *et al.*, (2011) for New Zealand. A German study of Velte and Stiglbauer (2011) state that financial expertise result in lower earnings management in cases where more than 50% of the audit committee members are experts.

DeFond *et al.* (2005) find that audit committees competence plays a significant role in boosting companies' corporate governance. Equally, other studies (e.g. Mangena & Pike, 2005; Abbott *et al.*, 2004; Xie *et al.*, 2003; Felo *et al.*, 2003) also found out that the financial experience of audit committee members is associated with lower levels of earnings management. Accounting experience of the audit committee members as well as their knowledge of auditing are positively associated with the likelihood that they will support the auditor in an auditor-corporate management dispute (DeZoort &

Salterio, 2001). Xie *et al.* (2003) stated that firms whose audit committees have members with financial expertise depict lower levels of earnings management.

Bédard *et al.*, (2004) found that financial expertise is associated with a significant decrease in aggressive earnings management, Abbott *et al.* (2004) found a significantly negative association between an AC having at least one member with financial expertise and the incidence of financial restatement, and they found that the financial expertise of the AC is related to a higher financial reporting quality. Nelson and Devi (2013) examined the association of AC experts with financial reporting quality proxied by earnings management, and they found out that the presence of non-accounting experts and accounting experts is significant to reduce the magnitude of earnings management. Sharma and Kuang (2014) found that financial expertise is associated with a lower likelihood of aggressive earnings management, but only when the expertise is held by independent directors. Xie *et al.* (2003), Choi *et al.* (2004), Lin and Hwang (2010), and Soliman and Ragab (2014) found that earnings management is negatively associated with AC member's expertise.

A few studies find no significant impact of financial expertise on earnings management such as a U.K. study of Song and Windram (2004), Rainsbury *et al.*, (2008) for New Zealand, Jamil and Nelson (2011) for Malaysia, and the U.S. study of Ghosh *et al.* (2010). None of the reviewed studies document a statistically positive association between financial expertise and earnings management. Other studies (e.g. Lin *et al.*, 2006; Yang & Krishnan, 2005) found no evidence of a statistically significant association between the level of financial experience of audit committees' members and earnings quality. These studies revealed that the presence of an audit committee is not significantly related to the level of discretionary accruals (Kang *et al.*, 2008; He *et*

*al.*, 2007; Davidson *et al.*, 2005). However, the findings of most of prior researches support the negative association between AC financial expertise and earnings management. Accordingly, this study proposes a negative association between the AC expertise and earnings management.

The degree of financial expertise of the audit committee in various extant studies has been measured as; a dummy variable, also indicated by the ratio of members in the AC with financial expertise to the total number of directors in the committee, whereas other studies used percentages. Katmon and Al Farooque (2017) measured audit committee financial expertise as a dummy variable with 1 if the numbers in audit committee with financial expertise is  $>1$  and 0 if otherwise. On the other hand, Al-Dhamari and Ismail (2013) measured it as the proportion of audit committee directors who are members of an accounting association or body, to the total number of directors serving on the audit committee. Huang, green and Lee (2012) computed the percentage of financial experts in the audit committee. Therefore, in this study audit committee financial expertise was measured by the ratio of audit committee members who are members of an accounting association or body to the total number of audit committee members.

#### **2.5.4 Blockholder Ownership and Earnings Management**

The role of ownership structure, specifically large shareholding in earnings management has been a subject of an ongoing scholarly debate. Financial reporting serves as an important communication device between managers and capital markets' stakeholders. According to Dou *et al.* (2016), little is known about the implication of blockholder identities on firms' reporting decisions and interestingly, literature offers mixed predictions and findings on the relationship between EM and large shareholders.

Jensen and Meckling (1976) in their seminal paper argued that monitoring of management by outside blockholders reduces agency costs. It is easier for small blockholders to sell their shareholdings in the firm if they are not pleased by managerial performance as opposed to large blockholders who may find it hard to sell their large block of stock without actively creating a query that has a significant response from the management. To address heterogeneity across blockholders in their study, Dou *et al.* (2016) classified blockholders into different types, that is: activists and pension funds, banks and trusts, corporations, hedge funds, insurance companies and money managers, mutual funds, venture capitalists, LBOs and individuals.

Some researchers have examined the role of blockholders in the control of managers' opportunistic behavior, particularly in earnings management. It is evident from a proportion of extant literature that blockholder ownership has an implication of reducing earnings management. Studies such as Chtourou (2000), Yeo *et al.* (2002), and Bos and Donker (2004) emphasized on the role of outside blockholders in effectively controlling the process of preparing financial statements which reduces the tendency by managers to manipulate results by exercising their discretion in reporting firm performance. Dou *et al.* (2016) were in full agreement that there is a significant individual blockholder effects on earnings management, and the presence of blockholders is associated with low EM. Shleifer & Vishny (1986) agreed that blockholders are entrenched at the helm and have the ability to designate and monitor corporate managers more. Equally, Iraya *et al.* (2015) states that the presence of blockholders effectively monitors the management to avoid their opportunistic behavior including earnings management.

However, there's no consensus with regard to the results found on the role of blockholders. In fact, the results of these researches are contradictory (Dechow *et al.*, 1996; Bos & Donker, 2004; Halioui & Jerbi, 2012). In their study conducted on firms publicly listed in the Tunisian stock exchange, Halioui and Jerbi (2012) concluded that the presence of blockholders affects positively the discretionary accruals and that those blockholders are not effective monitors of earnings management. Additionally, Al-fayoumi, Abuzayed and Alexander (2010) in their study on ownership structure and earnings management in Jordan found out an insignificant role of institutional and block-holder ownership on monitoring managerial earnings management. Other prior studies such as Maug (1998), Cronqvist and Fahlenbrach (2009), and Bamber, Jiang and Wang (2010) have also argued for the insignificant role of large shareholding in earnings management. This study however proposed that large shareholders are activists who play a monitoring role of the management as suggested by the agency theory.

Prior studies have used different measurements (percentages) to indicate blockholder shareholding, for instance Dou *et al.* (2016), Isenmila and Elijah (2012), Al-fayoumi *et al.* (2010) and Holderness (2009) used ownership of greater than 5% of the total shareholding, while Halioui and Jerbi (2012) used ownership greater than 40% of the firms' equity to indicate blockholding. This study therefore measured blockholder ownership using the shares held by individual owners who hold more than 5% of the total shares.

### **2.5.5 Institutional Ownership and Earning Management**

Institutional ownership refers to shares held by the financial institutions, institutional legal entities, foreign institutions and trusts and other institutions at the end of the year

(Widigdo, 2013). Existing literature presents mixed views on the effects of institutional investors on earnings management. Other scholars present a positive relationship with income-increasing earnings management while others evidence a negative association.

Firstly, is the point of view where institutional investors are often characterized as “transient” owners who are overly focused on current earnings, and they pressure management to achieve profit goals resulting into earnings management (Rajgopal *et al.*, 1999). This transient nature justifies the increase in earnings management under higher institutional ownership. Consistent with institutional transience, there is greater stock return volatility and trading volume surrounding earnings announcements of firms with higher institutional ownership (Potter, 1992; Kim *et al.*, 1996; Rajgopal *et al.*, 1999) as a way of meeting short-term performance targets. The short-term focus of institutional investors encourages managers to sacrifice long-term investment to meet current earnings targets (Bushee, 1998). Transient institutional investors exhibit a strong preference for near-term earnings, which translates into mis-valuation of stock prices where the near-term (long-term) earnings are over-(under-)weighted (Bushee, 2001; Koh, 2003).

The argument that institutional owners are transient investors suggests a positive relation between the proportion of stock held by institutions and the absolute value of discretionary accruals (Rajgopal *et al.*, 1999). Transient (short-term oriented) institutional investors create incentives for managers to manage earnings upwards (Koh, 2003). The observation is due to myopic pricing that would establish a link through which institutional investors could pressure managers into a short-term focus (Bushee, 2001). The management of firms with higher institutional ownership perceives greater costs to missing analysts' forecasts (Matsumoto, 2002). Managers

have been documented by Bushee (1998) to manipulate reported R&D and advertising expenses so as to meet targets, while Koh (2007) found out that transient institutional ownership is positively associated with income-increasing accruals management. Furthermore, Nazir and Afza (2018) posit that managers have substantial freedom to pursue their personal benefits at the expense of shareholders' wealth due to limited incentive of shareholders to monitor the behavior and performance of the agents.

Secondly, is from an oversight role point of view, where scholars have also registered a negative relationship between institutional investors and earnings management. It is argued that firms with large institutional shareholders are more likely to act in the interest of the investors, because large institutions have more resources and ability to monitor, discipline and influence managers (Hartzel & Stark, 2003). Institutional ownership is considered better to limit the actions of earnings management; this is due to the institutional owners regarded as sophisticated owners, who are not easily fooled by management (Kusumaningtyas, 2012).

According to Asward and Lina (2015), institutional investors are considered more experienced in detecting errors in the company, so they are not easily fooled by management and they will avoid actions to perform EM in order to profit the more qualified. With this point of view, the smaller the percentage of institutional ownership, the greater will be the tendency of managers in taking certain accounting policies to manipulate earnings reporting (Widyastuti, 2009). Institutional investors have the ability and the resources to detect earnings overstatement, which they would adjust for before pricing the securities of the firms (Collins *et al.*, 2003). Additionally, Koh (2007) asserted that long-term institutional investors constrain accruals management among firms that manage earnings to meet/beat earnings benchmarks.



Healy and Palepu (2001) suggest that analysts engage in private information production that helps detect earnings management, and Yu (2008) shows that greater analyst following is associated with less earnings management. Owing the mixed scholarly point of views, the study therefore sought to investigate the role of institutional investors in earnings management.

Grassa (2017) measured institutional ownership as a percentage of shares owned by institutional shareholders. Similarly, Hadani, Goranova and Khan (2011) while investigating the effect of institutional investors on earnings management also computed the percentage of shares owned by the largest institutional owner in the firm. Equally, Bhandari and Arora (2016) computed the percentage of equity shares held by FIIs. Al-Dhamari and Ismail (2013) also used the proportion of the five largest institutional investors' ownership of shares to the total number of shares issued. Elghuweel, Ntim, Opong and Avison (2016) measured institutional ownership as a percentage of institutional ownership to total firm ordinary shareholdings. The current study also measured the variable as a percentage sum of shares owned by the top ten institutions.

#### **2.5.6 Moderating Effect of CEO Power**

A firm's Chief Executive Officer is a top-level director responsible for strategic decisions making and implementation. The separation of ownership and control that characterizes the modern firms create conflicts of interest between managers and shareholders (Yasser & Mamun, 2016). The fact that the CEOs are top level individuals earns them more powers within the firm over time, experience, centrality and stock ownership. They may play an important role in determining the quality of financial reporting (Gounopolous & Pham, 2018). A powerful CEO makes decisions

independently without consultation with other parties, unlike a less powerful CEO whom according to Adams, Almeida and Ferreira (2005) have to compromise with other members of the top management team when they disagree with him. This proves that where there is less power by the executive, monitoring is effective, while more power limits the effectiveness of the very monitoring. In an organization in which only the CEO makes the most relevant decisions, the risk arising from judgment errors is not well diversified (Adams *et al.*, 2005), and this is no exception to firms where the CEOs use their own discretion to decide on when and what to include in their financial reporting. The firm CEO's and auditors have the obligation to certify the accuracy of the financial reports and the effectiveness of internal controls (Albersmann & Hohenfels, 2017), giving the CEOs the discretion over financial reports.

While agency theory documents that good corporate governance mechanisms such as audit committee and ownership structure should be put in place to monitor the divergence of interests, entrenchment theory on the other hand views a powerful CEO to have gained enough powers over time so as to dilute the same monitoring mechanisms put in place, hence influencing the financial reporting of the firm to suit their own interests. Cohen *et al.* (2011) in their study suggested that while audit committee is the governance party with the authority and the responsibility of overseeing the audit function, internal controls and financial reporting, certain factors such as undue influence by the CEO over the selection of the audit committee may diminish the ability of its members to be substantively independent. This argument suggests that the CEOs can influence the reporting of earnings in the presence of loyal board members. Furthermore, Carcello, Palmrose and Scholz (2011) echoed the same sentiments that CEO involvement in the audit committee selection process eliminates

the benefits of both an apparently independent audit committee and its financial expertise will be less because the expert is more likely to be compromised.

A number of studies focusing on CEO power and Earnings management suggested a significant relationship, for instance Adams *et al.* (2005) argued that more powerful CEOs can exert their will and thereby influence financial reporting to a greater extent than less powerful CEOs. Equally, Feng, Shevlin and Luo (2011) noted that financial reports manipulation is more likely to be experienced when the CEO power is high. Additionally, Efendi, Srivastava and Swanson (2007) argue that CEO power reduces board independence, thus impairing the monitoring role. Davidson *et al.*, (2007) also supports the positive association stating that a CEO approaching turnover may want to manufacture good performance through income-increasing earnings management. They also argued that individuals that plan to continue as CEOs will be less likely to manage earnings since positive earnings management is reversed in future years, and the continuing CEOs will not want to gamble the company's future since they will still be in office. According to Francis, Huang, Rajgopal and Zang (2008), CEO power is positively associated with financial reporting quality.

The power of a CEO results in information problems insofar as the CEO determines the agenda and information that the board receives (Yasser & Mamun, 2016). It is therefore arguable from the foregoing that audit committee and active owners such as institutions and blockholders present a monitoring mechanism meant to reduce earnings management, but its effectiveness is reliant on how powerful the CEO is. Previous studies have proxied power by using CEO tenure which is measured by the number of years that a CEO continuously holds this position in a company (Baatwah, Salleh, & Ahmad, 2015). Zhang (2009) suggests that earnings management decreases as time elapses except for the year before the CEO's departure, whereas Ghosh and Moon

(2005) argue that longer serving CEOs are more likely to use their managerial power to manipulate earnings.

Ali and Zhang (2015) also concluded that earnings are more likely to be overstated in the early years than in the later years of CEOs' service and that this association is weaker for firms with greater institutional ownership. This observation could be explained by shareholders' activism towards opportunistic earnings management, suggesting that active owners can play a role in reducing financial reports manipulation. A potential concern with the earnings management by a powerful CEO is that if they are aware of their superior ability and they know that they can perform well in the long run, then it again raises the question as to why they would overstate earnings and risk being labeled as opportunistic reporters. This label may destroy their credibility. Oyer (2008) and Axelson and Bond (2009) argue that at the beginning of their service as CEOs, there is sufficient adverse selection and shows that if managers' report poor outcome, they get labeled as "low ability" managers, and their whole career tend to suffer as a result. This argument suggests that even a high ability CEO would inflate earnings to avoid reporting poor, even if the poor outcome is not due to poor managerial ability.

One method of gauging the transparency of firms is estimating the earnings management of firms. Since the CEO has the power to make decisions for a firm, then earnings management may be the result. Specifically, a powerful CEO may influence earnings management of a firm, especially if the CEO has a strong incentive to inflate earnings in order to achieve profit or earnings increases. Studies document that top managers tend to manipulate earnings in the first and last years of their duty for different interests. For instance, Bengtsson, Bergström and Nilsson (2007) found out that the

incentives to use earnings management for heightening compensation contracts are significant. When people are near retirement, they may not be too concerned with the long-run performance of their organization. Instead, they may be more concerned with the short-term (Davidson *et al.*, 2007). That is, CEOs tend to lower their predecessors' performance for their personal benefit.

Previous studies cite different motives for earnings management by the CEO. For instance, Kuang, Flora and Wielhouwer (2014) found out that CEOs seem to be more engaged in earnings management after being hired, even though in the long-term CEOs engagement in earnings management tend to diminish. In contrast, Davidson *et al.* (2007) find that firms in which CEOs are nearing retirement age have large discretionary accruals. CEOs recruited from the outside also have stronger incentives to engage in earnings management (Kuang, Flora & Wielhouwer, 2014). The incentives to engage in earnings management (EM) are stronger around initial public offerings (Gounopolous & Pham, 2018). Moreover, CEO successors from external background may face the greater pressure from the board and from the market to show their managerial competence (Freidman & Saul, 1991).

## **2.6 Control Variables**

Other than the audit committee, ownership structures and CEO power, there are other factors that may influence earnings management, and thus the need to control for the variables. This study controlled for firm size and firm age.

**Firm Size:** The study controlled for firm size. This is because larger firms are likely to have more effective internal control systems and face more scrutiny from the market (Dechow *et al.*, 1995; Bédard *et al.*, 2004). Also, it is expected that small companies are more likely to engage in earnings management to cover their higher marginal cost

comparing with large companies that enjoy the benefit from economies of scale (Lin *et al.*, 2009). Previous studies have found a negative relation between company size and earnings management (Xie *et al.*, 2003; Abdul Rahman & Ali, 2006; Nelson & Devi, 2013; Sharma & Kuang, 2014).

Larger companies have greater monitoring needs and greater incentives to heighten audit committee effectiveness (Klein, 1998). Large firms adopt stricter monitoring mechanisms, suggesting more demand on audit independence. Firm size is calculated as a natural logarithm of total assets for each year (Abbott *et al.*, 2010; Davidson *et al.*, 2005; Ruiz-Barbadillo *et al.*, 2007). Medium and large firms have a strong pressure from the shareholders to the company's performance accord with expectations as compared to small firms. This prompts the management to meet these expectations (Barton & Simko, 2002). The larger the firm, the greater is the invested capital, so that the company gets more attention from shareholders. Firm size has a negative effect on earnings management. This indicates that large firms perform less earnings management than do small firms.

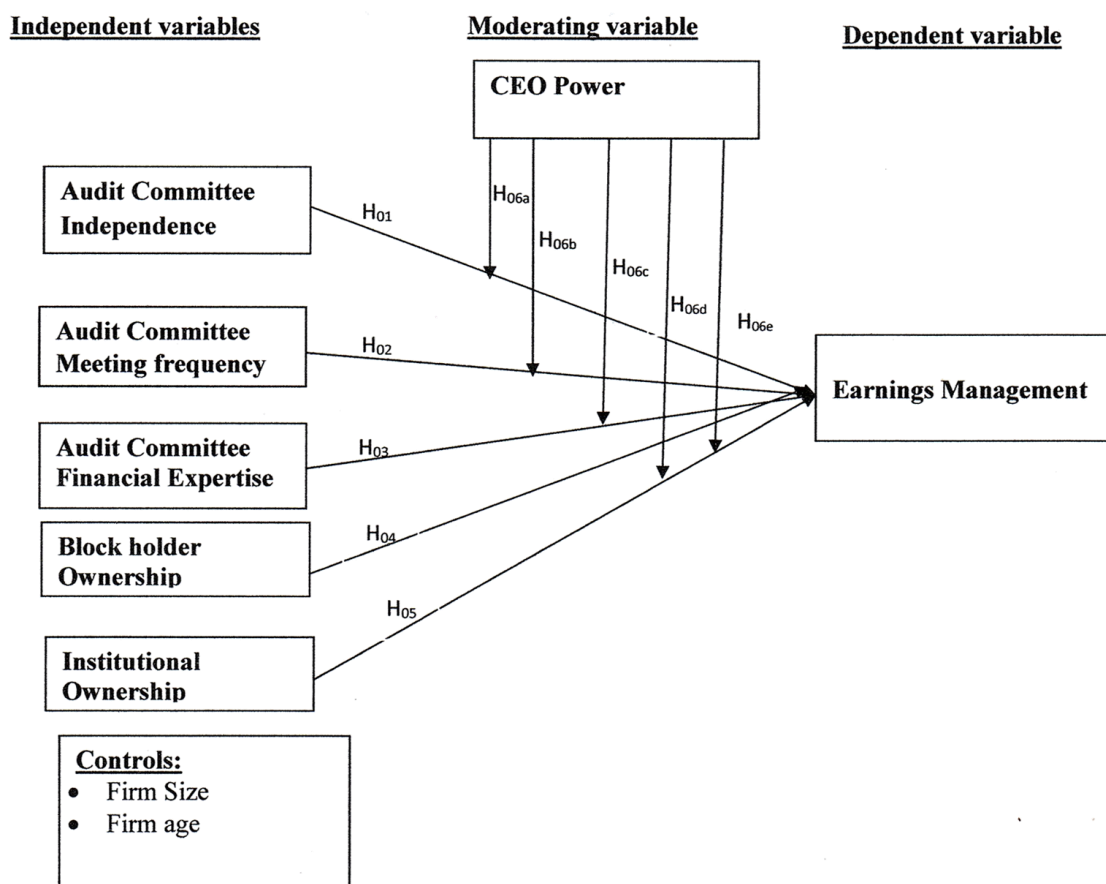
Firm size has negative effect on earnings management (Peni & Vahamaa, 2010; Guna & Herawaty, 2010; Gulzar & Wang, 2011; Jao & Pagalung, 2011). According to Wardhani and Joseph (2010), their different results indicate that firm size has a positive effect on earnings management. The larger the company the more is the motivation to do earnings management. One of them is to satisfy the desire of investors to show good financial performance. To measure firm size, the study adopted the measurements of previous studies (e.g. Klein, 2002; Ismail and Saleh, 2012; Al-Dhamari & Ismail, 2013; Elghuweel, Ntim, Opong & Avison, 2016; Grassa, 2017; Muth & Donaldson, 1998;

Elsayed, 2007; Topak, 2011; Al-Matari *et al.*, 2012; Lehn *et al.*, 2009) which used the natural log of total assets

**Firm Age:** The time that the firm has been in operation has an implication on its level of earnings management practices. This is motivated by different managerial and firm motives. According to Lee and Masulis (2011), Managers of more seasoned firms have weaker incentives to artificially produce higher earnings, suggesting a negative relation between firm age and EM. Young firms are more likely to be in need of external financing, which may give them an added motivation to manipulate earnings (Desai *et al.*, 2016). Different scholars have measured firm age differently that is; the number of years since incorporation (Clarkson, 2000; Berger & Udell, 1998; Boone *et al.*, 2007; Borghesi *et al.*, 2007; Gregory *et al.*, 2005) and the number of years between IPO date and the founding year (Ali & Zhang, 2015; Lee & Masulis, 2011). In agreement with these studies, the study measured firm age using the number of years from that of incorporation to the year of observation. Firm age therefore proves to be an important variable in respect to earnings management worth consideration, since EM vary according to how old the firm is.

## 2.7 Conceptual Framework

The study's dependent variable is Earnings management while the independent variables are Audit Committee independence, audit committee meeting frequency, audit committee financial expertise, blockholder ownership and institutional ownership. The study controlled for firm age and firm size as these might have an effect on earnings management. The moderating variable is CEO power as depicted in the conceptual framework below:



**Figure 2. 1: Conceptual Framework**

(Author, 2020)



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter presents the research philosophy, research design, target population, data types and sources, Measurement of variables, data analysis and presentation, diagnostic tests, regression assumptions and ethical considerations.

#### **3.1 Research Philosophy**

A research philosophy relates to the development of knowledge and the nature of that knowledge (Saunders, Lewis & Thornhill, 2009). According to Holden and Lynch (2004), a review of philosophy is a vital aspect of the research process as it opens researchers' minds to other possibilities, which can lead to both an enrichment of their research skills and an enhancement in their confidence that they are using the appropriate methodology. The study adopted a positivism philosophical approach towards arriving at the conclusions on the research problem. A positivist approach embraces certain assumptions about truth and reality. Positivism suited the study as it comprises of the objectivity assumption which views the researcher as an objective observer and reporter of data through sample selection procedures, measurement of variables and statistical analysis (Vanderstoep & Johnston, 2009).

The study was of a cause-effect nature and sought to explain the moderating effect of CEO power on the relationship between corporate governance mechanism and earnings management, justifying the philosophical choice as argued by Holden and Lynch (2004), that the aim of social science in a positivist perspective should be to identify causal explanations and fundamental laws that explain regularities in human social behavior.

A choice of what to study, and how to study it in a positivist approach can be determined by an objective criteria rather than by human beliefs and interests. The study is also suited for positivism since the concepts were operationalized in a way which enables facts to be measured quantitatively and generalizations made about regularities in human and social behavior, which were made basing on samples of sufficient size with the aim of generalizations being to lead to prediction, explanation and understanding (Holden & Lynch, 2004). Secondary data obtained from the NSE on publicly listed firms were measured using triangulation approach and analyzed statistically for trends and eventually the hypotheses tested.

### **3.2 Research Design**

According to Kumar (2011), a research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. The study adopted an explanatory research design and a panel approach towards arriving at the study's conclusions. This is because the study sought to explain the cause-effect relationship between the research variables. Brooks (2008) argues that panel data analysis (also longitudinal data or cross-sectional analysis) is adopted in cases where dataset comprise of both time series and cross-sectional elements, specifically studying multiple subjects such as firms over a number of time periods. The secondary data for the study were obtained from the NSE, and a panel data analysis was conducted to test the research hypotheses. According to Easterby-Smith *et al.* (2008) and Robson (2002), panel studies often employ the survey strategy. In the study, both cross-sectional and time series information was the focus over a period of fourteen years.

### **3.3 Target Population**

The target population for the study was 65 firms. The data set of the study comprised of firms listed at the Nairobi Securities Exchange for fourteen consecutive years between the periods 2004 to 2017. The firms listed at the Nairobi Securities Exchange are classified into nine sectors and these are: agricultural, automobiles and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, and manufacturing and allied.

The study's inclusion-exclusion criteria only focused on those firms which were consistently in operation over the study period, that is, from the years 2004 to 2017. Firms with missing annual financial reports for the period as well as those that were listed later than year 2004 were excluded. As a result, a survey of all the 35 listed firms that were consistently in operation at the NSE over the study period participated, resulting to a total of 490 firm-year observations from the nine industries. The stock market presents a better study area as it facilitates the flow of resources to the most productive investment opportunities and ensures efficient allocation of resources in the economy.

### **3.4 Data Types and Sources**

The study utilized secondary data obtained from the annual audited financial reports of firms listed at the NSE. Both quantitative and qualitative data were obtained from the secondary sources. A document analysis guide was used to assist and enable in the collection of secondary data. Content analysis consists of analyzing the contents of documentary materials such as books, magazines, newspapers and the contents of all other verbal materials which can be either spoken or printed. To avoid error during data collection from the annual reports, entries were double checked by the researcher.

Secondary data are useful for improving understanding and explaining the research problem in addition to providing more information to solve a problem (Ghuri & Gronhaug, 2005). The advantages of using secondary data sources are; savings in the time and cost of acquiring information, fewer resource requirements, the provision of comparative and contextual data, unforeseen discoveries resulting from using suitable methods, and relative ease of access (Sekaran & Bougi, 2010; Saunders, Thornhill & Lewis, 2009). Fraser *et al.*, (2006) argue that companies' annual reports are more accurate than other secondary data sources. In addition, they report that information and data based on annual reports show a high level of reliability and quality.

### **3.5 Measurement of Variables**

The study sought to investigate the moderating role of CEO power on the effect of corporate governance mechanism on earnings management. The variables were classified into predictors, moderating, controls and dependent variables measured as indicated below:

#### **3.5.1 Dependent Variable**

The study's dependent variable was *earnings management (EM)* which was measured by using discretionary accruals with the proxy label (*DA*). Accrual is the difference between the reported earnings during the period and the cash earnings during the period (Singh *et al.*, 2017). Accruals were further decomposed into non-discretionary (NDA) and discretionary (DA). Non-discretionary accruals are accounting adjustments by the management to the firm's cash flows mandated by accounting standard-setting bodies such as the Capital Markets Authority and other Accounting Standards bodies, while the discretionary part refers to the adjustments to cash flows selected by the management (Healy, 1985) by simply employing their own discretion.

$$\text{Total Accruals (TA)} = (\text{NDA} + \text{DA}) \dots\dots\dots \text{Eqn 1}$$

Where: NDA is the non-discretionary accruals

: DA is the non-discretionary accruals

Paul Healy in his seminal paper for the year 1985 developed the initial model to measure earnings management by using accruals. Healy (1985) tested for earnings management by comparing mean total accruals (scaled by lagged total assets) across the earnings management partitioning variable. Accounting earnings are decomposed into non-discretionary accruals and discretionary accruals where accruals are estimated by the difference between reported accounting earnings and cash flows from operations which is the working capital from operations (Healy, 1985). He developed a model to measure non-discretionary accruals;

$$\text{NDA}_t = \frac{\sum \text{TA}_t}{T} \dots\dots\dots \text{Eqn 2}$$

Where:

NDA is the estimated non-discretionary accruals;

TA is the total accruals scaled by lagged total assets;

t represents a year subscript for years included in the estimation period

T a year subscript indicating a year in the event period

DeAngelo (1986) with a closer model for measuring accruals tested for earnings management by computing the first differences in total accruals, and by assuming that the first differences have an expected value of zero under the null hypothesis of no earnings management. To measure Non-discretionary accruals, he proposed the below model:

$$\text{NDA}_t = \text{TA}_{t-1} \dots\dots\dots \text{Eqn 3}$$

Healy and DeAngelo Models were criticized for using total accruals from the estimation period to proxy for expected non-discretionary accruals (Dechow *et al.*, 2005) and as a result, Jennifer Jones in the year 1991 developed an expectation model that aimed to separate *NDA* and *DA*. Jones decomposed the change in total accruals into change in Non-discretionary and change in Discretionary accruals which was presented as follows:

$$\Delta TA_t = (TA_t - TA_{t-K}) = (DA_t - DA_{t-K}) + (NA_t - NA_{t-K}) \dots \dots \dots \text{Eqn 4}$$

Jones developed the expectation models used to measure Non-discretionary (Eqn 5) and discretionary accruals (Eqn 6).

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it} \dots \dots \dots \text{Eqn 5}$$

The Gross property, plant, and equipment and change in revenues are included in the expectations model to control for changes in non-discretionary accruals caused by changing conditions (Jones, 1991). Therefore, using (Eqn 1), to determine the discretionary portion of the accruals;

$$U_{ip} = \frac{TA_{ip}}{A_{ip-1}} - \alpha_1 \frac{1}{A_{ip-1}} + \alpha_2 \frac{\Delta REV_{ip}}{A_{ip-1}} + \alpha_3 \frac{PPE_{ip}}{A_{ip-1}} \dots \dots \dots \text{Eqn 6}$$

Where:

$TA_{it}$  Refers to the Total Accruals in year  $t$

$A_{it-1}$  Refers to firm  $i$ 's Total Assets at the end of year  $t-1$

$\Delta REV_{it}$  Refers to firm  $i$ 's revenues in year  $t$  less revenue in year  $t-1$

$PPE_{it}$  Refers to the gross property plant and equipment at the end of year  $t$

$\alpha_1, \alpha_2$  and  $\alpha_3$  are the firm specific parameters

$\varepsilon_{it}$  is the residual, which represents the firm specific discretionary accruals (DA) which is a proxy for earnings management.

$p$  is the year index for years included in the prediction period

$U_{ip}$  is the level of discretionary accruals at time  $p$

The original Jones model nonetheless received criticisms also for treating all revenues as non-discretionary, while its receivable component can be a subject of managerial discretion. Therefore, Dechow *et al.*, (1995) developed another powerful version (“modified Jones Model”) and compared with other models. The modified Jones model is powerful in measuring discretionary accruals (Dechow *et al.*, 1995; Kothari *et al.*, 2005; Ines, 2017; Singh *et al.*, 2017)

This study therefore adopted the modified Jones model to measure discretionary accruals which is the proxy for earnings management. Dechow *et al.*, (1995) improved the previous version of Jones (1991) by adjusting for receivables because Jones model assumes that revenues are nondiscretionary while they can be discretionary in nature, for instance considering a situation where management uses its discretion to accrue revenues at year-end when the cash has not yet been received and it is highly questionable whether the revenues have been earned (Dechow *et al.*, 1995). They came up with a modified version of Jones model for computing non-discretionary accruals by adjusting for receivables in the expectation model presented as:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it} \dots\dots\dots Eqn 7$$

Where:

$TA_{it}$  Refers to the Total Accruals in year t

$A_{it-1}$  Refers to firm i’s Total Assets at the end of year t-1

$\Delta REV_{it}$  Refers to firm i’s revenues in year t less revenue in year t-1

$\Delta REC_{it}$  Refers to firm i’s Receivables in year t less receivables in year t-1.

$PPE_{it}$  Refers to the gross property plant and equipment at the end of year t

$\alpha_1, \alpha_2$  and  $\alpha_3$  are the firm specific parameters

Total Accruals were obtained by net income (earnings before taxation and extraordinary item) less cash flow from operating activities in the cash-flow statement (Singh *et al.*, 2017). This model assumes the relation between nondiscretionary accruals and the explanatory variables is stationary (Jones, 1991). The variables in the Ordinary Least Square (OLS) regression model are deflated by lagged total assets to reduce heteroscedasticity problems (Jones, 1991). Total assets, receivables and revenues used in computing discretionary accruals were collected for the years 2003 to 2017 so as to obtain the t-1 difference.

The current study therefore proposes (Eqn 7) expectation model to obtain the coefficients  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  to give the predicted Non-discretionary accruals for different firms. The discretionary accruals (residuals) were therefore obtained by deducting predicted non-discretionary accruals from the actual total accruals basing on (Eqn 1). Therefore, the resulting equation (Eqn 8) presented as;

$$DA_{it} = \{y_{it} - \hat{y}_{it}\} = \frac{TA_{it}}{A_{it-1}} - \left\{ \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} \right\} \dots \dots \dots Eqn 8$$

Where:  $y_{it}$  is the actual total accruals for firm i at year t and,

$\hat{y}_{it}$  is the predicted values of non-discretionary accruals

### 3.5.2 Independent Variables

*Audit Committee Independence (ACI)* is defined as the presence of independent directors in the audit committee (Singh, Aggarwal & Anand, 2016). In the study, it was measured as the number of independent directors divided by the total number of directors in the Audit Committee (Klein, 2002; Shah, Butt & Hasan, 2009; Ismail & Saleh, 2012; Al-Dhamari & Ismail, 2017; Singh, Aggarwal & Anand, 2016).



*Audit Committee Meeting Frequency (ACMF)* refers to how often members meet to discuss various issues facing a firm (Katmon & Al Farooque, 2017). This was measured as the number of audit committee meetings held during the year used (Al-Dhamari & Ismail, 2017; Katmon & Al Farooque, 2017; Grassa, 2017; Singh, Aggarwal & Anand, 2016).

*Audit Committee Financial Expertise (ACFE)* refers to the financial qualification and competencies of the audit committee members. It was measured as the proportion of audit committee directors who are members of an accounting association or body to the total number of directors serving in the audit committee (Al-Dhamari & Ismail, 2017; Huang, green & Lee, 2012).

*Blockholder Ownership (BOWN)* is the fraction of closely held shares (Worldscope/Disclosure, 1997). In the study, it was measured by shares held by individual owners who hold more than 5% of the total shares (Dou *et al.*, 2016; Isenmila & Elijah, 2012), Al-fayoumi *et al.*,2010, Holderness, 2009).

*Institutional Ownership (IOWN)* was measured by the number of shares owned by the institutions, non-individuals relative to the total number of issued and traded shares in the stock exchange market for each company (Hamdan, Allam, Anaswa, Mohammed, Al-Otaibi & Mahmoud, 2012; Maswadeh, 2018)

### **3.5.3 Moderating Variable**

CEO power was proxied by CEO Tenure which is the number of years that a CEO continuously held this position in a company (Baatwah, Salleh & Ahmad, 2015). It was measured by computing the years that a Chief Executive Officer has been in office (Henderson, Miller & Hambrick, 2006; Simsek, 2007; Nourayi & Mintz, 2008).

### **3.5.4 Control variables**

*Firm size (FSIZ)* was measured in line with previous studies (e.g. Muth & Donaldson, 1998; Elsayed, 2007; Topak, 2011; Al-Matari *et al.*, 2012; Lehn *et al.*, 2009) who measured firm size by using the natural logarithm of total assets (Log TA).

For *firm age (FA)*, the study used the same measurements as that of previous studies (Berger & Udell, 1998; Boone *et al.*, 2007; Borghesi *et al.*, 2007; Gregory *et al.*, 2005), where age was defined as being the year of observation minus the establishment date of the company, in order to determine how many years it had been incorporated before.

## **3.6 Data Analysis and Presentation**

The data collected from the audited financial reports were keyed in, coded, cleaned and analyzed quantitatively. The data were analyzed using Stata Version 13 and analysis conducted using both descriptive and inferential statistical methods;

### **3.6.1 Descriptive Statistics**

Descriptive statistical techniques, specifically the measures of central tendency, that is the mean, as well as the measures of dispersion, which is the standard deviation, minimums and maximums were used to check for trends and to describe the data. A one-way ANOVA was also used to compare the study variables between different sectors and years. Descriptive statistics describe the basic characteristics of population or sample and summarize the data in a straightforward and understandable manner (Zinkmund, Babin & Griffin, 2009). According to Tharenou, Donohue and Cooper (2007) data are usually derived by frequencies or percentages for each demographic variable for individuals such as gender, age, education level, marital status, managerial level, years of company tenure, years of full-time work experience, and occupation type, and organizations e.g. industry type, employer sector, organization size,

ownership, and revenue. They further suggest that researchers should also include the means and standard deviations of variables that are continuous and ideally, the range of these values for their sample.

### **3.6.2 Inferential statistics**

Inferential statistics are statistical techniques for generalizing from a sample to a population (Zinkmund, Babin & Griffin, 2009), since studies are normally conducted on the sample or the subset of the study population. They are used to draw conclusions about significant relationships between variables (Vanderstoep & Johnston, 2009). Furthermore, they are used to estimate the characteristics of the population from sample data, or to test various hypotheses about the relationship between different variables. O'Leary (2004) further states that they allow assessing of the probability that an observed difference is not just a fluke or chance finding and are about conducting statistical tests that can show statistical significance

Inferential statistics used in the study involved Pearson moments correlation and hierarchical regression analysis. Correlation describes the strength and direction or linear dependence between two variables. Pearson moments correlation coefficients were used to check for associations between corporate governance mechanisms, CEO power and earnings management, where the coefficients ranged from between -1.0 to 1.0, that is, from a perfectly negative correlation, through no dependence, to a perfect positive correlation between the variables. Creswell (2003) asserts that the coefficient assumes that there is a linear relationship between the two variables and that the two variables are causally related which means that one of the variables is independent and the other is dependent.

### 3.6.3 Model Specification

A regression analysis was used to test the research hypotheses. Specifically, hierarchical regression analysis was conducted to check for direct effects and interactions as indicated in the models;

$$EM_{it} = \beta_0 + \beta_1 FSIZ_{it} + \beta_3 FA_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 1}$$

$$EM_{it} = \beta_0 + C_{it} + \beta_1 ACI_{it} + \beta_2 ACMF_{it} + \beta_3 ACFE_{it} + \beta_4 BOWN_{it} + \beta_5 IOWN_{it} + \beta_6 CP_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 2}$$

$$EM_{it} = \beta_0 + C_{it} + \beta_1 ACI_{it} + \beta_2 ACMF_{it} + \beta_3 ACFE_{it} + \beta_4 BOWN_{it} + \beta_5 IOWN_{it} + \beta_6 CP_{it} + \beta_{7a} ACI_{it} * CP_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 3}$$

$$EM_{it} = \beta_0 + C_{it} + \beta_1 ACI_{it} + \beta_2 ACMF_{it} + \beta_3 ACFE_{it} + \beta_4 BOWN_{it} + \beta_5 IOWN_{it} + \beta_6 CP_{it} + \beta_{7a} ACI_{it} * CP_{it} + \beta_{7b} ACMF_{it} * CP_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 4}$$

$$EM_{it} = \beta_0 + C_{it} + \beta_1 ACI_{it} + \beta_2 ACMF_{it} + \beta_3 ACFE_{it} + \beta_4 BOWN_{it} + \beta_5 IOWN_{it} + \beta_6 CP_{it} + \beta_{7a} ACI_{it} * CP_{it} + \beta_{7b} ACMF_{it} * CP_{it} + \beta_{7c} ACFE_{it} * CP_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 5}$$

$$EM_{it} = \beta_0 + C_{it} + \beta_1 ACI_{it} + \beta_2 ACMF_{it} + \beta_3 ACFE_{it} + \beta_4 BOWN_{it} + \beta_5 IOWN_{it} + \beta_6 CP_{it} + \beta_{7a} ACI_{it} * CP_{it} + \beta_{7b} ACMF_{it} * CP_{it} + \beta_{7c} ACFE_{it} * CP_{it} + \beta_{7d} BOWN_{it} * CP_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 6}$$

$$EM_{it} = \beta_0 + C_{it} + \beta_1 ACI_{it} + \beta_2 ACMF_{it} + \beta_3 ACFE_{it} + \beta_4 BOWN_{it} + \beta_5 IOWN_{it} + \beta_6 CP_{it} + \beta_{7a} ACI_{it} * CP_{it} + \beta_{7b} ACMF_{it} * CP_{it} + \beta_{7c} ACFE_{it} * CP_{it} + \beta_{7d} BOWN_{it} * CP_{it} + \beta_{7e} IOWN_{it} * CP_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 7}$$

Where:

*EM* = Earnings Management

*FSIZ* = Firm Size

*FA* = Firm Age

<i>ACI</i>	=	Audit Committee Independence
<i>ACMF</i>	=	Audit Committee Meeting Frequency
<i>ACFE</i>	=	Audit Committee Financial Expertise
<i>BOWN</i>	=	Blockholder Ownership
<i>IOWN</i>	=	Institutional Ownership
<i>CP</i>	=	CEO power which is proxied by CEO tenure
$\beta_0, \dots, \beta_{7e}$	=	Coefficients of the equations
$\varepsilon$	=	error term
<i>t</i>	=	time
<i>i</i>	=	Firm

The research hypotheses were tested at a significance level of 0.05, where a resulting p-value of less than 0.05 rejects the null hypothesis meaning the effect is statistically significant, whereas a p-value greater than 0.05 means that the effects between the study variables were insignificant.

### **3.7 Diagnostic Tests**

The collected data was a pooled data and thus the need to check for stationarity tests as well as the regression assumptions such as the absence of multicollinearity assumption, homoscedasticity assumption, serial correlation test and normality tests as indicated in this section.

#### **3.7.1 Stationarity Tests**

A time series is stationary if its mean and variance do not vary systematically over time. The current study used a pooled type of panel data of variables for different firms (*i*) and different years (*t*). Stationarity therefore should be checked for time series types of data. The study conducted Harris-Tzavalis unit root test developed by Harris and Tzavalis (1999), and Fisher test developed by Choi (2001) to check for the unit root of the data where the null hypothesis ( $H_0$ ) for both tests states that all panels have a unit

root and the alternative hypotheses ( $H_a$ ) stating that all panels are stationary. Stationarity of a time series is crucial for the application of various econometric techniques, and most empirical work based on time series data assumes that the underlying time series is stationary (Gujarati, 2003).

### **3.8 Regression Assumptions**

In order to conduct a regression analysis, the study checked for multicollinearity, homoscedasticity, autocorrelation and normality regression assumptions

#### **3.8.1 Multicollinearity**

The issue of multicollinearity appears if two or more exogenous variables are highly correlated which might affect the estimation of the regression parameters (Hair *et al.*, 2009). The study used the Variance Inflation Factor (VIF) and the tolerance level to indicate the presence of multicollinearity. A threshold of 10 was applied, where a VIF greater than 10 indicates that there is a multicollinearity problem (Gujarati, 2003), and a tolerance level greater than 0.10 is recommended (Fidell, 2001). Multicollinearity makes the regression coefficient unstable and difficult to interpret. In addition, the standard errors for the coefficients are magnified, making the coefficient statistically insignificant. Furthermore, multicollinearity can cause the coefficients to change signs, making it more difficult to identify the correct model. VIF illustrate the degree for every independent variable been explained by other independent variables to eliminate collinear variables.

#### **3.8.2 Homoscedasticity Test**

Regression analysis assumes homoscedasticity. The study employed both the Breusch–Pagan and the White’s tests to check for the assumption. The null hypothesis ( $H_0$ ) for this statistical test is the presence of homoscedasticity while the alternative ( $H_a$ )

assumes heteroscedasticity. If a p-value less than the 0.05 threshold is the result, then the null hypothesis of homoscedasticity is rejected and the alternative accepted, confirming heteroscedasticity assumption which means the data has too many outliers.

### **3.8.3 Serial Correlation Test**

In order to check for the serial correlation assumption, the study used both Durbin-Watson test and the Baltagi-Wu test. Serial correlation in panel data models biases and causes the results to be less efficient. Durbin Watson tests assume the values from 0 to 4. Serial correlation occurs when one observation's error term is correlated with another observation's error term. Thus, it is said that the errors are serially correlated. Serial correlation occurs when error terms from different time periods (or cross-section observations) are correlated. Serial correlation occurs in time-series studies when the errors associated with a given time period carry over into future time periods. This usually happens because there is an economic relationship between the observations, such as in time series data when observations are measurements of the same variables at different points in time, or in cluster sampling when observations are measurements of the same variables on related subjects.

### **3.8.4 Normality Test**

Regression analysis assumes a normally distributed data. To check for the normality assumption, the study used the Jarque-Bera, Shapiro Wilk and Shapiro-Francia normality tests. The null hypothesis ( $H_0$ ) for these tests states that the data follows a normal distribution while the alternative hypothesis ( $H_a$ ) states that the data does not follow a normal distribution. The Normality assumption was indicated by checking on the p-value against a significance level of 0.05. If the resulting p-value is more than the

threshold, then the null hypothesis was not rejected meaning the data is normally distributed.

### **3.9 Panel data analysis**

The study used a panel data analysis technique with a pooled type of data that combines both cross-sectional and time series data. The main types of data that are generally available for empirical analysis are cross-sectional, time series and pooled data. In cross-section data, values of one or more variables are collected for several sample entities, or units, at the same point in time, while in time series, data observes the values of one or more variables over a period of time, and in pooled data the same cross-sectional units (say firm or families or states) is surveyed over time. Panel data have space as well as time dimensions (Gujarati, 2003).

#### **3.9.1 Random and Fixed Effect Test**

The study adopted the Hausman's test to check for fixed and random effects. According to Greene (2008), In order to decide between random effects and fixed effects models, researchers often rely on the Hausman specification test. Previous studies used different types of regression approaches using either fixed or random effects models. Two main panel data regression models (the fixed effects model and the random effects model) have different assumptions about the error term. The fixed effect model assumes that the individual effect term is constant while the random effect assumes that the individual effects are random disturbances drawn from probability distribution. In the random effects model, the individual behavior of firms is supposed to be unknown and is treated as random. Nevertheless, in fixed effects, individual effects are treated as fixed through time. Thus this last model is more appropriate for exhaustive samples of the population. The Hausman test is designed to detect violation of the random effects



modeling assumption that the explanatory variables are orthogonal to the unit effects. If there is no correlation between the independent variable(s) and the unit effects, then estimates of  $\beta$  in the fixed effects model ( $\beta_{fe}$ ) should be similar to estimates in the random effects model ( $\beta_{re}$ ).

Under the null hypothesis, thogonality is distributed chi-square with degrees of freedom equal to the number of regressors in the model. A finding that  $p < 0.05$  is taken as evidence that, at conventional levels of significance, the two models are different enough to reject the null hypothesis, and hence to reject the random effects model in favour of the fixed effects model. If the Hausman test does not indicate a significant difference ( $p > 0.05$ ), it does not necessarily follow that the random effects estimator is safely free from bias, and is therefore to be preferred over the fixed effects estimator. Random effects allow one to generalize the interpretations beyond the sample used in the model (Kohler & Kreuter, 2005).

### **3.10 Ethical Consideration**

The study focused on firms that are listed at the NSE and they trade publicly. These firms publish their financial reports publicly for investor analysis from where the researcher will source the data, an indication that the information is already open for the public. All Information sources were cited in the document and later referenced by the researcher. Consent was also sought through a research permit sought from the National Commission for Science, Technology and Innovation (NACOSTI).

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.0 Introduction

This chapter presents the data analysis and the interpretation of the findings as set out in the general objective of the study and the research methodology. The areas covered in the chapter include: Firms Selection, descriptive statistics, diagnostic tests, regression assumptions tests, correlation analysis, fixed and random effects, a regression analysis for both direct and moderating effects and finally the empirical discussions of the findings.

#### 4.1 Firms Selection

The study focused on the firms listed at the Nairobi Stock Exchange (NSE), where secondary data were used, specifically the audited financial reports obtained from the Capital Markets Authority (CMA). A panel data analysis was conducted on the 35 listed firms that met the inclusion criteria set out in the study. The study's inclusion-exclusion criterion was used to exclude firms that were not consistently in operation and as well as those listed at the NSE later than the year 2004. The firms were drawn from different sectors such as the agricultural, automobiles and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, manufacturing and allied. The panel data collected were spread over a 14-year period, from 2004 to 2017 resulting to a total of 490 firm-year observations. Justifying a large observation number, Creswell (2014) stated that in quantitative research, a large N is needed in order to conduct meaningful statistical tests.

## 4.2 Descriptive Statistics

This section presents the overall, sector-wise and yearly descriptive statistical results of the study variables.

### 4.2.1 Descriptive Statistics of Variables

Descriptive statistics for the independent, dependent, moderator, and control variables are presented in Table 4.1. The total number of observations for the study was 490. The results show that earnings management had a mean (median) of -0.138 (0.005) comparable with the findings of Nelson & Devi (2013) and Albersmann and Hohenfels (2017), who found out a negative average discretionary accrual. This is an indication that the firms engage in earnings management and that on average, they engage in income-decreasing type of earnings management though at minimum levels. The magnitude of the desired adjustment depends upon the prospective level of current earnings relative to what is considered normal (Beidleman, 1973). The same findings were also evident in Hassan and Ahmed (2012) where they stated that on average, the sample firms manage accruals downwards (income-decreasing accruals) and their average value over a long period should be near zero (Tehrani *et al*, 2006). The discretionary accruals were between a minimum of -3.401 and a maximum of 1.997 signifying that firms considered in the study engage in different levels of earnings management. According to Grassa (2017) managers use income decreasing techniques for income smoothing purposes and tax motives. The standard deviation of 0.842 also justifies the dispersion, indicating that firms engage in different degrees of earnings management. The same is evident in a study conducted by Al-Janadi, Rahman and Omar (2013) within the Saudi Arabian Firms. Similarly, other studies (e.g. Beidleman, 1973; Jallow, Leventis & Dimitropoulos, 2012) also evidenced earnings management practices in their studies.

The Audit Committee Independence (ACI) had a mean of 85.3% signifying a good representation by the independent directors in the audit committee. This is comparable with the proportion evident in a study conducted by Klein (2002) on publicly-trading US firms that operate within the NYSE, where the study found out that on average, 80% of the members in the Audit Committee were independent. The higher percentage also supports the findings of Sun, Lan and Liu (2014). This therefore suggests minimal influence on the audit committee's output, since they are autonomous, and therefore translating into credible financial reports. The dispersion in terms of ACI for the firms was 23.4% which could be interpreted to be higher mainly because the sizes of the committee members differ. Some firms registered a minimum of 10% while others indicated a maximum of 100% independence of the Audit committee.

The Audit Committee Meeting Frequency (ACMF) had a mean of 4 meetings per year similar to the findings in previous studies of Alderman and Hohenfels (2017), and Buallay and Aldhaen (2018). This observation is mainly due to the fact that majority of the firms at the NSE stick to quarterly meetings as a policy. Buallay and Aldhaen, (2018) in their study using firms listed in the Gulf Cooperation Council (GCC) realized an average of 4.38 yearly meetings and suggested that there should be 4 meetings per year conducted by the AC, while Albersmann and Hohenfels (2017) recommended between 4 to 5 meetings per year as optimal. The study results also revealed a standard deviation of 2.283 and a minimum of as low as 1 meeting and a maximum of 15 meetings. These findings are also not far from that found in Grassa (2017) where the study found out that members met more than five times yearly for a study conducted within five countries.

The Audit Committee Financial expertise on the other hand had an average of 33.6% of the total number of directors in the audit committee. The mean proportion of financial competency in the AC is relatively a low representation compared to 72.5% obtained in Yang and Krishnan (2005). This is an indication of inadequate average representation of financially literate members participating in the Audit Committee. However, a relatively low representation output was also reported using a sample obtained from the US firms by Sun *et al.*, (2014), where the study realized an average of 42.6% representation. A standard deviation of 0.179 showing a small dispersion within and between firms was also evident. Additionally, the range of members with financial expertise participating in the audit committee was between a minimum of 10% and a maximum of 100%.

The study also conducted a univariate analysis on Blockholder Ownership (BOWN) and from the findings; majority of the blockholders had an average of 64.1% of the total shares. This is relatively adequate enough to execute a monitoring role and reduce opportunistic managerial discretion on earnings that is reported by firms as depicted by extant literature. The blockholder ownership is relatively higher on average, and almost similar to the proportion reported by Bradbury *et al.* (2006), where they realized a mean blockholder ownership of 61.1% by using a sample of firms in Singapore and Malaysia in their study. Blockholder ownership was measured by the summation of the 5% and above percentages of total shares. The standard deviation of 18.2% of the total outstanding shares was also evident in the study. The range was between a minimum of 20% and a maximum of 98% of the total shares.

Institutional Ownership on the other hand had a mean of 65.1% of the total shares with a standard deviation of 19%. The average shows the ownership structure by institutional

investors being on the higher side, which by the foregoing can be beneficial in boosting monitoring or disadvantageous if these investors are transient in nature. Institutional investors in a firm have been previously documented by literature to play a crucial role in pressurizing management for better performance as well as in conducting a monitoring role to the management. Dissimilarly, Gull *et al.* (2017) realized a low institutional ownership at 18% of the total outstanding shares. The minimum institutional ownership in the current study was at 5%, with a maximum as high as 99% of the total outstanding shares. According to Hassan & Ahmed (2012), this implies that while some firms are substantially owned by institutional investors, others are almost wholly owned by individual investors

On CEO tenure (CP) which serves as a proxy as to how powerful a CEO is, an average of 6.1 years within the same position and a standard deviation of 5.8 years were evident as indicated in Table 4.1. Similarly, previous studies documented closer means. For instance, Wan *et al.* (2016) reported 8 years using Malaysian firms, while Gounopolous & Pham (2018) documented 4.98 years, and Gull *et al.* (2017) realized 7.82 years. Surprisingly, a CEO was found to have served for a maximum of 30 years while others served for only 1 year. The observation of a higher tenure is due to the higher stake of ownership being held by the respective CEO as well as the firm-founders serving as the CEOs. The tenure on the lower side was due to those individuals who were appointed in acting positions as the firms search for a substantial CEO. Entrenchment theory suggests that the higher the tenure of a CEO, the more powerful is the individual.

Firm size had a mean of 7.056 with a dispersion of 0.713 standard deviations as shown in Table 4.1. The minimum firm size was 4.806 and the maximum was 8.747 which indicate much disparity in firm sizes listed at the NSE. The firms operating at the NSE

proved heterogeneous in terms of size and were highly dispersed from the mean, thus suggesting the need to control for the variable in the study so that the data do not become biased as a result. Consistently, Reyna (2018) realized the same disparity in firm sizes for a study conducted within firms listed at the Mexican stock exchange. This therefore justifies the need for controlling firm size in the study which was measured as a log of total assets.

Moreover, firm age had a mean of 67.7 years with a standard deviation of 27.5 years. This observation is due to the fact that firms listed at the NSE are relatively old with the youngest having 18 years old, and the oldest with 148 years. This also indicates a greater dispersion and the same findings were evident in Sun *et al.* (2014) where firm age had a mean of 29.8 years.

**Table 4. 1: Summary table of Variables**

<b>Stats</b>	<b>N</b>	<b>Mean</b>	<b>Min</b>	<b>Max</b>	<b>Sd</b>
EM	490	-0.138	-3.401	1.997	0.842
ACI	490	0.853	0.100	1.000	0.234
ACMF	490	4.080	1.000	15.000	2.283
ACFE	490	0.336	0.100	1.000	0.179
BOWN	490	0.641	0.200	0.980	0.182
IOWN	490	0.651	0.050	0.990	0.190
CP	490	6.114	1.000	30.000	5.838
FS	490	7.056	4.806	8.747	0.713
FA	490	67.700	18.000	148.000	27.505

*EM: Earnings Management, ACI: Audit Committee Independence, ACMF: Audit Committee Meeting Frequency, ACFE: Audit Committee Financial Expertise, BOWN: Blockholder Ownership, IOWN: Institutional Ownership, CP: CEO Power, FS: Firm Size, FA: Firm Age*

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#### 4.2.2 Descriptive Statistics Sector-wise

The study further sought to conduct a sector-wise description of the variables. The variables were analyzed in respect to the nine sectors, that is; Agricultural (AG1), Automobile and Accessories (AA2), Banking (BA3), Commercial and Services (CS4), Construction and Allied (CA5), Energy and Petroleum (EP6), insurance (IS7), Investment (INV8) and, Manufacturing and Allied (MA9). The results in table 4.2 shows the ANOVA output indicating that in general, all the corporate governance mechanisms and earnings management practices significantly differ across the industries. These findings are consistent with that realized in (Wasiuzzaman, 2018) who found out that the levels of earnings management and the predictors varied according to the industries. The results further show that, earnings management was highly detected within firms in the Automobiles & Accessories sector as shown by a mean (0.892) followed by Energy and Petroleum (-0.665), then Construction and Allied (-0.628), Manufacturing and Allied (-0.369), Investment (0.321), Banking (0.277), commercial and services (-0.248), Insurance (0.197) and the lowest average EM being detected in the agricultural sector with a mean (-0.116).

The study results also indicate that the independence of the audit committee differs significantly ( $p < 0.05$ ) across the nine sectors. The proportion of independent members in the AC was highly presented in the insurance sector with a mean (96.3%) followed by the investment (94.3%), then Construction and Allied (92.5%), Manufacturing and Allied (91.8%), commercial and services (90.7%), Banking (87.4%), Energy and Petroleum (83.9%), Automobiles & Accessories (63.1%) and the lowest presented in the agriculture sector with a mean (52.7%).



Further, Audit committee meeting frequency (ACMF) also proved to differ significantly ( $p < 0.05$ ) within the sectors with a p-value less than 0.05. The results also show that more audit committee meetings were evident in the Energy & Petroleum industry with a mean of (6), followed by the Construction and Allied (5), then investment (4), Automobiles and Accessories (4) Manufacturing and Allied (4), Banking (4), commercial and services (4), Agriculture (4), and the lowest being indicated by the insurance sector with an average of 3 meetings per year.

Additionally, the results also indicated a significant difference in the proportion of members with financial expertise sector-wise ( $p < 0.05$ ). The audit committee members with financial expertise were highly represented in the Energy and Petroleum with a mean (49.1%) followed by the agriculture sector by the mean of (41.4%) then Construction and Allied (40.2%), Manufacturing and Allied (34.1%), Banking (29.6%), insurance (29.1%), commercial and services (27.5%), investment (26.6%) and the lowest indicated in the Automobiles & Accessories sector with a mean (21.2%).

The study ANOVA results also revealed that blockholder ownership had significant unequal means ( $p < 0.05$ ), confirming differences in ownership concentrations across the sectors. Also to note is that blockholder ownership was highly evidenced in the Energy and Petroleum industry with a mean (83.6%) followed by Construction and Allied (77.3%), Automobiles & Accessories (73.4%), agriculture (66.2%), commercial and services (64.9%), Banking (59.1%), insurance (58.2%), Manufacturing and Allied (53.8%), with the lowest being the Investment sector with a mean (51.7%).

The difference in Institutional ownership was also statistically significant ( $p < 0.05$ ). Institutional investors were more in the Automobiles & Accessories industry (81.6%), closely followed by the Energy and Petroleum industry (81.5%), then Construction and

Allied (70.4 %), agriculture (68.2 %), commercial and services (67.3 %), Banking (67.1 %), insurance (54.6 %), Manufacturing and Allied (53 %), with the lowest degree of institutional ownership observed in the investment sector with an average (38.9 %).

The study results also show that CEO power proxied by tenure, significantly differ within the sectors ( $p < 0.05$ ). The CEOs on average, appeared to have served for longer in the Automobiles & Accessories sector (14.5) followed by Agriculture (8.8) then commercial and services (6.6), Construction and Allied (6.4), Banking (5.1), Manufacturing and Allied (4.8), Energy & Petroleum (4.8), investment (4.6), with the lowest being the insurance sector with an average of 4.3 years.

The size of firms also differed significantly sector-wise ( $p < 0.05$ ). Measured by the log of total assets, larger firms were observed in the banking sector as shown by a mean (7.704), then Energy & Petroleum (7.371), insurance (7.286), investment (7.15), Construction and Allied (6.918), Manufacturing and Allied (6.862), commercial and services (6.686), Agriculture (6.603), and the lowest average firm size in the Automobile and Accessories industry (6.579).

Finally, firms also differed significantly in terms of age ( $p < 0.05$ ). The results in table 4.2 shows that firms within the agriculture sector were the oldest with 90.75 years, followed by Manufacturing and Allied (75.67), then Automobiles & Accessories (74.5), insurance (69), Banking (68.9), commercial and services (61.3), Construction and Allied (54.1), Energy & Petroleum (53.5) and the youngest firms observed in the investment sector with an average of 43.5 years.

**Table 4. 2: Descriptive statistics sector-wise**

Sector_ID		EM	ACI	ACMF	ACFE	BOWN	IOWN	CT	FS	FA
AG1	Mean	-0.116	0.527	3.554	0.414	0.662	0.682	8.786	6.603	90.750
	Std	0.989	0.212	1.292	0.239	0.116	0.088	9.041	0.329	35.352
AA2	Mean	0.892	0.631	4.000	0.212	0.734	0.816	14.500	6.579	74.500
	Std	0.691	0.134	0.000	0.215	0.047	0.028	4.183	0.366	4.183
BA3	Mean	0.277	0.874	3.982	0.296	0.591	0.671	5.098	7.704	68.875
	Std	0.524	0.238	1.266	0.089	0.209	0.163	3.801	0.689	29.316
CS4	Mean	-0.248	0.907	3.595	0.275	0.649	0.673	6.583	6.686	61.333
	Std	0.368	0.163	0.730	0.071	0.145	0.182	5.244	0.809	29.019
CA5	Mean	-0.628	0.925	4.800	0.402	0.773	0.704	6.443	6.918	54.100
	Std	0.904	0.222	2.399	0.210	0.133	0.151	6.584	0.521	14.682
EP6	Mean	-0.665	0.839	6.321	0.491	0.836	0.815	4.821	7.371	53.500
	Std	1.772	0.253	5.457	0.332	0.141	0.094	7.263	0.272	4.583
IS7	Mean	0.197	0.963	3.214	0.291	0.582	0.546	4.286	7.286	69.000
	Std	0.157	0.099	0.833	0.123	0.152	0.087	2.917	0.424	6.152
INV8	Mean	0.321	0.943	4.143	0.266	0.517	0.389	4.643	7.150	43.500
	Std	0.088	0.094	1.167	0.084	0.056	0.067	2.951	0.473	4.183
MA9	Mean	-0.369	0.918	3.988	0.341	0.538	0.530	4.833	6.862	75.667
	Std	0.630	0.156	3.028	0.152	0.172	0.256	4.202	0.532	25.238
<b>Total</b>	Mean	-0.138	0.853	4.080	0.336	0.641	0.651	6.114	7.056	67.700
	Std	0.842	0.234	2.283	0.179	0.182	0.190	5.838	0.713	27.505
<b>ANOVA</b>										
<b>difference:</b>	<i>F</i>	15.280	26.110	6.110	9.610	18.880	17.250	7.440	29.600	13.090
	<i>Prob&gt;F</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

AG1: Agricultural, AA2: Automobile and Accessories, BA3: Banking, CS4: Commercial and Services, CA5: Construction and Allied, EP6: Energy and Petroleum, IS7: insurance, INV8: Investment, MA9: Manufacturing and Allied.

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#### 4.2.3 Descriptive Statistics by Year

The study also sought to check whether the variables vary yearly. According to table 4.3, earnings management was highly evidenced in the year 2016 (mean = -0.312) with the lowest in the year 2010 (mean = -0.010). This shows that earnings management practices increased in the year 2016 than other years. Additionally, the ANOVA comparison indicates that earnings management do not differ significantly across the years ( $p > 0.05$ ).

Independence and technical competence of the audit committee members are also very important for their effective monitoring role (Zhang, 2012). In light of the foregoing,

the study deemed it important to establish the independence of the audit committee among publicly listed firms in Kenya for a period ranging from 2004 to 2017. In table 4.3., audit committee independence was highly evidenced in 2008 (mean = 89.1%) with the lowest in the year 2017 (mean = 75.6%). From the results it can also be noted that Audit Committee Independence demonstrated an upward trend from the year 2004 to 2008 after which it stagnated at about 85%. The ANOVA difference indicated that there was an insignificant difference on yearly ACI.

Xie *et al.* (2003) found out that an audit committee that meets regularly becomes better supervisors in overseeing the financial reporting process. The financial reports are very important for a company that wants to attract investors. The study deemed it important to establish the audit committee meeting frequency among publicly listed firms in Kenya for a period ranging from 2004 to 2017. In table 4.3, audit committee meeting frequency was relatively higher in the year 2016 (mean = 5.143) than other years, and lowest in the year 2012 (mean = 3.514). This means that audit committee had more meetings in the year 2016 than other years. The results also show that the yearly difference in the frequency of meetings were insignificant ( $p > 0.05$ )

Audit committee financial expertise is the financial skills and knowledge that the audit committee members have on how to assess accounting issues presented to them. Financial background is a key indicator of skills and knowledge that the audit committee members bring on board. Financial expertise leads AC members to identify and ask knowledgeable questions that challenge management and external audit to a greater extent of financial reporting quality (Bédard & Gendron, 2010). The study deemed it important to establish the audit committee financial expertise among publicly listed firms in Kenya for a period between 2004 and 2017. According to table 4.3, audit

committee financial expertise was highly evidenced in the year 2004 (mean = 38.8 %), and the lowest in the year 2009 (mean = 30.4 %). This means that on average, the audit committee members in the year 2004 had more financial expertise compared to other years. There was an insignificant ( $p>0.05$ ) yearly mean difference in the financial expertise of the audit committee.

Chtourou (2000), Yeo *et al.* (2002), Bos and Donker (2004) emphasized on the role of outside-blockholders (shareholders) in effectively controlling the process of preparing financial statements, which reduces the tendency to manipulate the results by managers who exercise their discretion in reporting earnings. The study therefore deemed it important to establish the degree of blockholding among publicly listed firms in Kenya for a period ranging from 2004 to 2017. Table 4.3 illustrates that blockholders' presence was highly evidenced in the year 2017 (mean =0.676), with the lowest being observed in the year 2012 (mean = 0.617). This shows that blockholders' involvement increased in the year 2017 than other years. Further, the results depict a downward trend in blockholding between the years 2004 to 2012.

The study focused on institutional ownership among publicly listed firms in Kenya for a period ranging from the years 2004 to 2017. According to table 4.3 evidently, institution ownership was highly evidenced in the year 2017 (mean = 0.686) with the lowest in year 2011 (mean = 0.629). This shows that Institutional investors were higher in year 2017 than other years. It can also be noted that institutional ownership decreased between the years 2004 and 2011.

CEO power which had a proxy tenure of an individual is the control power that the executive officer exhibits in a firm. Pathan and Skully (2010) argue that CEO power can be of advantage or a disadvantage to a firm. A firm with high monitoring costs may

benefit from the all-knowing CEO of a complex firm. However, it is argued that the roles should be separated to ensure board independence and that the CEO receives no extra benefits. The study sought to establish the CEO power among publicly listed firms in Kenya for a period ranging between 2004 and 2017, and according to table 4.3, CEO tenure was highly evidenced in the year 2012 (mean = 7.886) with the lowest being registered in 2004 (mean = 3.829). This means that CEO power was more exhibited in year 2017 than other years.

Finally, for firm size, it was evident from the findings in table 4.3 that it had the highest mean of 7.308 in the year 2015 with the lowest in year 2004 (mean = 3.829). The firm size also indicated a significant yearly difference ( $p < 0.05$ ).

**Table 4. 3: Descriptive Statistics by Year**

Year		EM	ACI	ACMF	ACFE	BOWN	IOWN	CT	FS
2004	Mean	-0.234	0.844	4.029	0.388	0.676	0.666	3.829	6.649
	Std	0.983	0.233	2.662	0.223	0.192	0.213	3.722	0.598
2005	Mean	-0.298	0.863	4.229	0.358	0.667	0.655	4.400	6.733
	Std	1.028	0.197	2.602	0.195	0.191	0.213	3.912	0.591
2006	Mean	-0.144	0.870	3.886	0.320	0.651	0.638	4.257	6.812
	Std	0.886	0.224	1.937	0.155	0.180	0.204	3.943	0.601
2007	Mean	-0.262	0.883	3.914	0.331	0.638	0.650	4.686	6.881
	Std	0.887	0.223	2.005	0.166	0.183	0.185	4.164	0.596
2008	Mean	-0.121	0.891	3.543	0.313	0.627	0.644	5.343	6.975
	Std	0.684	0.221	0.817	0.117	0.172	0.182	5.104	0.621
2009	Mean	-0.020	0.870	3.800	0.304	0.625	0.646	5.943	7.029
	Std	0.769	0.227	1.132	0.117	0.174	0.184	5.324	0.629
2010	Mean	-0.010	0.873	3.657	0.321	0.622	0.645	6.571	7.081
	Std	0.673	0.230	1.235	0.178	0.173	0.180	5.564	0.688
2011	Mean	-0.105	0.854	3.971	0.312	0.621	0.629	7.314	7.138
	Std	0.675	0.239	2.007	0.140	0.173	0.188	5.692	0.711
2012	Mean	0.013	0.853	3.514	0.333	0.617	0.635	7.886	7.187
	Std	0.684	0.234	1.337	0.183	0.176	0.188	6.004	0.734
2013	Mean	-0.064	0.849	4.143	0.350	0.631	0.644	6.514	7.261
	Std	0.873	0.235	2.767	0.218	0.189	0.191	6.322	0.734
2014	Mean	-0.147	0.854	4.629	0.333	0.633	0.655	7.000	7.259
	Std	0.900	0.204	3.030	0.193	0.192	0.193	6.633	0.767
2015	Mean	-0.167	0.846	4.314	0.346	0.632	0.654	6.857	7.308
	Std	0.893	0.254	2.576	0.180	0.192	0.191	7.068	0.771
2016	Mean	-0.312	0.835	5.143	0.371	0.666	0.665	7.486	7.242
	Std	0.954	0.247	3.362	0.209	0.200	0.197	7.318	0.781
2017	Mean	-0.054	0.756	4.343	0.323	0.676	0.682	7.514	7.229
	Std	0.859	0.308	2.578	0.198	0.177	0.171	7.860	0.803
Total	Mean	-0.138	0.853	4.080	0.336	0.640	0.651	6.114	7.056
	Std	0.842	0.234	2.283	0.179	0.185	0.190	5.838	0.713
<b>ANOVA</b>									
<b>difference:</b>									
<i>F</i>		<i>0.56</i>	<i>0.650</i>	<i>1.320</i>	<i>0.630</i>	<i>0.470</i>	<i>0.190</i>	<i>1.980</i>	<i>3.390</i>
<i>Prob &gt; F</i>		<i>0.8879</i>	<i>0.815</i>	<i>0.199</i>	<i>0.8317</i>	<i>0.941</i>	<i>0.999</i>	<i>0.021</i>	<i>0.000</i>

*EM*: Earnings Management, *ACI*: Audit Committee Independence, *ACMF*: Audit Committee Meeting Frequency, *ACFE*: Audit Committee Financial Expertise, *BOWN*: Blockholder Ownership, *IOWN*: Institutional Ownership, *CP*: CEO Power, *FS*: Firm Size, *FA*: Firm Age

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### **4.3 Diagnostic Test**

#### **4.3.1 Unit Root test**

A time-series data is said to be stationary if its mean and variance are constant over time (Gujarati, 2003). Thus, the series tend to drift around its mean due to the limited variance. The series can be of a stochastic nature (randomly determined) or a deterministic nature (displaying a trend). In contrast a non-stationary time-series or a random walk model is one where the mean and variance continually change over time and has a simple correlation coefficient between the  $X$  variable and its lagged variable which is influenced by factors other than solely the length of the lag between the two (Studenmund, 2011). In the field of economics and finance, time related or seasonal shocks in one-time period may strongly influence subsequent periods.

The study applied two tests to check for the stationary of each variable. First, is the Harris-Tzavalis unit root test developed by Harris and Tzavalis (1999), and secondly is the use of Fisher test developed by Choi (2001) using Phillips-Perron test for unit root. The hypotheses were tested at 5% significance level, where a p-value less than 0.05 rejects the null hypothesis meaning the stationarity of the panel data holds. Table 4.4 below shows both the null and alternative hypotheses for the two tests that were applied in the study.



**Table 4. 4: Unit root test Hypothesis**

Test	Hypothesis
Harris -Tzavalis	Ho: All panels contain unit root
	Ha: Panels are stationary
Fisher Type test Hypothesis	Ho: All panels contain unit root
	Ha: Panels are stationary

Table 4.5 below shows the unit root test results for the two analyses tests used. It is evident that for all the  $p$ -values in Table 4.5, all the null hypotheses were rejected at a 0.05 significance level for all the variables, meaning there is no unit root in the data (stationarity holds). This implies that the means and variances in the data do not depend on time, hence the application of the regression model can produce meaningful results (Gujarati, 2012).

**Table 4. 5: Unit root test**

	Harris-Tzavalis Unit-root test		Fisher Type Unit-root test	
	Z	p-value	Z	p-value
EM	-6.121	0.000	-3.910	0.000
ACI	-16.539	0.000	-4.276	0.000
ACMF	-8.523	0.000	-3.074	0.001
ACFE	-7.916	0.000	-3.268	0.001
BOWN	-3.222	0.001	-2.303	0.011
IOWN	-3.119	0.001	-1.888	0.030
CP	-1.899	0.029	-2.516	0.006

*EM: Earnings Management, ACI: Audit Committee Independence, ACMF: Audit Committee Meeting Frequency, ACFE: Audit Committee Financial Expertise, BOWN: Blockholder Ownership, IOWN: Institutional Ownership, CP: CEO Power*

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#### **4.4 Regression Assumptions Results**

In order to conduct the regression models for the study, it was important first to check on the underlying assumptions of regression. Failure to meet these assumptions may cause the results of an analysis to be inaccurate (Marczyk, DeMatteo & Festinger, 2005). The study therefore sought to check for the normality, multicollinearity, Homoscedasticity and autocorrelation assumptions.

##### **4.4.1 Normality Assumption**

To check for the normality assumption, Jarque-Bera, Shapiro–Wilk and Shapiro-Francia tests were conducted and the hypotheses tested at a 0.05 significance level.

###### **4.4.1.1 Jarque-Bera Normality test**

Under the Jarque-Bera Test, if the Chi (2) value is lower than the significance level of 0.05, then the null hypothesis is rejected, and it can therefore be concluded that the data is not normally distributed. On the contrary, if the p-value is greater than 0.05, then the null hypothesis is not rejected meaning the data is normally distributed. This test checked for the normality assumption basing on the hypotheses that:

Ho: The data follows a normal distribution

Ha: The data does not follow a normal distribution

In table 4.6, the p-value (Jarque-Bera Chi (2) = 0.6679) is greater than 0.05 meaning the null hypothesis cannot be rejected. This therefore implies that the data was normally distributed. Additionally, the skewness/kurtosis test had a P-value of 0.600 which was greater than 0.05, also proving that the data was asymptotically normally distributed. The implication is that there is no violation of the normal distribution assumption of error terms since the residuals are normal.

**Table 4.6: Jarque-Bera test for normality**

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	----- Joint ----- chi2(2)	----- Prob>chi2
myresiduals	490	.4529	.6980	.72	.600
Jarque-Bera	normality test: 0.8072,		Chi(2) 0.6679		
Jarque-Bera	test for Ho: normality:				

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#### 4.4.1.2 Shapiro-Wilk and Shapiro-Francia Normality test

According to Yap and Sim (2011), Shapiro–Wilk test is the most powerful test for normality, while Mbah & Paothong (2015) stated that Shapiro-Francia normality test is the best test statistic in detecting the deviations from normality. Shapiro Wilk and Shapiro-Francia normality tests were therefore adopted to also check for the normality assumption. As depicted in table 4.7, the p-values of the tests also shows a normal distribution since the *p*-values (0.11808 & 0.14845) were greater than 0.05 meaning the null hypothesis of normality cannot be rejected. These tests were also based on the assumptions that:

Ho: The data follows a normal distribution

Ha: The data does not follow a normal distribution

**Table 4. 7: Shapiro-Wilk and Shapiro- Francia Normality tests**

	Variable	Obs	W	V	z	Prob>z
<b>Shapiro-Wilk</b>	My residuals	490	0.99504	1.638	1.185	0.11808
<b>Shapiro-Francia</b>	My residuals	490	0.99546	1.610	1.043	0.14845

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#### 4.4.2 Multicollinearity Assumption

Multicollinearity is a phenomenon whereby a high correlation exists between the independent variables. It occurs in a multiple regression model when high correlation exists between the predictor variables, prompting questionable assessments of the regression coefficients. This leads to strange outcomes when attempts are made to

decide the degree to which the independent variables explain the changes in the outcome variable (Creswell, 2014). The outcomes of multicollinearity are expanded standard errors of evaluations of the Betas, which means diminished reliability quality and misleading results. A multicollinearity test was used to check whether there existed a high correlation between one or more independent variables in the study.

The Variance inflation factor (VIF) measured the correlation level between the predictor variables, and estimated the inflated variances due to linear dependence with other explanatory variables. A common rule of thumb is that VIFs of 10 or more suggest the presence of multicollinearity that affects the study (Newbert, 2008). The results of the VIF test as shown in Table 4.8 ranged from between 1.10 and 2.53 meaning all the Variance Inflation Factors were less than 10, indicating that the model was free from a multicollinearity problem. Tabachnick and Fidell (2001) stated that a tolerance value of 0.10 is recommended as the minimum level of tolerance. Table 4.8 shows that the tolerance values for all the variables were more than 0.1 also indicating the absence of multicollinearity between the exogenous variables of the study.

**Table 4. 8: VIF test for Multicollinearity**

<b>Variable</b>	<b>VIF</b>	<b>1/VIF</b>
IOWN	2.53	0.394720
BOWN	2.40	0.416522
ACFE	1.46	0.687144
ACMF	1.40	0.716630
FA	1.34	0.748146
FS	1.19	0.843635
ACI	1.11	0.903923
CP	1.10	0.905835
Mean VIF	1.56	

*IOWN*: Institutional Ownership, *BOWN*: Blockholder Ownership, *ACFE*: Audit Committee Financial Expertise, *ACMF*: Audit Committee Meeting Frequency, *FA*: Firm Age, *FS*: Firm Size, *ACI*: Audit Committee Independence, *CP*: CEO Power

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### 4.4.3 Heteroscedasticity Assumption

This assumption involves checking whether the data has a constant variance, which is desirable in conducting a regression analysis. Gujarati (2003) states that heteroscedasticity makes the estimators to be inefficient, and this lack of efficiency renders the usual hypothesis-testing procedure of dubious value. To check for the homoscedasticity assumption, the study used the Breusch-Pagan test and the White's test to check for the assumption. The hypotheses were tested at a 0.05 significance level.

#### 4.4.3.1 Breusch-Pagan Test for Homoscedasticity

Under the Breusch-Pagan test, the null hypothesis ( $H_0$ ) assumes Homoscedasticity, while the alternative ( $H_a$ ) assumes heteroscedasticity. Table 4.9 shows that the p-value is 0.4099 which is greater than 0.05 meaning the null hypothesis is not rejected, and concluded that there is no heteroscedasticity problem. Instead the error variance is constant (homoscedasticity).

**Table 4. 9: Breusch-Pagan / Cook-Weisberg Test for Homoscedasticity**

---

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

$H_0$ : Constant variance

Variables: fitted values of my residuals

chi2(1) = 0.68

Prob > chi2 = 0.4099

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**Research (2020)**

#### 4.4.3.2 White's test for Homoscedasticity

Further tests to check for the homoscedasticity assumption was conducted using the White's test. The results in table 4.10 proves homoscedasticity since the p-value (0.7262) is greater than 0.05, meaning the null hypothesis ( $H_0$ ) is not rejected. Thus, the error variance is constant since the p-value is not significant.

**Table 4.10: The White's Test for Homoscedasticity**

White's	test for Ho:	Homoscedasticity
	against Ha:	unrestricted heteroskedasticity
	chi2(44)	0.64
	Prob > chi2	.7262

**Research (2020)****4.4.4 Autocorrelation Assumption**

Gujarati (2003) defined autocorrelation as the correlation between members of series of observations ordered in time (as in time series data) or space (as in cross-sectional data). Autocorrelation in the study was detected using the modified Durbin-Watson test and Baltagi-Wu test. According to Drukker (2003), these tests employ many specification assumptions such as individual effect types, need for non-stochastic regressors and inability to work in the presence of heteroscedasticity. A rule of thumb on the autocorrelation tests is that a value between 0 and 4 indicates that there is no autocorrelation in the data. The results in table 4.11 means that both the values for the Durbin-Watson (1.2270564) and Baltagi-Wu (1.4567944) fall between the no autocorrelation threshold of between 0 and 4.

**Table 4.11: Autocorrelation Test**

	modified Bhargava et al.	
Fixed effect/ Random effect	Durbin-Watson	1.2270564
	Baltagi-Wu LBI	1.4567944

**Research (2020)****4.5 Correlation Results**

Correlation refers to a statistical measure of association between two variables measured by a coefficient that has both a direction and a magnitude, whereby the direction can either be positive or negative (Vanderstoep & Johnston, 2009). The coefficient helps in measuring the strength and the direction of the relationship between the variables. According to Gujarati (2003), the coefficient lies between  $-1$  and  $+1$ ,

where  $-1$  indicates a perfect negative association while  $+1$  indicates a perfect positive association. In the study Pearson correlation coefficient was used to measure the strength and direction of linear association between the corporate governance mechanism variables, control variables and earnings management. The coefficients were also used to check for the multicollinearity assumption of regression, where a correlation coefficient of 0.8 or more raises a serious multicollinearity problem (Hair *et al.*, 2006) between the independent variables. The results for correlation analysis were summarized and presented in table 4.12.

Generally, the results presented in table 4.12 indicate that there is no multicollinearity problem, since all the coefficients were below 0.8. Among the study variables, audit committee financial expertise exhibited the highest association in relation to earnings management, followed by the audit committee meeting frequency, then audit committee independence, CEO tenure, Firm Age, blockholder ownership, institutional ownership and lastly firm age.

The Pearson correlation results in the table 4.12 specifically shows that audit committee independence (ACI) had a negative and significant ( $r = -0.285$ ,  $p < 0.01$ ) association with earnings management. This means that an increase in the proportion of independent members sitting in the audit committee significantly decreases discretionary earnings management. This output concurs with that realized in the previous studies of Elijah and Ayemere (2015), and Latif and Abdullah (2015) who found out that more independence in the AC reduces earnings management.

The results also show that audit committee meeting frequency (ACMF) has a negative and significant ( $r = -0.448$ ,  $p < 0.01$ ) relationship with earnings management, and the p-value was significant at 0.01. These results therefore mean that as the number of

meetings held annually by the audit committee increases, earnings management significantly decreases. This agrees with the findings of Katmon and Al Farooque (2017), and Albersmann and Hohenfels (2017) whose studies also realized a negative relationship between the number of meetings conducted by the AC and earnings management. However, the yearly meetings should not be too many so as to generate agency conflicts, where the members attend many meetings for self-interests, being motivated by the incentives given to them upon attendance. As realized in the study, the optimum average number of meetings therefore should be around four per year. The same sentiments were made by Albersmann & Hohenfels (2017), where they stated that 4–5 meetings per year seem to represent an effective number of meetings in order to reduce the level of earnings management.

The correlation results further indicate that audit committee financial expertise (ACFE) has a negative and significant ( $r = -0.619$ ,  $p < 0.01$ ) association with earnings management. Thus, an increase in the percentage of members with financial expertise within the audit committee, significantly reduces the tendency by the management to engage in earnings management. The results are comparable with those realized in the previous studies (e.g. Vafeas, 2005; Nelson & Devi, 2013; Katmon & Al Farooque, 2017; Albersmann & Hohenfels, 2017) where they found that the larger the proportion of financial expertise in the audit committee, the lesser is earnings management.

The study also checked for the relationship between blockholder ownership and earnings management. Table 4.12 illustrates that there is a negative and significant ( $r = -0.194$ ,  $p < 0.01$ ) association between blockholder ownership and earnings management. Thus, it can be argued that as the proportion of blockholders increase in a firm, earnings management decreases significantly. The findings are in line with the view of agency



theory where blockholders who are the largest owners monitor activities of the management closely to reduce opportunistic earnings management. The same was echoed by Bharath *et al.* (2013) that blockholders threat of exit upon realization of divergence of interests aligns managers' and shareholders' interests.

Institutional ownership on the other hand was found to have a positive and significant ( $r= 0.171$ ,  $p<0.01$ ) relationship with earnings management. This therefore can be interpreted to mean that higher proportion of institutional investors in a firm triggers a significant upward trend in earnings management. This observation is mainly due to the fact that the institutions always pressure management for short-term performance therefore forcing management to resort into earnings management as a means of reaching set targets. In support of the study findings, Latif and Abdullah (2015) also found a positive and significant association between institutional ownership and discretionary accruals.

The correlation results also indicated that CEO power has a positive and significant ( $r=0.266$ ,  $p<0.01$ ) relationship with earnings management. This means that an increase in CEO's power, significantly increases the tendency to manipulate earnings for self-interests. This observation could be motivated by the fact that CEOs' pay are pegged on their performance. A powerful CEO can easily engage in income-increasing earnings management for more incentives without red flags being raised as compared to a CEO with less power. The same findings were also evident in studies conducted by Latif & Abdullah (2015) and Wan *et al.* (2016) who cites a positive relationship between CEO power and earnings management.

Further, firm size showed a positive and significant ( $r=0.123$ ,  $p<0.01$ ) association with earnings management. It follows therefore that an increase in firm size also increases

earnings management in a firm. This is interpreted to mean that large firms are more likely to engage in earnings management practices as compared to small firms. The same findings were also evident in the previous studies of Nelson & Devi (2013) and Gull *et al.* (2017).

The output also indicated that firm age is positively and significantly ( $r=0.219$ ,  $p<0.01$ ) correlated with earnings management. This is an indication that as the age of a firm increases, the likelihood of managing earnings also increases. Thus, from the findings it can be argued that older firms tend to engage more in earnings management than younger firms which are still growing. This observation could be motivated by performance, where large firms are deemed to have more pressure to perform well at the declining stage, therefore compelling management engage in earnings management so as to record a false growth.

**Table 4.12: Correlation results**

	EM	ACI	ACMF	ACFE	BOWN	IOWN	CT	FS	FA
EM	1								
ACI	-0.285**	1							
ACMF	-0.448**	0.099*	1						
ACFE	-0.619**	0.069	0.507**	1					
BOWN	-0.194**	0.005	0.117**	0.203**	1				
IOWN	0.171**	-0.064	0.037	0.132**	0.714**	1			
CP	0.266**	-0.220**	-0.116*	-0.205**	-0.069	-0.023	1		
FS	0.123**	0.157**	0.118**	0.016	-0.279**	-0.153**	-0.079	1	
FA	0.219**	-0.195**	-0.036	-0.111*	0.136**	0.380**	0.132**	-0.176**	1

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

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

*EM*: Earnings Management, *ACI*: Audit Committee Independence, *ACMF*: Audit Committee Meeting Frequency, *ACFE*: Audit Committee Financial Expertise, *BOWN*: Blockholder Ownership, *IOWN*: Institutional Ownership, *CP*: CEO Power, *FS*: Firm Size, *FA*: Firm Age

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### 4.6 Random and Fixed Effects

Panel data may suffer from the effects of the errors that result due to different firms within different sectors. The study therefore sought to determine whether to conduct

the regressions using either the random or fixed effects. To make the decision, a regression had to be conducted using random and fixed effects after which Hausman's tests were carried out for each model to inform the decision.

#### **4.6.1 Random Effect**

The random effect model estimates the coefficients based on the assumption that the individual or group effects are uncorrelated with other independent variables. The regression results using the random model are illustrated in table 4.13. The random model shows that audit committee independence, audit committee meeting frequency, audit committee financial expertise, blockholder ownership, institutional ownership, firm size and firm age explains up to 66.14% of the variation in earnings management. Audit committee independence (ACI) had a negative and significant ( $\beta = -0.623$ ,  $\rho < 0.05$ ) effect on earnings management, meaning a unit increase in the independence of the audit committee decreases earnings management by 0.623 units.

The audit committee meeting frequency (ACMF) showed a negative and significant ( $\beta = -0.067$ ,  $\rho < 0.05$ ) effect on earnings management. Thus, a unit increase in the number of meetings held annually, reduces earnings management by 0.067 units. Furthermore, audit committee financial expertise (ACFE) also depicted a negative and significant ( $\beta = -2.109$ ,  $\rho < 0.05$ ) effect on earnings management meaning a unit increase in the financial expertise of the audit committee triggers a decrease in earnings management by 2.109 units. Additionally, blockholder ownership showed a negative and significant ( $\beta = -2.546$ ,  $\rho < 0.05$ ) effect on earnings management, meaning a unit increase in blockholder ownership will trigger earnings management to reduce by 2.546 units.

Institutional ownership showed a positive and significant ( $\beta = 3.010$ ,  $\rho < 0.05$ ) effect on earnings management. Therefore, a unit increase in institutional ownership leads to an

increase in earnings management by 3.010 units. For the control variables in the random effect model, Firm size ( $\beta= 0.062$   $\rho>0.05$ ) and firm age ( $\beta= -0.001$ ,  $\rho>0.05$ ) portrayed an insignificant effect on earnings management.

**Table 4.13: Random effect regression Results**

Random-effects GLS regression	Number of obs	=	490			
Group variable: firmid	Number of groups	=	35			
R-sq: within	Obs per group: min	=	14			
between	Avg	=	14			
overall	Max	=	14			
corr(u_i, X) = 0 (assumed)	Wald chi2(7)	=	925.39			
	Prob > chi2	=	0.000			
	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ACI	-0.623	0.102	-6.070	0.000	-0.823	-0.422
ACMF	-0.067	0.011	-6.310	0.000	-0.088	-0.046
ACFE	-2.109	0.143	-14.760	0.000	-2.389	-1.829
BOWN	-2.546	0.293	-8.690	0.000	-3.120	-1.971
IOWN	3.010	0.274	10.990	0.000	2.472	3.546
FS	0.062	0.048	1.300	0.193	-0.032	0.157
FA	-0.001	0.002	-0.580	0.560	-0.005	0.003
_cons	0.693	0.395	1.760	0.079	-0.081	1.466
sigma_u	0.350					
sigma_e	0.381					
Rho	0.458	(fraction of variance due to u_i)				

*ACI: Audit Committee Independence, ACMF: Audit Committee Meeting Frequency, ACFE: Audit Committee Financial Expertise, BOWN: Blockholder Ownership, IOWN: Institutional Ownership, FS: Firm Size, FA: Firm Age*

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### 4.6.2 Fixed effect

A fixed-effect model controls for all time-invariant differences between the individuals (Torres-Reyna, 2007). It considers the independence of each cross-sectional units. Table 4.14 highlights the regression results for the fixed effect model. The fixed effect model showed that audit committee independence (ACI), audit committee meeting frequency (ACMF), audit committee financial expertise (ACFE), blockholder ownership (BOWN), institutional ownership (IOWN), firm size (FS) and firm age (FA) explains up to 66.25% of the variation in earnings management. From the table, audit committee independence portrayed a negative and significant ( $\beta= -0.595$ ,  $\rho<0.05$ ) effect

on earnings management, meaning a unit increase in the independence of the audit committee decreases earnings management by 0.595 units.

The audit committee meeting frequency also showed a negative and significant ( $\beta = -0.068$ ,  $\rho < 0.05$ ) effect on earnings management. Thus, a unit increase in the audit committee meeting frequency results in the reduction of earnings management by 0.068 units. Furthermore, audit committee financial expertise also showed a negative and significant ( $\beta = -2.051$ ,  $\rho < 0.05$ ) effect on earnings management. Therefore, a unit increase in the audit committee financial expertise leads to a decrease in earnings management by 2.051 units. Blockholder ownership also indicated a negative and significant ( $\beta = -2.727$ ,  $\rho < 0.05$ ) effect on earnings management which is interpreted to mean that an increase in blockholder ownership by a unit reduces earnings management by 2.727 units.

Institutional ownership indicated a positive and significant ( $\beta = 3.209$ ,  $\rho < 0.05$ ) effect on earnings management. Thus, an increase in institutional ownership by a unit leads to an increase in earnings management by 3.209 units. For the control variables, firm size ( $\beta = -0.002$ ,  $\rho > 0.05$ ) and firm age ( $\beta = 0.002$ ,  $\rho > 0.05$ ), they indicated an insignificant effect on earnings management.

**Table 4.14: Fixed Effect Regression Results**

Fixed-effects (within) regression	Number of obs	=	490
Group variable: firmid	Number of groups	=	35
R-sq: within = 0.6625	Obs per group: min	=	14
between = 0.5337	Avg	=	14
overall = 0.6000	Max	=	14
corr(u_i, Xb) = -0.1575	F (7,448)	=	125.65
	Prob > F	=	0.000

EM	Coef.	Std. Err.	t	P>t	[95% Conf.	Interv al]
ACI	-0.595	0.107	-5.580	0.000	-0.804	-0.385
ACMF	-0.068	0.011	-6.230	0.000	-0.090	-0.047
ACFE	-2.051	0.148	13.850	0.000	-2.342	-1.760
BOWN	-2.727	0.345	-7.900	0.000	-3.405	-2.049
IOWN	3.209	0.313	10.260	0.000	2.594	3.823
FS	-0.002	0.068	0.030	0.978	-0.136	0.132
FA	0.002	0.006	0.440	0.657	-0.008	0.013
_cons	0.847	0.435	1.950	0.052	-0.008	1.702
sigma_u	0.398					
sigma_e	0.381					
Rho	0.521	(fraction of variance due to u_i)				
F test that all u_i=0:		F(34, 448) =	11.53	Prob > F = 0.0000		

*ACI: Audit Committee Independence, ACMF: Audit Committee Meeting Frequency, ACFE: Audit Committee Financial Expertise, BOWN: Blockholder Ownership, IOWN: Institutional Ownership, FS: Firm Size, FA: Firm Age*

**Research (2020)****4.7 Hausman's Test**

The use of panel data model allows for either the fixed effect or random effect models to estimate the dependence relationship among the variables. The Hausman test informs on the decision between fixed and random effects, whereby its rationale for decision making is to opt for the random effects if the error terms are correlated, since inferences may not be correct (Torres-Reyna, 2007). To decide between a random and a fixed effects model, the Hausman's test developed by Hausman (1978) was conducted. Its null hypothesis (Ho) states that a random effect is appropriate, while the alternative hypothesis (Ha) states that the fixed effect is the appropriate model. The hypotheses were tested at a 0.05 significance level, whereby rejecting the null hypothesis ( $p < 0.05$ ) indicates that the fixed effect model is to be used in conducting the regression models.

After running the two regression models, a Hausman specification test was conducted to decide between the fixed and random effects estimator to be used in conducting the subsequent regressions. The decision therefore on whether to use fixed effect or random effects models in conducting the regression was informed by the results of the Hausman test in table 4.15.

The table indicates that the chi-square value and its  $p$ -value ( $\chi^2 = 8.10$ ;  $p > 0.05$ ) were not significant. Therefore, the null hypothesis of random effects, stating that the random effect is appropriate was not rejected. The Hausman's test therefore concluded that for the subsequent regression models to be conducted, a random effects model is appropriate for use so as to test the research hypotheses.

**Table 4.15: Hausman Test**

	---- Coefficients ----			
	(b) Fe	(B) Re	(b-B) Difference	$\sqrt{\text{diag}(V_b - V_B)}$ S.E.
ACI	-0.595	-0.623	0.028	0.029
ACMF	-0.068	-0.067	-0.001	0.003
ACFE	-2.051	-2.109	0.058	0.039
BOWN	-2.727	-2.546	-0.182	0.182
IOWN	3.209	3.010	0.199	0.151
FS	-0.002	0.062	-0.064	0.048
FA	0.002	-0.001	0.004	0.005

b = consistent under  $H_0$  and  $H_a$ ; obtained from xtreg

B = inconsistent under  $H_a$ , efficient under  $H_0$ ; obtained from xtreg

Test:  $H_0$ : difference in coefficients not systematic

$$\chi^2(7) = (b-B)'[(V_b - V_B)^{-1}](b-B)$$

$$= 8.10$$

$$\text{Prob} > \chi^2 = 0.3243$$

*ACI*: Audit Committee Independence, *ACMF*: Audit Committee Meeting Frequency, *ACFE*: Audit Committee Financial Expertise, *BOWN*: Blockholder Ownership, *IOWN*: Institutional Ownership, *FS*: Firm Size, *FA*: Firm Age

**Research (2020)**

## **4.8 Regression Results**

The study's purpose was to determine the moderating effect of CEO power on the relationship between corporate governance mechanism and earnings management. A hierarchical regression model with eight models was applied to check for both direct and moderating effects of the independent and moderating variables respectively on earnings management. In the hierarchical regression; the first model regressed the dependent and the controls variables, second model regressed the dependent, controls, independent and the moderator while models four to seven regressed the dependent, controls, independent and moderator by gradually introducing the interactions to test the hypotheses. All the models adopted the random effects models as suggested by the Hausman's tests conducted to decide between the random and fixed effects. The research hypotheses were tested at a 0.05 significance level where a p-value less than 0.05 rejects the null hypothesis.

### **4.8.1 Control Variables**

Table 4.16 indicates that the overall first model, was significant (F-value = 9.81;  $p < 0.05$ ). The p-value was less than 0.05 indicating that the overall model was fit. The control variable Firm size (FS) had a positive and significant ( $\beta = 0.171$ ;  $p < 0.05$ ) effect on earnings management. The p-value is less than 0.05 meaning firm size has a significant effect on earnings management, while its positive coefficient indicates that a unit increase in firm size increases earnings management by 0.171 units. This therefore justifies the need for its control in the study. Additionally, a z-value of 2.22 for firm size is within the rejection region also justifying the significance of firm size effect on earnings management. From the foregoing, it can therefore be argued that large firms manage earnings more, compared to small firms. This is due to the fact that the management of large firms are under intense pressure to produce impressive results.



The management will therefore manage earnings upwards or downwards to suit their targets. These findings are consistent with the findings of Klein (2002), Xie *et al.* (2003), Nelson and Devi (2013), and Reyna (2018) whose studies found out that firm size has a positive and significant effect on earnings management.

Model 1 also shows that Firm Age (FA) has a positive and significant ( $\beta=0.006$ ,  $p<0.05$ ) effect on earnings management. The p-value was less than 0.05 indicating a significant effect of firm age on earnings management. A positive coefficient on the other hand also shows that a unit increase in firm age increases earnings management by 0.006 units. This therefore justifies the need for controlling for the effect of firm age in the model. The z-value for firm age of 1.99 falls within the rejection region, additionally confirming the significant effect of the age of a firm on earnings management. From the results, it can be concluded therefore that older firms engage in more earnings management as compared to young firms. The firms' life cycle justifies the fact that they perform well during early stages and experience continued growth, until the declining and maturity phase where they are older enough to start experiencing declining performance. Managers under pressure to register continued growth in performance are compelled to engage in earnings management so as to maintain a good image of the firm and thus the observed increase in earnings management as the firm is aging. Therefore, the first hierarchical regression model is rewritten as;

**Table 4.66: EM and Control Variables**

Random-effects GLS regression				Number of obs = 490		
Group variable: firmid				Number of groups = 35		
R-sq: within = 0.0092				Obs per group: min = 14		
between = 0.1600				avg = 14		
overall = 0.0747				max = 14		
corr(u_i, X) = 0 (assumed)				Wald chi2(2) = 9.81		
				Prob > chi2 = 0.0074		
em	Coef.	Std.Err.	z	P>z	[95% Conf. Interval]	
fs	0.1708789	0.0770389	2.22	0.027	0.0198854	0.3218724
fa	0.0060657	0.0030486	1.99	0.047	0.0000905	0.012041
-						
_cons	-1.753904	0.5700266	3.08	0.002	-2.871135	-0.6366722
sigma_u	0.50832494					
sigma_e	0.64869969					
rho	0.38043601	(fraction of variance due to u_i)				

#### 4.8.2 Direct Effects

A random effects regression model was conducted for the effects of audit committee independence (ACI), audit committee financial expertise (ACFE), audit committee meeting frequency (ACMF), blockholder ownership (BOWN) and institutional ownership (IOWN) on earnings management (EM), while controlling for the effects of Firm Age (FA) and Firm Size (FS).

The results presented in table 4.17 shows the resulting output which indicates that the overall model was significant ( $p < 0.05$ , F-value = 937.12). The R-square (0.6640) for the model means that the variables accounts for up to 66.40% of the variation in earnings management.

Audit committee independence showed a negative and significant effect ( $\beta = -0.612$ ,  $p < 0.05$ ) on earnings management. The p-value was less than 0.05 indicating that the independence of the audit committee significantly affects earnings management. Additionally, the z-value (-5.99) given the intervals, falls within the rejection region,

also justifying for the significant effect of audit committee independence on earnings management. Moreover, the negative coefficient indicates that a unit increase in the independence of the audit committee decreases earnings management by 0.612 units.

Audit committee meeting frequency has a negative and significant effect ( $\beta = -0.068$ ,  $\rho < 0.05$ ) on earnings management. The p-value was less than 0.05 indicating that the number of meetings held in a financial year by the audit committee affects earnings management. The negative coefficient indicates that a unit increase in the number of meetings held by the audit committee decreases earnings management by 0.068 units. Additionally, the z-value (-6.4) given the intervals falls within the rejection region, also justifying for the significant effect of CEO power on earnings management.

Audit committee financial expertise has a negative and significant effect ( $\beta = -2.063$ ,  $\rho < 0.05$ ) on earnings management. The p-value was less than 0.05 indicating that the proportion of financial expertise in the audit committee significantly affects earnings management. The z-value (-14.3) given the intervals, falls within the rejection region, also justifying for the significant effect of audit committee financial expertise on earnings management. A positive coefficient indicates that a unit increase in the proportion of members with financial expertise in the audit committee decreases earnings management by 2.063 units.

Blockholder ownership had a negative and significant ( $\beta = -2.466$ ,  $\rho < 0.05$ ) effect on earnings management. The p-value was less than 0.05 indicating that the proportion of blockholder ownership structure significantly affects earnings management. Additionally, the z-value (-8.39) given the intervals, falls within the rejection region, also justifying for the significant effect of blockholder ownership on earnings

management. Moreover, the negative coefficient indicates that a unit increase in the proportion of blockholder ownership decreases earnings management by 2.466 units.

Institutional ownership had a positive and significant ( $\beta = 2.952$ ,  $\rho < 0.05$ ) effect on earnings management. The p-value was less than 0.05 meaning the null hypothesis is rejected and concludes that institutional ownership has a significant effect on earnings management. Additionally, the z-value (10.78) given the intervals, falls within the rejection region, also justifying for the significant effect of institutional ownership on earnings management. The positive coefficient indicates that a unit increase in the proportion of CEO power increases earnings management by 2.952 units.

Further, the results indicate that CEO power has a positive and significant ( $\beta = 0.01$ ,  $\rho < 0.05$ ) effect on earnings management. The p-value was less than 0.05 indicating that the power of a CEO significantly affects earnings management. Additionally, the z-value (3.17) given the intervals, falls within the rejection region, also justifying for the significant effect of CEO power on earnings management. The positive coefficient indicates that a unit increase in the proportion of CEO power increases earnings management by 0.01 units. More power vested in CEO makes the individual to dictate the processes and outputs in their favor without raising much queries from any party. This therefore means that a powerful CEO can easily choose to manipulate the financial reports without much concerns being raised by a CEO-dominated audit committee. CEO power gives the CEO a greater control over the perception created by the firm's financial reports (Davidson *et al.*, 2004; Latif & Abdullah, 2015). A powerful CEO is more likely to engage in income-increasing earnings management if he/she does not meet the targets, or equally engage in income-decreasing accruals management for income smoothing purposes. According to Davidson *et al.* (2004), power gives the CEO a greater control over the perception created by the firm's financial reports. Equally,

Latif & Abdullah (2015) also realized that a powerful CEO engages in more discretionary earnings management.

**Table 4.17: Direct Effect**

Random-effects GLS regression					Number of obs = 490	
Group variable: firmid					Number of groups =35	
R-sq: within = 0.6640					Obs per group:min=14	
between = 0.6105					avg = 14	
overall = 0.6401					max = 14	
corr(u_i, X) = 0 (assumed)					Wald chi2(2) =937.12	
					Prob > chi2 = 0.000	
em	Coef.	Std.Err.	z	P>z	[95% Conf.	
fs	0.0485772	0.0481862	1.01	0.313	-0.045866	0.1430204
fa	-0.0019482	0.0021238	-0.92	0.359	-0.006111	0.0022143
aci	-0.6120762	0.1022189	-5.99	0.000	-0.812422	-0.4117308
acmf	-0.0677397	0.0105771	-6.4	0.000	-0.08847	-0.047009
acfe	-2.062936	0.1439013	-14.3	0.000	-2.344978	-1.780895
bown	-2.465966	0.2937835	-8.39	0.000	-3.041771	-1.890161
iown	2.951987	0.2738965	10.78	0.000	2.41516	3.488815
cp	0.0115852	0.0053294	3.17	0.000	0.0011397	0.0220307
_cons	0.7337305	0.3932916	1.87	0.062	-0.037107	1.504568
sigma_u	0.34777878					
sigma_e	0.38039914					
rho	0.45529248	(fraction of variance due to u_i)				

***H<sub>01</sub>: Audit Committee Independence has no significant effect on Earnings Management***

The Audit Committee Independence (ACI) portrayed a negative and significant effect ( $\beta = -0.81$ ,  $p < 0.05$ ) on earnings management. Its p-value was less than 0.05 meaning, the null hypothesis stating that the independence of the audit committee has no significant effect on Earnings Management is rejected, and concluded that the independence of the audit committee has a significant effect on earnings management. Additionally, the z-value (-7.64) was within the rejection region also justifying for a significant effect. A negative coefficient on the other hand, indicates that a unit increase in the proportion of independent directors in the audit committee decreases earnings

management by 0.81 units. The audit committee acts as a corporate governance mechanism on matters concerning financial reporting. Its independence from the undue influence of management depends on the ratio of the outside directors, who bring in an independent oversight role within the firm. It follows therefore that a higher proportion of outside directors in the audit committee provides a more independent monitoring, and thus the observed reduction in earnings management. The results concur with the findings in previous studies (e.g. Klein, 2002; Tehranian *et al.*, 2006; Saleh, Iskandar & Rahmat, 2007; Hassan & Ahmed, 2012; Latif & Abdullah, 2015), where they found out that independence of the audit committee reduces earnings management in a firm.

***Ho<sub>2</sub>: Audit Committee Meeting frequency has no significant effect on Earnings Management***

Table 4.16 further shows that the Audit Committee Meeting Frequency (ACMF) has a negative and significant effect ( $\beta = -0.03$ ,  $p < 0.05$ ) on earnings management. Its p-value was less than 0.05, meaning the null hypothesis stating that Audit Committee Meeting frequency has no significant effect on Earnings Management is rejected. It is therefore concluded that the number of meetings held by the audit committee in a year significantly affects managerial participation in earnings management practices. The z-value (-2.37) given the intervals, falls within the rejection region also justifying for the significant effect. A negative coefficient indicates that a unit increase in the number of meetings held by the audit committee in a year decreases earnings management by 0.03 units. A higher number of meetings held by the AC translates in to a higher level of activeness of the committee, thus limiting the management from manipulating earnings to suit their desires. However, for efficiency and effectiveness purposes, the meetings should not be too many so as to magnify the agency costs of monitoring, as well as not

to create a conflict of interest since the members' motives in attending the meetings may be diverted from that assigned by the shareholders. In contend, Albersmann & Hohenfels (2017) suggested 4 to 5 meetings per year as enough frequency to reduce earnings management. Xie *et al.* (2003) find that an AC that meets regularly becomes better supervisors in overseeing the financial reporting process. Equally, other studies such as Vafeas (2005), Cornett *et al.*, (2009), and Albersmann and Hohenfels (2017) also found that more meetings reduce earnings management.

***H<sub>03</sub>: Audit Committee Financial Expertise has no significant effect on Earnings Management***

It was also evident in the study that the Audit Committee Financial Expertise (ACFE) has a negative and significant effect ( $\beta = -2.06$ ,  $\rho < 0.05$ ) on earnings management. A p-value of less than 0.05 is interpreted to mean rejection of the null hypothesis stating that the Audit Committee Financial Expertise has no significant effect on Earnings Management. Therefore, it is instead concluded that the financial expertise of the audit committee has a significant effect on earnings management. Additionally, the z-value (-12.11) is within the rejection region, also justifying for a significant effect of the audit committee financial expertise on earnings management. A negative coefficient on the other hand, indicates that a unit increase in the proportion of directors in the audit committee with financial expertise decreases earnings management by 2.06 units. A higher proportion of members in the AC with financial expertise provides the necessary monitoring mechanism to assess and evaluate the financial reports towards detecting manipulated earnings. This therefore reduces opportunistic earnings management within the firms. The audit committee members' accounting financial expertise can facilitate the committee to more effectively oversee the financial reporting process (Sun *et al.*, 2014). Abdul Rahman and Ali (2006) stated that the financial expertise of audit

committee members is associated with lower levels of earnings management. Additionally, Vafeas (2005), and Nelson and Devi (2013) also documented that a greater proportion of financial expertise deters earnings management in the firms.

***Ho4: Blockholder ownership has no significant effect on Earnings Management***

It is also notable in table 4.16 that Blockholder Ownership (BOWN) has a negative and significant effect ( $\beta = -1.78$ ,  $p < 0.05$ ) on earnings management. The p-value was less than 0.05 indicating the null hypothesis stating that blockholder ownership has no significant effect on earnings management is rejected. It is therefore concluded that the percentage of blockholding in a firm significantly affects earnings management. The z-value (-6.07) given the intervals, also falls within the rejection region also justifying for a significant effect. Moreover, a negative coefficient means that a unit increase in the proportion of blockholder ownership decreases earnings management by 1.78 units. Blockholders, unlike small shareholders are always viewed as activists since they do not give up easily and sell their shares when they detect any disappointment in the firm. Due to blockholders having large stakes in the firm, their proposals and queries are always felt and taken into consideration by the management. This therefore makes the large shareholders to be effective oversight and monitoring mechanism towards reducing the agency conflicts, where management might engage in earnings management for their self-interests. Hence, earnings management reduces in the presence of a higher blockholding. Furthermore, blockholders' threat of exit has an impact in aligning managerial interests towards enhancing firm value. The results on the role of blockholders agree with the findings in Dou *et al.*, (2016) and Bharath *et al.*, (2013) who also realized a negative influence of large shareholders on earnings management.



***H<sub>05</sub>: Institutional ownership has no significant effect on Earnings Management***

Table 4.16 further shows that Institutional Ownership (IOWN) has a positive and significant effect ( $\beta= 2.95$ ,  $\rho<0.05$ ) on earnings management. A p-value less than 0.05 means that the null hypothesis stating that Institutional Ownership has no significant effect on Earnings Management is rejected. It is therefore concluded that the proportion of institutional shareholders in a firm has a significant effect on earnings management. Additionally, the z-value (10.78) also falls within the rejection region, also justifying for a significant effect between institutional owners and earnings management. Its effect as signified by the coefficient is the largest among the study's exogenous variables. A positive coefficient on the other hand, indicates that a unit increase in the proportion of institutional ownership in a firm increases earnings management by 2.95 units. Institutional shareholders are transient investors who pressure the management for short-term performance, therefore compelling them to engage in actions that falsely increase income. For instance, management will engage in income-increasing earnings management so as to falsely meet the short-term targets and impress their employers. The management of firms with a higher number of transient institutional owners are more likely to both manage earnings upwards and guide forecasts downwards so as to avoid negative earnings surprises (Matsumoto, 2002). On the other hand, income-decreasing actions such as income smoothing to indicate consistent growth may also be the result. Transient institutional investors therefore compel management to be left with no other option of realizing their unmet targets, other than just income-increasing or income-decreasing earnings management. These findings are consistent with Bushee (1998), Matsumoto (2002), Koh (2003) and Cornett *et al*, (2006) whose studies found a positive and significant effect of institutional shareholding on the discretionary accruals.

### **4.8.3 Moderating Random Effects Model**

The study further sought to check on the moderating effect of CEO power on the relationship between corporate governance mechanism variables and earnings management. A moderator is a qualitative or quantitative variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable (Baron & Kenny, 1986).

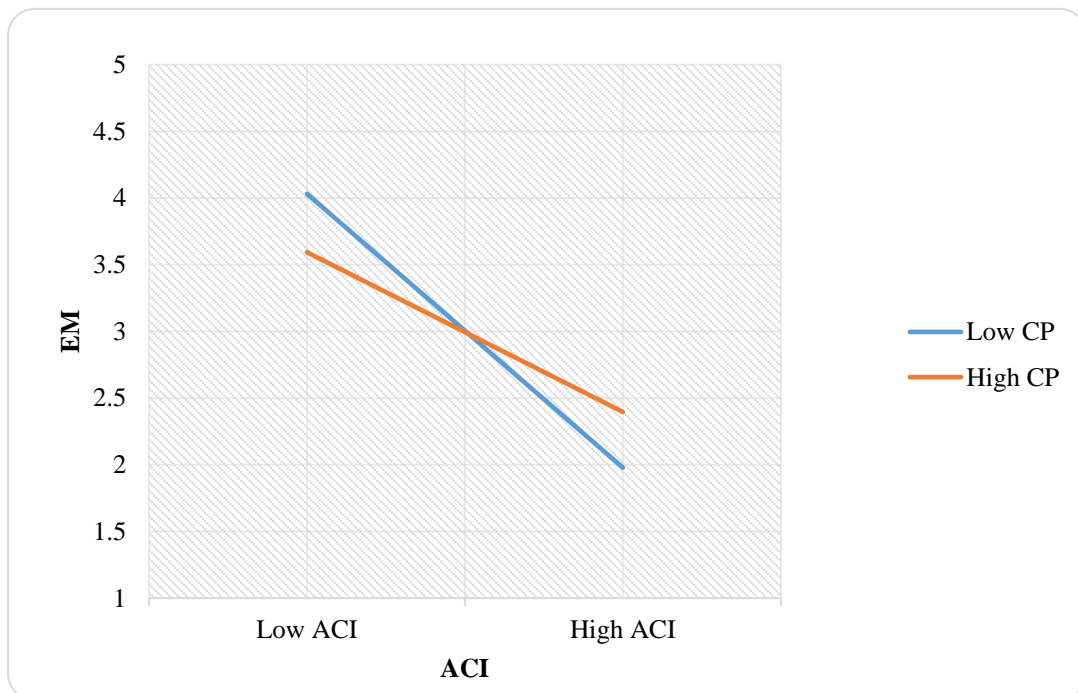
According to Frazier, Tix and Barron (2004), there are three types of moderations; First is the enhancing interactions where both the predictor and moderator affect the outcome variable in the same direction and together have a stronger than additive effect, secondly, is the buffering interaction where the moderator variable weakens the effect of the predictor variable on the outcome, and lastly is the antagonistic interactions where the predictor and moderator have the same effect on the outcome but the interaction is in the opposite direction. Moderation is a situation in which independent variables' effect on the dependent varies as a function of some third variable which is the moderator variable (Hayes, 2009). The study used a hierarchical regression model to test the moderation hypotheses by gradually introducing the interactions and interpreting the resulting output. A moderated effect is typically modeled statistically as an interaction between predictors and the moderator variable (Hayes, 2009), which are gradually added into the models. As an indication to arrive at a conclusion as to whether there is a moderation effect, Hayes (2009) stated that three conditions must hold; First, the R square for without and with interaction should vary, secondly the coefficient for the interaction should be different from zero, and lastly is that the overall model (F-value) should be significant.

***H<sub>06a</sub>: CEO power does not significantly moderate the relationship between Audit Committee Independence and earnings Management***

The study sought to check for the moderating role of CEO power on the relationship between Audit Committee Independence (ACI) and Earnings Management (EM). Table 4.16 shows that the overall moderation regression model 4 was significant ( $F=1057.42$ ,  $\rho<0.05$ ). The R square (0.6923) indicates that the first interaction model explains up to 69.23 % of the variation in earnings management up from previous model's 66.40%, therefore confirming a R square change of ( $\Delta R^2 = 2.83$  %). This means that the variance accounted for with the interaction is significantly more than the variance accounted for without the interaction. Furthermore, it was also evident that there is a positive and significant ( $\beta=0.21$ ,  $\rho<0.05$ ) moderating effect of CEO power on the relationship between audit committee independence and earnings management. The beta coefficient is different from zero, the overall model is significant and there is a significant  $R^2$  change, indicating that CEO power significantly moderates the relationship. The audit committee which is viewed as a mechanism to provide independent oversight role against the management's self-interests is more effective when it operates independently. However, the independence of the AC is less effective in reducing earnings management in the presence of a powerful CEO. A powerful CEO is more likely to influence audit committees' effectiveness (Chang *et al*, 2017; Chen & Komal, 2018) by reducing their degree of monitoring, hence arguable that when the boards and leadership are chosen by the CEO, their independence and power that are appropriate to their roles will be diminished (Yasser & Mamun, 2016).

Figure 4.1 gives a graphical presentation of the moderating effect of CEO power on the relationship between audit committee independence and earnings management. With

less independence in the audit committee, earnings management is higher compared to a situation with higher independence. Furthermore, the figure illustrates that under low independence of the audit committee, earnings management is higher for firms with low CEO power than for firms with higher CEO power, whereas under higher audit committee independence, firms with higher CEO power engage in more earnings management compared to those with lower power. This effect therefore confirms a buffering moderation since an increase in the power of a CEO and audit committee independence, decreases earnings management further but with a smaller magnitude in the presence of a powerful CEO.



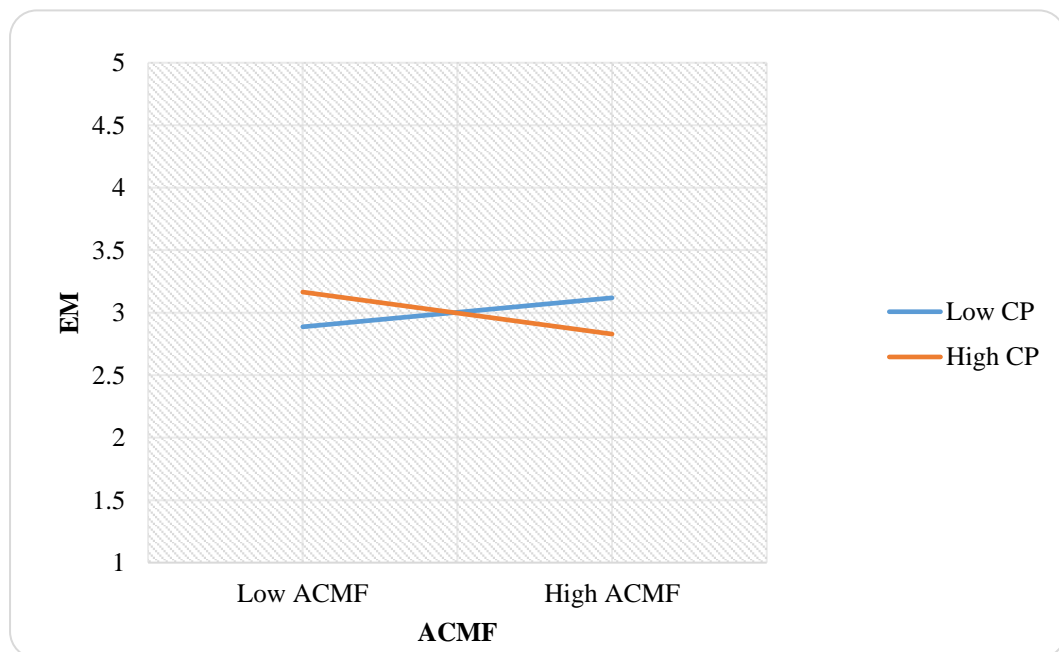
**Figure 4. 1: Modgraph ACI, CP AND EM**

***Ho<sub>6b</sub>: CEO power does not significantly moderate the relationship between Audit Committee Meeting frequency and earnings Management***

The study's hierarchical regression model 5 sought to check for the moderating effect of CEO power on the relationship between Audit Committee Meeting Frequency (ACMF) and earnings management (EM). The null hypothesis stating that CEO power does not significantly moderate the relationship between the audit committee meeting frequency and earnings management was rejected. The results in table 4.16 shows that there is a negative and significant ( $\beta = -0.09$ ,  $p < 0.05$ ) moderating effect of CEO power on the relationship between audit committee meeting frequency and earnings management. The results also indicate that the overall moderation regression model 5 was significant ( $F = 1142.22$ ,  $p < 0.05$ ). The R squared ( $R^2 = 0.7093$ ) indicates that the model accounts up to 70.93 % of the variation in earnings management. This presents an increase from 69.23% from the previous model signifying an R squared change ( $\Delta R^2 = 1.70\%$ ) meaning the variance accounted for with the interaction is significantly more than the variance accounted for without the interaction. The beta coefficient is different from zero, the overall model is significant and there is a significant  $R^2$  change, concluding that CEO power has a significant moderating effect on the relationship between AC meeting frequency and earnings management. More meetings held by the audit committee in a year reduces earnings management, however the effect weakens in the presence of a powerful CEO in the firm. Therefore, as much as higher audit committee meeting frequency is deemed to reduce earnings management in a firm, a powerful CEO may want to manipulate reported financial reports for personal gains, thus weakening the effectiveness of the ACMF in monitoring earnings management. According to Cohen *et al.* (2011), when board members are under the influence of

management, they may not act in the best interests of shareholder. This renders the audit committees' monitoring mechanism ineffective in solving agency conflicts in a firm.

Figure 4.2 presents a modgraph illustrating the moderating effect of CEO power on the relationship between audit committee meeting frequency and earnings management. It is evident from the graph that firms characterized by low CEO power and a smaller number of meetings have low earnings management as compared to firms with low CEO power and higher number of meetings. On the other hand, firms with higher CEO power and more meetings have lower earnings management than those with higher CEO power and low meeting frequency. This therefore indicates that CEO power has a buffering moderating effect on the relationship between audit committee meeting frequency and earnings management.

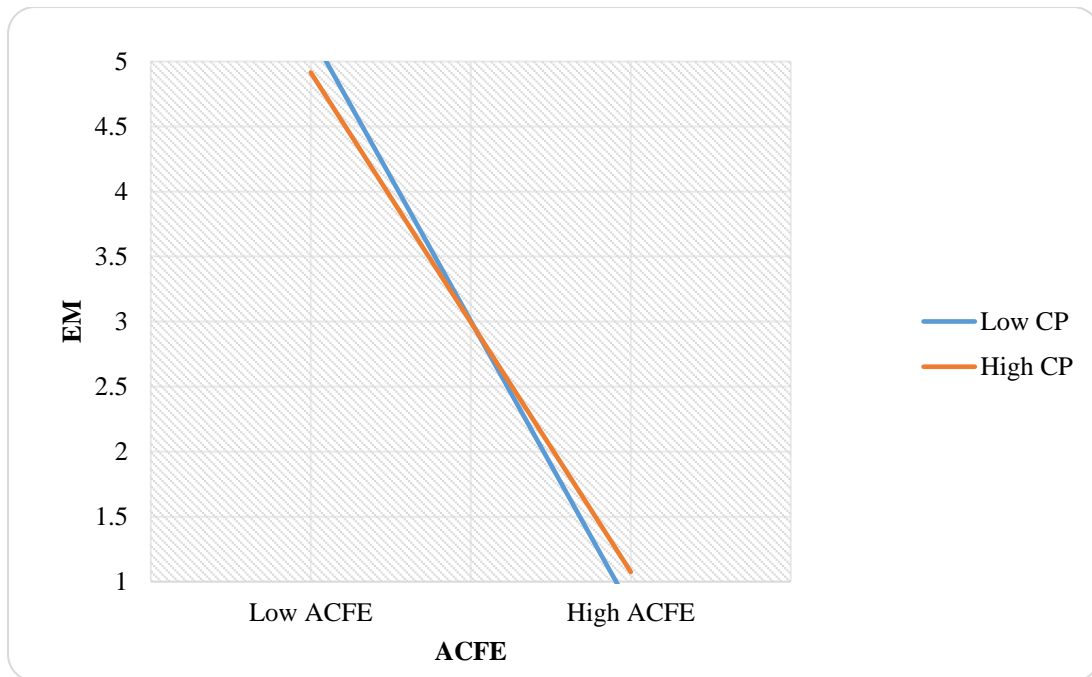


**Figure 4. 2: Modgraph ACMF, CP AND EM**

***H<sub>06c</sub>: CEO power does not significantly moderate the relationship between Audit Committee Financial Expertise and earnings Management***

The regression model 6 was also conducted to check on the moderating effect of CEO power on the relationship between Audit Committee Financial Expertise (ACFE) and earnings management (EM). The null hypothesis stating that CEO power does not moderate the relationship was rejected. Table 4.16 indicates a positive and significant ( $\beta = 0.14$ ,  $p < 0.05$ ) moderating effect of CEO power on the relationship between audit committee financial expertise and earnings management. The results further show that the overall moderation regression model 6 was significant ( $F = 1145.72$ ,  $p < 0.05$ ). The R square (0.7103) also indicates that the model accounts for 71.03 % of the variance in earnings management. This presents a  $R^2$  increase from 70.93% as indicated by an R-square change ( $\Delta R^2 = 0.10\%$ ). This means that the variance accounted for with the interaction is significantly more than the variance accounted for without the interaction.

Figure 4.3 graphically illustrates the moderating effect of CEO power on the relationship between Audit Committee Financial Expertise (ACFE) and Earnings management. It is evident that firms with higher audit committee financial expertise have lower earnings management, while those with low financial expertise have higher earnings management, indicating an inverse relationship. However, with the moderator in place, CEO power has a buffering moderating effect on the relationship since earnings management decreases further under both high and low power of the CEO but with a small magnitude. Under low ACFE, earnings management is higher for firms with low CEO power, while higher ACFE indicates higher earnings management for firms with higher CEO power.



**Figure 4. 3: Modgraph ACFE, CP AND EM**

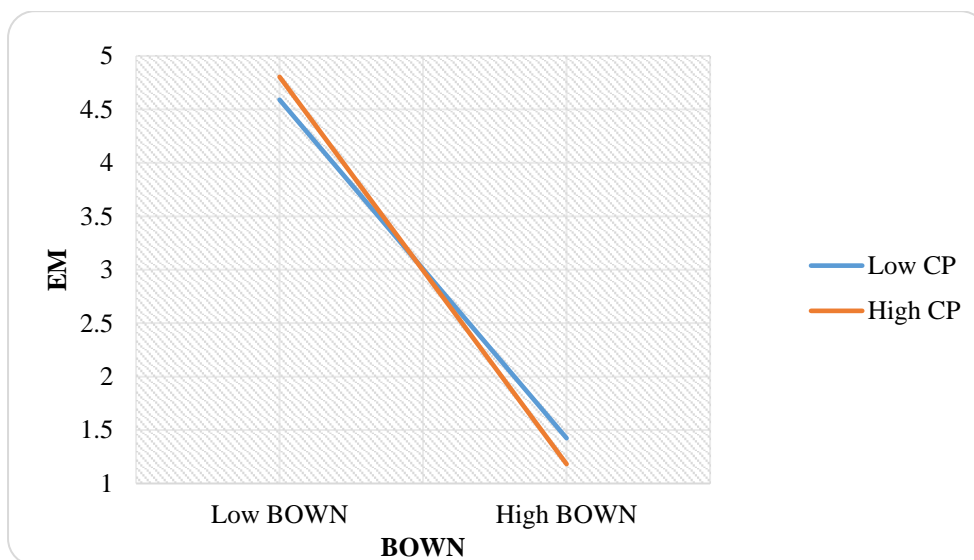
*H<sub>06d</sub>: CEO power does not significantly moderate the relationship between blockholder ownership and earnings Management*

The study further sought to check for the moderating role of CEO power on the relationship between Blockholder Ownership (BOWN) and Earnings Management (EM). Table 4.16 shows that the overall moderation regression model 7 was significant ( $F=1210.66$ ;  $p<0.05$ ). The R square ( $R^2=0.7225$ ) indicates that the model accounts for 72.25 % of the variation in earnings management up from 71.03%, therefore confirming an R square change ( $\Delta R^2 = 1.22$  %). This means that the variance accounted for with the interaction is significantly more than the variance accounted for without the interaction. Furthermore, it was also evident that there is a negative and significant ( $\beta=-0.08$ ,  $p<0.05$ ) moderating effect of CEO power on the relationship between blockholder ownership and earnings management. Thus, the null hypothesis stating that CEO power does not significantly moderate the relationship was rejected and concluded that a powerful CEO has a moderating effect on the monitoring effectiveness of the



blockholders. The beta coefficient is different from zero, the overall model is significant and there is a significant  $R^2$  change, therefore indicating that CEO power significantly moderates the relationship. The monitoring role of large shareholders in influencing managers' real actions to better align with those of shareholders (Dou *et al.*, 2016) reduces earnings management practices, but a powerful CEO weakens the relationship due to personal motives. For instance, a powerful CEO would want to report impressive results by managing earnings, only that this is not possible without neutralizing and dominating the close scrutiny by the large shareholders, thus weakening their role.

Figure 4.4 shows the moderating effect of CEO power on the relationship between blockholder ownership and earnings management. Large shareholders monitor earnings manipulation closely, thereby justifying the observation of low earnings management when there is higher blockholder ownership, as compared to when a firm has less blockholders. In the presence of a powerful CEO, the effectiveness of blockholder monitoring is reduced, indicating a buffering moderating effect of CEO power on the relationship.



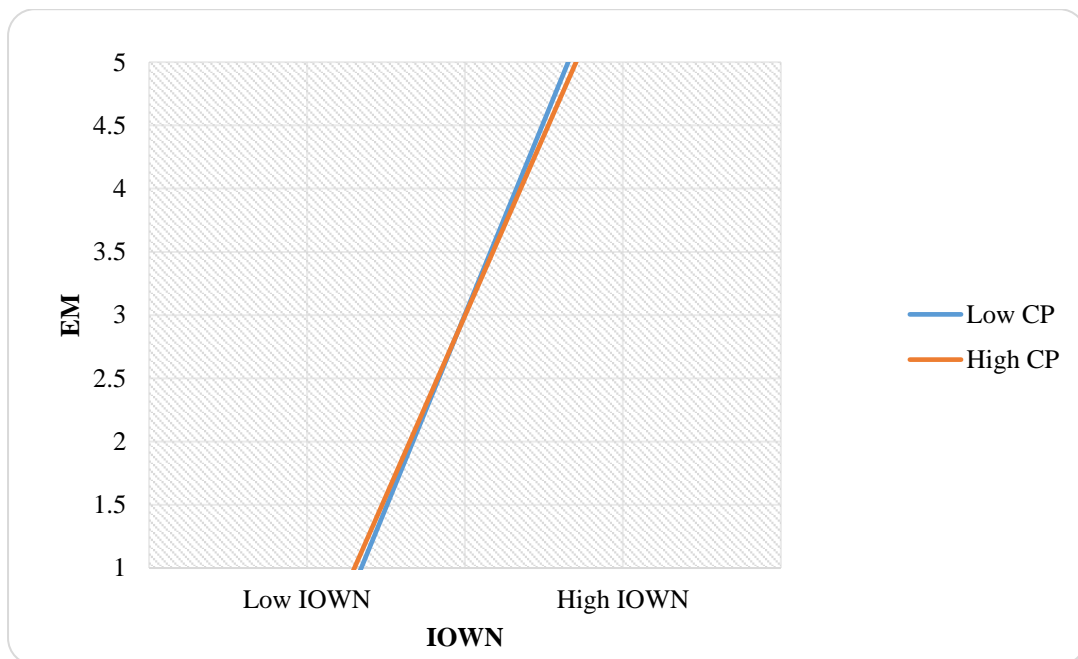
**Figure 4. 4: Modgraph BOWN, CP AND EM**

***H<sub>06c</sub>: CEO power does not significantly moderate the relationship between institutional ownership and earnings Management***

Finally, the last hierarchical regression model 8 sought to test all the hypotheses of the study and to check for the moderating effect of CEO power on the relationship between Institutional Ownership (IOWN) and earnings management (EM). The results in table 4.16 indicate that there is a negative and significant ( $\beta = -0.10$ ,  $p < 0.05$ ) moderating effect of CEO power on the relationship between Institutional Ownership and earnings management. The results also show that the overall moderation regression model 8 was significant ( $F = 1247.31$ ,  $p < 0.05$ ). The R square ( $R^2 = 0.7295$ ) indicates that the model accounts for 72.95 % of the variation in earnings management. This represents an increase from 72.25% signifying an R-square change ( $\Delta R^2 = 0.7\%$ ) which means that the variance accounted for with the interaction is significantly more than the variance accounted for without the interaction. The beta coefficient therefore is different from zero, the overall model is significant, and there is a significant  $R^2$  change indicating that CEO power significantly moderates the relationship. According to Zhao and Chen (2008), shareholders with more rights exert more pressure on managers, leading to more EM. Institutional investors demand for better short-term performance from management leaving them with no other option other than to manipulate reported earnings. However, a powerful CEO enhances the positive correlation. A CEO with more power might take advantage of the transient nature of institutional investors of requesting for higher short-term performance to manipulate earnings. This therefore increases the discretionary earnings management further.

Figure 4.5 illustrates the moderating effect of CEO power on the relationship between institutional ownership and earnings management. Institutional owners expect higher

firm performance which is more likely to result in the manipulation of reported earnings. This justifies the increase in earnings management in the presence of higher institutional investors as opposed to lower earnings management experienced when institutional ownership is low. Increase in CEO power enhances the CEO's pressure to dictate reported earnings and therefore higher earnings management is the result. An enhancing moderating effect is therefore evident in the relationship since a more entrenched CEO was found to engage in more earnings management. This is due to the fact that a tenured and experienced CEOs have earned reputation, trust and power over time to engage in earnings management without much concerns or suspicion.



**Figure 4. 5: Modgraph IOWN, CP AND EM**

Table 4.18: Moderating Effect

Em	Model 1 Coef.	Model 2 Coef.	Model 3 Coef.	Model 4 Coef.	Model 5 Coef.	Model 6 Coef.	Model 7 Coef.
_cons	-1.75(.57)	0.73(.39)	0.45(.38)	0.85(.38)	0.84(.38)	0.79(.38)	0.70(.38)
FS	0.17(.08)**	0.05 (.05)	0.06(.05)	0.04 (.05)	0.05(.05)	0.04(.05)	0.03(.05)
FA	0.01(.00)**	-0.00(.00)	0.00 (.00)	-0.00(00)	-0.00(.00)	-0.00(.00)	-0.00(.00)
ACI		-0.61(.10)**	-0.85(.10)**	-0.90(.10)**	-0.86(.11)**	-0.83(.11)**	-0.81(.11)**
ACMF		-0.07(.01)**	-0.05(.01)**	-0.03(.01)**	-0.02(.01)	-0.02(.01)	-0.03(.01) **
ACFE		-2.06 (.14)**	-1.80(.14)**	-1.78(.14)**	-1.91(.17)**	-2.04(.17)**	-2.06 (.17)**
BOWN		-2.47 (.29)**	-2.17(.29)**	-2.05(.28)**	-1.98(.29)**	-1.70(.29)**	-1.78(.29)**
IOWN		2.95 (.27)**	2.95(.27)**	2.81(.26)**	2.78(.26)**	2.66(.26)**	2.95(.27)**
CP		1.01(.01)**	1.02(.10)**	-1.00(.10)**	1.01(.10)**	1.01(.10)**	1.01(.10) **
ACI*CP			0.19(.03)**	0.23(.03)**	0.20(.04)**	0.21(.04)**	0.21(.04)**
ACMF*CP				-0.14(.03)**	-0.15(.03)**	-0.12(.03)**	-0.09(.03)**
ACFE*CP					0.06(.05)	0.13(.05)**	0.14(.05)**
BOWN*CP						-0.11(.03)**	-0.08(.03)**
IOWN*CP							-0.10(.03)**
<b>Model summary statistics</b>							
<i>sigma_u</i>	0.51	0.35	0.35	0.35	0.36	0.36	0.37
<i>sigma_e</i>	0.65	0.38	0.36	0.35	0.35	0.35	0.34
<i>Rho</i>	0.38	0.46	0.48	0.50	0.50	0.52	0.54
<i>Hausman</i>	0.39	0.46	0.40	0.57	0.65	0.85	0.84
<i>R-sq</i>	0.0092	0.6640	0.6923	0.7093	0.7103	0.7225	0.7295
<i>ΔR-sq</i>	-	0.0026	0.0283	0.0170	0.0010	0.0122	0.0070
<i>F</i>	9.81	937.12	1057.42	1142.22	1145.72	1210.66	1247.31
<i>Prob &gt; chi2</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000

\*\* Significant at the 0.01 level (2-tailed).

\* Significant at the 0.05 level (2-tailed).

EM: Earnings Management, ACI: Audit Committee Independence, ACMF: Audit Committee Meeting Frequency, ACFE: Audit Committee Financial Expertise, BOWN: Blockholder Ow Power, FS: Firm Size, FA: Firm Age

**Research (2020)**

#### 4.9 Discussion of the Findings

The descriptive statistics of the study confirms the presence of earnings management (mean = -0.138) among firms listed at the NSE with a standard deviation (0.842), indicating that the firms engage in different levels of earnings management. The management can manage earnings upwards and exaggerate accruals (income-increasing) or manage reported accruals and earnings downwards (income-decreasing) for various reasons such as CEO pay or to impress shareholders with good performance and growth. It is evident from the results that on average, the firms listed at the NSE engage in income-decreasing accruals management. They manipulate earnings downwards and also engage in income smoothing aggressive accounting, where earnings for the current period are spread to reflect continuous growth and upward trend in firm performance. According to Hassan and Ahmed (2012), firms manage accruals downwards (income-decreasing accruals) while their average value over a long period should be near zero.

Audit committee independence had a mean of 85.3% which presents a relatively higher proportion though firms indicated a significant variation of 23.4% in the independence of their board members. Some firms reported a minimum of as low as 10% of the independent members in the AC. Independent members monitor managerial activities in the firm without fear or any influence since they are not internally affiliated to the firm. This agrees with the sentiments of Klein (2002) that boards structured to be more independent of the CEO are more effective in monitoring the corporate financial accounting process. Additionally, Abbott *et al.* (2004) supported the need for more independence in the audit committee stating that it exhibits a significant and negative association with the occurrence of restatements.

The audit committee meeting frequency had an average of four yearly meetings held by the audit committee. Agency theory cites corporate governance structures as a means towards reducing agency conflicts in a firm. The level of activity of the audit committee is a function of the number of meetings held in a year. Choi *et al.* (2004) posited that active audit committees have higher likelihood of detecting opportunistic earnings management as compared to dormant committees. Xie *et al.* (2003) emphasizes on the activeness of the audit committee and stated that the committee activity influences members' ability to serve as effective monitors. Similarly, Albersmann and Hohenfels (2017) recommended 4-5 meetings in a year in order to reduce the level of earnings management in a firm. Buallay and Aldhaen (2018) on the other hand recommends 2-10 meetings as adequate to conduct enough monitoring of the financial reports.

The proportion of financial expertise in the audit committee was relatively low at 33.6 % and the lowest firm registering as low as 10% representation by directors with financial expertise. Financial expertise is a crucial pillar towards the monitoring of the audit committee since directors with financial expertise are more likely to detect manipulated reports compared to those without the competencies. Owing to this crucial role, a bigger proportion is therefore desirable for the effectiveness of the audit committee. Yang and Krishnan (2005) and Sun *et al.*, (2014) accentuate the role of financial expertise towards quality reporting in firms. Since the primary duty of the audit committee is to oversee the financial process of the company, it is reasonable to believe that audit committee members with financial expertise (especially accounting expertise) have more effective means to monitor management's financial reporting practices for the realization of high quality financial reporting (Kusnadi *et al.*, 2016).

On the ownership structure, blockholder ownership had a mean of 64.1% of the total ownership, while institutions owned an average of 65.1 %. Shareholders help in close

monitoring of activities within the firm to avert agency conflicts and foster higher performance. The percentages noted were relatively adequate since studies such as Bradbury *et al.* (2006) and Gull *et al.* (2017) recorded and recommended comparable proportions for both blockholder and institutional ownership structures.

The study's correlation results indicate that all the corporate governance mechanisms considered in the study had a negative and significant association with earnings management except for institutional ownership. The Pearson correlation coefficients for audit committee independence (-0.285), audit committee meeting frequency (-0.448), audit committee financial expertise (-0.619) and blockholder ownership (-0.194) affirm a negative and significant association with earnings management. In support of agency theory which suggests an effective corporate governance mechanism as a working means of reducing agency conflicts. These results indicate that the mechanisms present a monitoring technique, necessary to deter opportunistic earnings management in the firm. This is due to the fact that management can exercise their discretion over reporting to the detriment of the firms' shareholder wealth maximization objective. Similar associations were also witnessed in the previous studies (e.g. Vafeas, 2005; Nelson & Devi, 2013; Elijah & Ayemere, 2015; Latif & Abdullah, 2015; Katmon & Al Farooque, 2017; Albersmann & Hohenfels, 2017), where they realized an inverse relationship between these exogenous variables and earnings management in a firm.

However, Institutional ownership (0.171), CEO power (0.266), firm size (0.123) and firm age (0.219) did not indicate an inverse relationship with earnings management but instead registered a positive coefficient. This means that more institutional investors in a firm encourage earnings management. This is justified by the "transient" nature of institutional investors, since as they demand for higher short-term performance on the management, management on the other hand resort to earnings management so as to

meet the targets and avoid penalties of non-achievement. The same sentiments were echoed by Latif & Abdullah (2015) who found out that there is a positive correlation between institutional ownership and discretionary earnings management.

The direct and indirect effects multiple regression results were used to test the study's hypotheses. The results indicate that Audit committee independence has a negative and significant effect on earnings management ( $\beta = -0.81$ ,  $p = 0.000$ ). Therefore, the null hypothesis stating that the independence of the audit committee does not significantly affect earnings management is rejected and concluded that more audit committee independence reduces earnings management. When the audit committee comprises of more outside directors, the committee becomes more effective in executing its monitoring role, and thus the reduction in managerial earnings management. Audit committees must remain independent to be able to carry out their oversight-related functions (Latif & Abdullah, 2015). Independent members of the audit committee have the incentives to maintain and enhance their reputation and consequently, they are interested in achieving a higher degree of financial reporting quality which leads to reduction in earnings management. The findings support the provisions of the agency theory which suggests that when there is an agency conflict between the principal (shareholders) and the agents (management), then agency cost has to be incurred in providing effective monitoring mechanism to reduce the self-interests (opportunistic earnings management) of the agents. Zhang (2012) supported the findings when he stated that the independence of the audit committee members is very important for their effective monitoring role. The findings were also backed up by Abbott *et al.* (2004) where they found out that there is a negative association between audit committee independence and financial reporting fraud and misstatement. Xie *et al.* (2003) also



suggested that a more independent audit committee provide better governance as compared to a less independent committee.

Audit committee meeting frequency also had a negative and significant ( $\beta = -0.03$ ,  $p = 0.000$ ) effect on earnings management. The null hypothesis was therefore rejected and concluded that audit committee meeting frequency affects earnings management. When the AC has more meetings during a year, the manager may not be able to manipulate earnings. The meetings held by the audit committee provide a chance for the detection of manipulated reports and it subjects management to a higher chance of being detected, thus reducing the likelihood of managerial earnings management. Li *et al.* (2012) supported the findings by suggesting that, an active AC that meets frequently during the year would provide its members with greater opportunities for discussing and evaluating the issues placed before them concerning the company's financial reporting practices. Nazir and Afza (2018) concur that frequent meetings of the audit committee can have a strong monitoring mechanism for lower earnings management. Also consistent with the results, Xie *et al.* (2003), Vafeas (2005), Yang and Krishnan (2005), Katmon & Al Farooque, (2017) and (Cornett *et al.*, 2009) found a significant negative association between the number of meetings held by the AC and earnings management. According to Xie *et al.* (2003) an AC that meets regularly becomes better supervisors in overseeing the financial reporting process. The number of audit committee meetings (meeting frequency) is a proxy for the committee's activity level, and an increase in the meeting frequency increases monitoring. The firm is less likely to inflate income by under-reporting or over-reporting gains (Cornett *et al.*, 2009) when subjected into thorough and more frequent scrutiny.

The audit committee financial expertise had a negative and significant ( $\beta = -2.06$ ,  $p = 0.000$ ) effect on earnings management. The null hypothesis was therefore rejected and concluded that the financial expertise of the audit committee significantly affects earnings management. As suggested by the agency theory, the key duty of the AC is to review the financial reporting process to ensure the best quality of financial reports. It is therefore arguable that the availability of an accounting and financial expertise in the audit committee would enhance its effectiveness and abilities in detecting and preventing earnings management. Financial expert directors' presence in the audit committee may tend to have an implication of lowering the levels of discretionary accruals (Nazir & Afza, 2018), because the members with financial expertise in the committee provide a higher capability for thorough scrutiny of financial reports, and are able to easily interpret the reports. This reduces the tendency of the management to manipulate reported earnings. Baxter & Cotter (2009) supported the findings as they found out that specialized knowledge in accounting and auditing (financial expertise) is needed for audit committee members; to independently and meaningfully assess accounting issues presented to them, to evaluate alternative accounting treatments or estimates, or to discuss accounting estimates and assumptions involved in implementing new accounting policies. Additionally, Bédard *et al.* (2004) found out that financial expertise is associated with a significant decrease in aggressive earnings management. Abbott *et al.* (2004) also realized a significant negative association between an AC having at least one member with financial expertise and the incidence of financial restatement. They concluded that the higher the financial expertise of the audit committee, then the higher is the financial reporting quality. Furthermore, Nelson and Devi (2013) stated that the presence of accounting experts is significant in reducing the magnitude of earnings management. Other studies (e.g. Mangena & Pike, 2005; Xie

*et al.*, 2003; Felo *et al.*, 2003; Vafeas, 2005; AbdulRahman & Ali, 2006) also supported the results and found out that the financial experience of audit committees' members is associated with lower levels of earnings management. However, Katmon & Al Farooque, (2017) reported an insignificant effect.

Blockholder ownership has a negative and significant ( $\beta = -1.78$ ,  $p = 0.000$ ) effect on earnings management. The null hypothesis stating that blockholder ownership has no significant effect on earnings management was rejected. Firstly, large investors are active and more concerned about the business decisions. They monitor the management's decisions closely and they raise valuable concerns where necessary. By so doing they align their interests with those of the management, therefore reducing agency conflicts and as a result, earnings management is reduced. Secondly, a threat of exit is another mechanism since their dissatisfaction if not impressed may result to an exit which has a great adverse implication on the firm, proofing their monitoring effective in the reducing earnings management. Blockholders have the incentive and power to ensure their interests are being met (Shleifer & Vishny, 1986; Bradbury *et al.*, 2006). Bharath *et al.*, (2013) found that blockholders' threat of exit significantly enhances firm value by better aligning managers' and shareholders' interests. According to Dou *et al.* (2016), closely monitored managers are less likely to engage in the extraction of private benefits, and therefore they have less to conceal from shareholders by managing earnings. It is easier for small block-holders to sell their shareholdings in the firm if they are not pleased by managerial performance, as opposed to large block-holders who may find it hard to sell their large block of stock without actively creating a query that has a significant response from the management. Chtourou (2000), Yeo *et al.* (2002) and, Bos and Donker (2004) supported the results as they emphasized on the role of blockholders in effectively controlling the process of

preparing financial statements to reduce the tendency of managers in manipulating the results by exercising their discretion in reporting firm performance.

Institutional ownership has a positive and significant ( $\beta = 2.95$ ,  $p = 0.001$ ) effect on earnings management. The null hypothesis was rejected and concluded that institutional ownership has a significant effect on earnings management. The resulting output is due to the fact that institutional investors exert more pressure for higher performance by the management. Institutional investors are “transient” investors (Bushee, 1998) who pressure management towards higher short-term performance, forcing them to resort to earnings management so as to meet the short-term targets. This therefore has an implication that an increase in the proportion of transient institutional investors translates into higher earnings management. According to Bushee (1998), institutional investors are “transient investors” who focus on short-term earnings and pressure the management into delivering higher consistent earnings. In support of the findings, Tehranian *et al.*, (2006) stated that managers feel more compelled to meet earnings goals of institutional investors, and thus engage in more earnings manipulation. Other studies (e.g. Rajgopal *et al.* 1999; Matsumoto, 2002; Koh, 2003; Cornett *et al.*, 2006; Latif & Abdullah, 2015) also found a positive and significant relationship between institutional ownership and earnings management.

In contrast, Asward & Lina (2015) found out that institutional investors are considered more experienced in detecting errors in the company, so it is not easily fooled by management and the management will avoid actions that bring about earnings management in order to profit the more qualified. Healy and Palepu (2001) also supported the findings by suggesting that institutional analysts engage in private information production that helps detect earnings management. Hartzell and Starks

(2003) also found out that institutions restrain earnings management and have a negative relationship.

CEO power has a positive and significant ( $\beta = 0.21$ ,  $p = 0.000$ ) moderating effect on the relationship between audit committee independence and earnings management. The null hypothesis stating that CEO power does not significantly moderate the relationship was rejected, and concluded that CEO power significantly moderates the relationship between audit committee independence and earnings management. A powerful CEO interferes with the effectiveness of the independent directors in executing their role of reducing earnings management in the firm, since a powerful CEO dilutes the independent oversight role of the audit committee. In agreement with the results, Chang *et al.* (2017) and Chen and Komal (2018) stated that a powerful CEO is more likely to influence the audit committees' effectiveness. The weakening of the contribution of independent directors in the AC may render the monitoring role ineffective, giving room for opportunistic earnings management. When a CEO is involved in the selection of the audit committee, there is a higher likelihood that the CEO selects members who are loyal, therefore compromising on their independence, and hence distracting their monitoring role. Consistently, Cohen *et al.* (2011) noted that certain factors, such as undue influence by the CEO over the selection of the audit committee may diminish the ability of its members to be substantively independent. A positive relationship could also be due to the CEO nearing retirement and there is lack of concern for the long-run, which will be supplemented with incentives to increase their firm's short-run performance to enhance their own wealth (Davidson *et al.*, 2007). Healy (1985) states that earnings management is associated with profit-based bonus plans.

Further, the results indicate that there is a negative and significant ( $\beta = -0.09$ ,  $p = 0.005$ ) moderating effect of CEO power on the relationship between audit committee meeting frequency and earnings management. More meetings by the audit committee reflects the committee's level of activity. An active committee is more effective in monitoring and detecting financial reporting manipulation, therefore reducing earnings management. Firms with limited audit committee activities and more CEO power often face difficulties in decision making, and their activeness in detecting earnings management do not prove fruitful in the long-run due to CEO's interference. According to Yasser and Mamun (2016), boards working under CEO dominance will tend to operate ceremonially, communicate poorly and "rubber-stamp" management decisions. Cohen *et al.* (2011) corroborate with the study findings by stating that when board members are under the influence of management, they may not act in the best interests of the shareholders.

It was also evident from the study results that CEO power positively and significantly ( $\beta = 0.144$ ,  $p = 0.004$ ) moderates the relationship between audit committee financial expertise and earnings management. The financial expertise of the audit committee is necessary as it increases the chance of detecting managerial self-interests in financial reporting. This is due to the fact that members with financial expertise understand too well the reporting mechanisms. However, the presence of a powerful CEO reduces the efficiency of financial experts in the audit committee to query inappropriate earnings management, since the executive overpower them with an objective of meeting their desires. According to Gounopolous and Pham (2018), CEOs are not directly responsible for overseeing financial reporting process, but the CEOs' decision-making power allows them to more effectively influence decisions on financial reporting. A CEO might decide to manipulate earnings to meet targets, build reputation prior to

retirement (Davidson *et al*, 2007) or due to pay-for-performance motivations. The incentives can take the shape of stock prices, management incentives, or debt covenants (Latif & Abdullah, 2015).

CEO power also had a negative and significant ( $\beta = -0.08$ ,  $p = 0.005$ ) moderating effect on the relationship between blockholder ownership and earnings management. The null hypothesis stating that CEO power does not significantly moderate the relationship was rejected and concluded that CEO power significantly moderates the relationship between blockholder ownership and earnings management. The observation is due to the monitoring role of the blockholders within the firm. Agency theory suggests that to avoid agency conflicts in a firm, the shareholders should incur agency costs associated with monitoring of the agents. Blockholders of the firm are activists who monitor the firm's progress closely as compared to small shareholders whose proposals do not count. Blockholders are therefore activists against the managements' opportunistic earnings management, but in the presence of a powerful CEO, the relationship weakens. For instance, Adams *et al.* (2005) argue that the risk from judgment errors is not well-diversified in a firm in which the CEO primarily makes all of the consequential decisions.

Finally, CEO power was confirmed in the study results to have a negative and significant ( $\beta = -0.10$ ;  $p < 0.001$ ) moderating effect on the relationship between institutional ownership and earnings management. The null hypothesis stating that CEO power does not significantly moderate the relationship was rejected, and concluded that CEO power significantly moderates the relationship between institutional ownership and earnings management. Institutions being "transient investors" go for higher short-term performance, therefore compelling management to engage in income-increasing

discretionary accruals so as to meet their targets. In the presence of a powerful CEO the results indicate a further increase in earnings management. This is because when a CEO is powerful, he/she will take advantage of the pressure for higher performance emanating from the transient institutional shareholders to also meet their personal objective of target realization. This renders them vulnerable to earnings management as a means of achieving their targets required by the myopic institutional investors. Adams *et al.* (2005) states that more powerful CEOs can exert their will and thereby influence financial reporting to a greater extent than less powerful CEOs.



## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents the summary of the findings obtained from the analysis, the conclusions and the recommendations for policy, practical, managerial, theoretical and for future research

#### **5.1 Summary of the Findings**

The main objective of the study was to determine the moderating effect of CEO power on the relationship between corporate governance mechanisms and earnings management among publicly listed firms in Kenya. The Corporate governance mechanism constructs in the study were Audit Committee Independence (ACI), Audit Committee Meeting Frequency (ACMF), Audit Committee Financial Expertise (ACFE), Blockholder Ownership (BOWN) and Institutional Ownership (IOWN). The moderating variable was CEO power, and the dependent variable was earnings management. The target population for the study comprised of 65 firms listed at the Nairobi Securities Exchange (NSE). A 14-year data analysis was conducted for the periods from 2004 to 2017, resulting to a total of 490 firm-year observations. The choice NSE listed firms in the study was informed by the fact that it is a major pillar to economic growth and comprises of a good representation of diverse firms. Additionally, the study's variables required information which are provided by companies most of which are listed at the NSE and are regulated by the CMA.

##### **5.1.1 Summary of the Descriptive Results**

The study's descriptive results indicated that on average, firms engage in income-decreasing earnings management (mean= -0.138), consistent with the findings in

(Nelson & Devi, 2013; Albersmann & Hohenfels, 2017; Hassan & Ahmed, 2012; Al-Janadi, Rahman & Omar, 2013) whose studies also realized average income-decreasing earnings management. Also, to note from the findings on corporate governance mechanisms is that on average, the independence of the audit committee was relatively higher (mean=85.3%) comparable with findings of Klein (2002) and Sun *et al.* (2014). The audit committee meeting frequency had an average of 4 meetings in a year comparable to the findings in Alderman and Hohenfels (2017) and (Buallay & Aldhaen, 2018). However, the audit committee financial expertise registered a low average representation in the audit committee (mean=33.6%), nonetheless a lower proportion was also observed in Sun *et al.* (2014). Blockholder ownership indicated an average of 64.1% which was a relatively higher representation comparable with the findings in Bradbury *et al.* (2006), while institutional investors had an average of 65.1% of the total firm shares. CEOs were found to have had an average experience of 6.1 Years while serving in the same position which was comparable to that in Gull *et al.* (2017) and Gounopolous and Pham (2018). Firm size was found to have an average of 7.056, while in terms of age, the firms operating at the NSE were 67.7 years old on average.

The sector-wise and yearly ANOVA results indicated that earnings management and corporate governance mechanisms significantly differ from one sector to another ( $p < 0.05$ ), but do not significantly differ as a subject of the years ( $p > 0.05$ ), except for CEO tenure ( $p < 0.05$ ) and firm size ( $p < 0.05$ ). Notably, the firms within two sectors, specifically the Automobiles and Accessories and the energy and petroleum, proved to engage in more earnings management compared to other sectors. These results though were consistent with the findings in Wasiuzzaman (2018) who also recorded sectorial differences in the level of earnings management.

### 5.1.2 Summary of the Correlation Results

Comparable with the findings in the previous studies, the Pearson correlation coefficients indicate a negative and significant associations between; Audit committee independence ( $r = -0.285$ ) consistent with (Elijah & Ayemere, 2015; Latif & Abdullah, 2015), audit committee meeting frequency ( $r = -0.448$ ) supporting (Katmon & Al Farooque, 2017; Albersmann & Hohenfels, 2017), audit committee financial expertise ( $r = -0.619$ ) agreeing with the findings of (Vafeas, 2005; Nelson & Devi, 2013; Katmon & Al Farooque, 2017; Albersmann & Hohenfels, 2017) and lastly, blockholder ownership ( $r = -0.194$ ) as argued by Bharath *et al.* (2013), and earnings management. Additionally, the correlation results also indicated a positive and significant relationship between; institutional ownership ( $r = 0.171$ ) consistent with Latif and Abdullah (2015), CEO power ( $r = 0.266$ ) agreeing with (Latif & Abdullah, 2015; Wan *et al.*, 2016), firm size ( $r = 0.123$ ) comparable to that of (Nelson & Devi, 2013; Gull *et al.*, 2017), firm age ( $r = 0.219$ ), and earnings management.

### 5.1.3 Summary of the Regression Results

It is generally observed that corporate governance mechanism in the study has a significant effect on earnings management, and the effects are moderated by the power of the CEO. However, the effects of corporate governance mechanisms on earnings management provides mixed outcomes, where audit committee independence, audit committee meeting frequency, audit committee financial expertise and blockholder ownership indicated a negative and significant effect on earnings management, whereas institutional ownership, firm age and firm size shows a positive and significant effects. Dechow *et al.* (1995) reiterate that the role of these mechanisms in relation to financial reporting is to ensure compliance with mandated reporting requirements and to maintain the credibility of a firm's financial statements. The moderation findings

indicate that the use of CEO power as a moderator weakens the relationship between; audit committee independence, audit committee meeting frequency, audit committee financial expertise, blockholder ownership, and earnings management, while enhancing that of institutional ownership.

#### **5.1.3.1 Audit Committee Independence and Earnings Management**

Audit committee independence had a negative and significant effect on earnings management (-0.636,  $p < 0.05$ ), meaning a unit increase in the independence of the audit committee reduces earnings management by 0.636 units. This therefore proves that an audit committee with higher independence is an effective corporate governance monitoring mechanism as suggested by the agency theory. These findings are backed up by previous studies (e.g. Abbott *et al.*, 2004; Klein, 2002; Tehranian *et al.*, 2006; Saleh, *et al.*, 2007; Hassan & Ahmed, 2012; Latif & Abdullah, 2015; Xie *et al.*, 2003), where they all found out that there is a negative effect between AC independence and financial reporting fraud and misstatement. Outside members of the audit committee have incentives to maintain and enhance their reputation and therefore they are interested in achieving a higher degree of financial reporting quality, which leads to reduction in management involvement.

#### **5.1.3.2 Audit Committee Meeting Frequency on Earnings Management**

The audit committee meeting frequency had a negative and significant ( $\beta = -0.028$ ,  $p < 0.05$ ) effect on earnings management. This means that a unit increase in the number of meetings held by the audit committee in a year decreases earnings management by 0.028 units. The rationale for holding audit committee meetings is majorly to help improve the activeness and eventually the effectiveness of the audit committee in overseeing the financial reporting standards, and not to attempt to maximize members'

personal interests. When the AC has more meetings, the manager may not be able to manipulate earnings. Consistent with the results, previous studies ( e.g. Li *et al.*, 2012; Katmon & Al Farooque, 2017; Cornett *et al.*, 2009; Xie *et al.*, 2003; Vafeas, 2005; Yang & Krishnan, 2005) found that audit committee meeting frequency has a negative and significant effect on earnings management.

#### **5.1.3.3 Audit Committee Financial Expertise on Earnings Management**

The audit committee financial expertise also had a negative and significant ( $\beta = -2.109$ ,  $p < 0.05$ ) effect on earnings management. This means that a unit increase in the proportion of accounting and financial expertise in the audit committee decreases earnings management by 2.109 units. According to Chen and Komal (2018), financial expertise in the Audit committee is important for effectiveness purposes. Velte and Stiglbauer (2011) states that financial expertise results in lower earnings management in cases where majority of the audit committee members are experts. In tally with the findings, other studies (e.g. Cotter, 2009; Bédard *et al.*, 2004; Abbott *et al.*, 2004; Mangena & Pike, 2005; Xie *et al.*, 2003; Felo *et al.*, 2003; Vafeas, 2005; AbdulRahman & Ali, 2006) also reported that the financial expertise of the audit committee deters earnings management as suggested by the agency theory.

#### **5.1.3.4 Blockholder Ownership on Earnings Management**

Blockholder ownership had a negative and significant effect ( $\beta = -1.777$ ,  $p < 0.05$ ) on earnings management, meaning a unit increase in blockholder ownership decreases earnings management by 1.777 units. Due to the separation of ownership and control in a firm as suggested by Fama and Jensen (1983), there needs to be a monitoring mechanism borne by the principal as pointed out by the agency theory so as to reduce the divergence of the agents' interests. Dou *et al.* (2016) backed up the findings of a significant individual blockholder effects on earnings management. Other studies that

also report a negative association between blockholders and earnings management include Bos and Donker (2004), Bharath *et al.*, (2013), Chtourou (2000), Yeo *et al.* (2002) and Dou *et al.* (2016). These studies emphasized on the crucial function of blockholders in controlling and monitoring the process of preparing financial statements, therefore reducing the likelihood of managerial engagement in altering the statements for personal gains.

#### **5.1.3.5 Institutional Ownership on Earnings Management**

The study also sought to determine the effect of institutional ownership on earnings management. The results indicated that institutional ownership has a positive and significant ( $\beta= 2.952$ ,  $p<0.05$ ) effect on earnings management. Therefore, a unit increase in institutional investors in a firm triggers an increase in earnings management by 2.952 units. This observation is due to the pressure for short-term performance exerted on the management by institutional investors, hence compelling them to engage in earnings management so as to meet the targets.

#### **5.1.3.6 CEO Power on earnings management**

CEO power had a positive and significant effect ( $\beta= 1.005$ ,  $p<0.05$ ) on earnings management, meaning a unit increase in CEO power increases earnings management by 0.116 units. A powerful CEO dominates the firm's activities and are not subjected to other parties' decisions. As suggested by the entrenchment theory, longer serving CEOs gain experiences over time that makes them more entrenched. Powerful CEOs therefore are more likely to dictate financial reports to meet their personal satisfaction without much concerns since they make their decisions independently. The results were also supported by Latif & Abdullah (2015) where they realized a positive and significant effect of CEO power on earnings management.

### 5.1.3.7 Moderating Effect of CEO Power

CEO power significantly moderates ( $\beta=0.214$ ;  $\rho<0.05$ ) the relationship between audit committee independence and earnings management. It is therefore concluded that CEO power moderates the relationship between audit committee independence and earnings management. According to Adams *et al.* (2005) more power vested in the CEO neutralizes the independence, and subsequently the effectiveness of the audit committee in monitoring opportunistic earnings management. Additionally, Cohen *et al.* (2011) agree that the ability of the audit committee to monitor management independently is reduced if the CEO plays a role in their selection process. Chen and Komal (2018) and Chang *et al.* (2017) also support the study's findings that the effectiveness of the audit committee in executing its monitoring role is interfered with by CEO power. According to Yasser and Mamun (2016), the same person should not hold the offices of Chief Executive Officer (CEO) and chairman simultaneously since this will make them powerful and this may reduce the effectiveness of the board's monitoring ability.

Furthermore, the results shows a negative and significant moderating effect ( $\beta= -0.087$ ;  $\rho<0.05$ ) of CEO power on the relationship between audit committee meeting frequency and earnings management. An audit committee that holds optimum meetings is active and this contributes to its effectiveness in reducing discretionary earnings management. However, a powerful CEO reduces the interplay between an active audit committee and earnings management. According to Chen & Komal, (2018), when the CEO is powerful, the audit committee has less control over setting its own agenda. This situation moderates the audit committee's effectiveness and as suggested by Kusnadi *et al.* (2016), this observation could be motivated by the desire of a powerful CEO to meet pay-for-performance targets, CEO nearing retirement (Davidson *et al.*,2007) or has just taken over the position and wants to record high ability impression (Axelson & Bond,

2009; Ali & Zhang, 2015).Cohen *et al.* (2011) argues that board members do not act in the best interest of the owners if they are under undue influence, particularly from a CEO who is more entrenched.

The results also indicated a negative and significant ( $\beta = -0.10$ ;  $p < 0.05$ ) moderating effect of CEO power on the relationship between audit committee financial expertise and earnings management. An audit committee that is well represented by members with financial expertise prove effective in constraining discretionary earnings management. This is due to the fact they have the knowledge and ability for thorough scrutiny of discretionary reported financial statements, thus decreasing the chance of opportunistic activities of the management. CEO power though, interferes with the effectiveness of these audit committees' ability to reduce earnings management in a firm. A powerful CEO has the ability to make independent opportunistic decisions in the firm without the committee raising concerns due to fear of victimization from the executive. Carcello *et al.* (2011) posits that CEOs involvement in the selection of the directors silences them from raising financial concerns as compared to when the CEO is not involved in their selection.

CEO power also had a negative and significant moderating effect ( $\beta = -0.079$ ;  $p < 0.05$ ) on the relationship between blockholder ownership and earnings management. Blockholders deter earnings management but CEO power weakens its monitoring effectiveness. Agency theory argues that where there is separation of ownership and control, there needs to exist a monitoring mechanism borne by the owners. The CEO may be motivated to engage in discretionary accruals management so as to produce better results. The actions if realized are always opposed by the active blockholders. However, their concerns upon realization of the anomaly may not bear any fruit in the



presence of a powerful CEO who might choose to ignore their grievances without any further action. In agreement, Yasser and Mamun (2016) state that the shareholders have less control over the CEO when he or she is powerful.

Finally, CEO power has a negative and significant moderating effect ( $\beta = -0.12$ ;  $p < 0.05$ ) on the relationship between institutional ownership and earnings management. Higher institutional ownership triggers more earnings management due to their constant pressure for short-term performance targets. Therefore, with the transient nature of institutional investors in the firm combined with CEO power, increases the inclination for more earnings management in the firm. A powerful CEO is more likely to engage in higher earnings management as compared to a low powered CEO. Entrenched CEOs prefer not to report the unmet performance targets thereby resorting to earnings management especially when they are under threat from the institutional investors, as compared to low powered CEOs who might not engage in higher discretionary earnings management due to fear for consequences of detection.

## **5.2 Conclusion**

The study sought to determine the effect of corporate governance mechanism on earnings management, and the moderating role of CEO power on the relationship. As suggested by the agency theory, corporate governance presents an effective monitoring mechanism for deterring the divergence of interests and to align the interests of the management with those of the shareholders. The stakeholder theory extends these to other interested parties such as potential investors and regulators who rely on the reported earnings for their decision making. An institutional environment that provides better legal protection can control managers' self-interest to a greater extent. The audit committee which is a sub-committee of the board of directors is mandated to act as an

internal control for overseeing financial reporting and to ensure quality of financial information.

Generally, an effective audit committee, and the presence of blockholders in a firm proves to reduce managerial discretionary accruals management, but institutional shareholders compel management to engage in more earnings management. In support of the arguments by the entrenchment theory, the corporate governance mechanisms effectiveness in reducing earnings management is moderated by the degree of power vested on the Chief Executive Officer. The corporate governance mechanism constructs in the study comprised of both internal and external mechanism, specifically; the audit committee independence, audit committee meeting frequency, audit committee financial expertise, blockholder ownership and institutional ownership.

The audit committee independence is an effective corporate governance mechanism that aids in constraining earnings management in a firm. A higher proportion of independent members in the audit committee is desirable as an effective monitoring mechanism on matters pertaining financial reporting. This is due to the fact that the independent members in the committee operate free from managerial undue influence, and they provide an autonomous oversight role on matters about financial reporting so as to align the objectives of the management with those of the shareholders, and other stakeholders as suggested by both agency and stakeholder theories. Outside members of the AC are free from managerial influence because they are not internally affiliated to the firm and they have a reputation to guard that ultimately translates into reduced earnings management.

The study also sought to establish the effect of audit committee meeting frequency on earnings management. It was evident that an increase in the number of meetings held

by the audit committee in a year decreases earnings management. A higher frequency of the audit committee meetings signifies a higher level of activeness (activity) in detecting earnings management in the firm as compared to a dormant committee. Regularly conducted meetings mean higher monitoring of managerial activities, thorough scrutiny of financial reporting and eventually reduced earnings management. However, too many meetings being held by the AC may be ineffective due to divergence of interests as suggested by the agency theory, and therefore to avoid the attendance of many meetings for self-interests such as monetary incentives, the study's average of about four meetings per year could be considered as optimal in curbing earnings management.

The study also sought to find out the effect of audit committee financial expertise on earnings management. From the findings, the study concludes that the representation of financial expertise in the audit committee significantly affects earnings management. An increase in the proportion of members with financial expertise in the audit committee translates into lesser earnings management in a firm. The presence of financial experts in the audit committee provides increased monitoring and ensures effectiveness in reducing earnings management. Financial experts in the audit committee also heightens the propensity of the committees' ability to assess and evaluate objectively the financial reports and accounting issues presented to them, since they are knowledgeable of the various accounting methods that require managerial discretion in reporting. This prevents managers from taking advantage of their discretion in financial reporting to manipulate the reports for their own interests.

On the effect of blockholder ownership on earnings management, the study concluded that blockholder ownership has a significant effect on earnings management. An

increase in blockholder ownership in a firm reduces earnings management. This observation supports agency theory propositions which suggest shareholder monitoring as a means of solving agency conflicts. Blockholders are viewed as activists who show more concern for managerial decisions due to their large stake of shares in the firm. Unlike small shareholders who sell their shares easily if not impressed by managerial actions, blockholders stick to the firm and raise concerns instead of quitting, thereby reducing earnings management. Agency conflicts can be solved through a threat of takeover, and this solution is not exceptional to blockholders' whose views and queries are valued in a firm, rendering them effective in monitoring managerial activities through such threats that foster reduction in earnings management. Normally, Takeover force can put market pressure on managers to do the best for shareholders.

The study also sought to determine the effect of institutional ownership on earnings management. Institutional investors according to the study findings increase the likelihood for managerial engagement in earnings management, due their transient nature. Institutional investors exert more pressure for impressive performance on the side of management, thus compelling them to engage in income-increasing or income-decreasing earnings manipulation if the targets are not met. This therefore generates a positive association between the institutional investors and earnings management in a firm. A higher proportion of institutional investors therefore means higher earnings management. Institutional investors with higher reputation could also want to be identified with highly performing subsidiaries and they end up exerting more pressure on the management for better performance. Management have been cited by previous studies to manipulate research and development costs as a means of meeting their set targets as well as employing more discretion in reporting.

CEO power significantly moderates the relationship between audit committee independence and earnings management. An audit committee with higher independence monitors managerial decisions and actions pertaining to financial reporting without influence, thus reducing earnings management. However, with a powerful CEO in place, the effectiveness of the committee by operating independently is reduced. A CEO with more power is more likely to dominate the audit committee, neutralize their independence and make decisions without consultation. Entrenched CEOs can dominate the audit committees' oversight role and take actions that suit their own interests without much concerns being raised. The study findings suggest that entrenched CEOs engage in more earnings management without much scrutiny from the audit committee.

The study also found out that CEO power significantly moderates the effect of audit committee meetings frequency on earnings management. The higher the number of meetings, the more active is the committee, and thus its effectiveness in deterring discretionary earnings management in the firm. However, a powerful CEO neutralizes the level of activity of the audit committee in reducing earnings management. A CEO who is more entrenched as suggested by the entrenchment theory might engage in greater discretionary accruals as compared to a CEO who has less power. A CEO who is entrenched might overpower the meeting agendas and eventually the outcome, hence diluting the activeness of the committee in executing its monitoring and goal congruence role.

CEO power was also found to significantly moderate the relationship between audit committee financial expertise and earnings management. An audit committee with greater proportion of financial expertise, analyze financial reports objectively, since

they possess the necessary knowledge for assessment purposes. This therefore increases the likelihood of manipulation detection, therefore reducing earnings management in a firm. However, in the presence of a moderator which is CEO power, the effects weaken under higher CEO power since the effectiveness of the AC's financial expertise in deterring earnings management is counterweighted.

The power of a CEO also moderates the effect of blockholders on earnings management. The presence of blockholders in a firm was found to constrain earnings management, but the effect diminishes in the presence of a powerful CEO whom owing to his/her power is less subjected to scrutiny from the shareholders. According to the entrenchment theory, organizational CEOs earn more power by investing in risky projects which grounds them into the organization. A powerful CEO has the ability to engage in higher earnings to suit their desires, and this interferes with the abilities of blockholder activism to monitor entrenched executives.

Finally, the study established that CEO power significantly moderate the relationship between institutional ownership and earnings management. Institutional investors proved to increase earnings management due to their constant pressure for higher short-term targets that result into earnings management as a means of managerial realization of set targets. Entrenched CEOs in the presence of institutional shareholders further enhance the manipulation of reported earnings. This is due to the CEOs personal motives for better results combined with the transient nature of institutional investors, the two resulting into magnified earnings management.

## **5.3 Recommendations**

### **5.3.1 Policy Recommendations**

The study recommends the need for an effective internal and external corporate governance mechanism of listed companies for reduced earnings management, and embarking on actual earnings that are not as a result of aggressive accounting so as to avert possible collapse of public firms.

Furthermore, as a means of reducing earnings management in the firms, a higher and clear proportion of independent members in the audit committee is desirable for an independent oversight role. CMA's corporate governance guidelines of 2015 indicates a gap as it requires at least three independent and non-executive directors in the audit committee, which is ambiguous as it does not indicate the exact ratio of independent to the total membership in the audit committee. This is a concern especially with the variation in the audit committee size from one firm to another. Additionally, some firms registered very low independence, while others indicated an impressive independence ratio. The study therefore suggests compliance by the underrepresented firms, and the use of percentages of independent members to the total number of directors in the audit committee. This could be a best practice since the AC size varies.

The CMA guidelines of 2015 on corporate governance plausibly states that all the firms listed at the NSE should disclose the number, attendance and details of audit committee meetings held in a year. This provision indicates a gap as pertains to the optimal number of meetings to be held in a year. It instead dispenses this responsibility to be at the discretion of the committee members since it does not provide a limit on the optimal or maximum number of yearly meetings. It is of best practice therefore to make clear the maximum meeting frequency so as to avoid a conflict of interest. The study suggests

an average of four meetings in a year to be optimally practical as realized for the firms in the study.

The CMA guidelines should provide a clear policy on the ideal ratio of members in the AC with financial expertise, to the total membership necessary to objectively oversee the financial reporting functions in the firms. Some firms registered a very low proportion of members in the audit committee that possess financial expertise, which is undesirable for the effective execution of the monitoring role of the audit committee. This has to be enhanced for better oversight.

### **5.3.2 Practical implication**

Corporate governance mechanisms such as the audit committee and active ownership structures prove very important in limiting managerial earnings management in the firm. However, the effectiveness of the mechanisms in reducing earnings management is interfered with by the power of the chief executive officer. A powerful CEO engages in higher earnings management, hence neutralizing the degree to which the corporate governance controls put in place reduce earnings management. CEOs with too much power neutralize the very corporate governance mechanism that is meant to monitor them. CEOs should therefore shun from interfering with the mechanisms put in place and instead they should support and embrace the monitoring role executed by the control mechanisms in the firm.

The audit committee meeting frequency is an important aspect of the level of activity of the audit committee. Firms should therefore put more emphasis on the meetings held by the audit committees as a means of achieving a timely monitoring of the financial reporting process in the firm. Objective agendas of the meetings should be in place



while the members should also ensure higher attendance of the meetings held for ideal decision making.

A low representation of members with financial expertise in the audit committee was also notable for firms listed at the NSE. Firms should therefore boost their representation of members with financial expertise in their audit committees so as to achieve quality financial reporting packaged with low levels of earnings management. As much as a majority of the firms had the chair of the audit committee being a financial expert, appointment of the participating members into the audit committee should be majorly based on their corporate experience and financial expertise.

### **5.3.3 Managerial implication**

Despite the study's findings of closer to zero average earnings management, firms' management should refrain from engaging in either income-increasing or income-decreasing earnings management, since it is not favorable to the firms' stakeholders as suggested by the stakeholder theory. The stakeholders will be subjects of doctored financial reports that do not give a true reflection of the current status of the firm. Among other stakeholders, manipulating financial reports by the management for achievement of self-interests is detrimental to the firms' investors, regulators and governments, as it portrays a false impression to the interested parties on the true value and status of the firm. Furthermore, the management should instead support both the internal and external controls put in place.

### **5.3.4 Theoretical implication**

The research findings have several implications for academicians and others involved in theory building. The study extends to the body of knowledge on the vital role of corporate governance mechanisms that is; Audit committee independence, audit

committee meeting frequency, audit committee financial expertise, blockholder ownership and institutional ownership in constraining earnings management, more so in an emerging market such as the Nairobi Stock Exchange that thrives in a developing nation.

It also makes a great scholarly contribution in determining and justifying the moderating role of CEO power on the relationship between the study's internal and external corporate governance mechanisms and earnings management. The findings indicate that CEO power moderate the effectiveness of the audit committee and owners in constraining earnings management.

The research findings strongly support the agency theory propositions which suggests monitoring mechanisms such as corporate governance mechanisms to avoid agency conflicts between the management and the shareholders. It further, proves as suggested by the entrenchment theory that powerful executives interfere with the functioning of the very mechanisms meant to monitor them against engaging in conflicting actions that in the long-run affect the stakeholders such as the investors, shareholders, governments, employees, regulators and other parties as suggested by the stakeholder theory.

### **5.3.5 Implication to Shareholders**

Both large and small shareholders should be influencing rather than selecting the firms' financial reporting practices. This is because their activism goes a long way in executing the crucial role of constraining earnings management within the firms. It is therefore important for the blockholders to actively and closely monitor managerial activities in a firm so as to reduce the agency conflicts that arise due to the divergence of managerial interests, more so in dealing with the issue of earnings management.

Institutional investors were found to increase earnings management in a firm due to their transient nature. It is therefore recommendable that as their role is appreciated in the firm, institutional investors should instead focus on the long-term performance of the firm as opposed to their constant pressure for higher short-term results that yields to managerial engagement in earnings management as a means of achieving the set targets and expectations.

#### **5.4 Recommendations for Future Research**

The study's context comprised of firms listed at the Kenyan Nairobi Stock Exchange and therefore the study recommends future researchers to explore on the role of corporate governance mechanisms in earnings management in other contexts, more so the developed nations, where firms are more heterogeneous in nature. Further studies should also consider other constructs of corporate governance outside the study's scope such as the effect of the overall board and other ownership structures such as managerial ownership, state ownerships, family ownerships and foreign ownership on earnings management. Other researchers should also consider including more control variables such as firm performance and leverage as they may have an implication towards the levels of earnings management.

An opportunity also arises for further research in the developing an experiment on other philosophical best measures of earnings management, considering the varied and dynamic measurements suggested by prior seminal papers that suggest different approaches. This is because it is unclear whether investors should use discretionary accruals or aggregate accruals approach as a proxy for earnings management. The complexity of such models suggests that the average investor is unlikely to use complicated measures to indicate earnings management.

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## APPENDICES

## Appendix I: Tables

## EM, Control, Independent Variables

em	Coef.	Std.Err.	z	P>z	[95% Conf.]	
Random-effects GLS regression						
Group variable: firmid						
R-sq: within = 0.6614						
between = 0.5945						
overall = 0.6317						
corr(u_i, X) = 0 (assumed)						
Number of obs = 490						
Number of groups = 35						
Obs per group: min=14						
avg = 14						
max = 14						
Wald chi2(2)= 925.39						
Prob > chi2 = 0.000						
fs	0.0624992	0.0479707	1.30	0.193	0.031522	0.15652
fa	-0.0012315	0.0021134	-0.58	0.560	-0.005374	0.0029106
aci	-0.6225837	0.1024954	-6.07	0.000	-0.823471	-0.4216965
acmf	-0.0669788	0.0106108	-6.31	0.000	-0.087776	-0.0461819
acfe	-2.108892	0.1428496	-14.8	0.000	-2.388872	-1.828912
bown	-2.545579	0.292983	-8.69	0.000	-3.119815	-1.971343
iown	3.009368	0.2739458	10.99	0.000	2.472445	3.546292
_cons	0.6928485	0.3945777	1.76	0.079	-0.08051	1.466207
sigma_u	0.3503834					
sigma_e	0.38127697					
rho	0.45785123	(fraction of variance due to u_i)				

## EM, Control, Independent, Interaction 1

em	Coef.	Std.Err.	z	P>z	[95% Conf.]	
Random-effects GLS regression						
Group variable: firmid						
R-sq: within = 0.6923						
between = 0.6110						
overall = 0.6558						
corr(u_i, X) = 0 (assumed)						
Number of obs = 490						
Number of groups = 35						
Obs per group: min= 14						
avg = 14						
max = 14						
Wald chi2(2) =1057.42						
Prob > chi2 = 0.000						
fs	0.0606979	0.0467815	1.3	0.194	-0.030992	0.1523879
fa	-0.0012232	0.0021095	-0.58	0.562	-0.005358	0.0029113
aci	-0.8479268	0.1049507	-8.08	0.000	-1.053626	-0.6422271
acmf	-0.0509315	0.0104902	-4.86	0.000	-0.071492	-0.0303711
acfe	-1.804076	0.1438294	-12.5	0.000	-2.085977	-1.522176
bown	-2.168485	0.28892	-7.51	0.000	-2.734758	-1.602212
iown	2.954529	0.2650944	11.15	0.000	2.434954	3.474105
cp	1.0186855	0.1069852	3.68	0.000	-0.032376	0.0049948
aci_cp	0.1914967	0.0298824	6.41	0.000	0.1329282	0.2500652
_cons	0.4482944	0.3832127	1.17	0.242	-0.302789	1.199378
sigma_u	0.34914931					
sigma_e	0.36419741					
rho	0.47891431	(fraction of variance due to u_i)				

**EM, Control, Independent, Interaction 1, Interaction 2**

Random-effects GLS regression					Number of obs = 490	
Group variable: firmid					Number of groups = 35	
R-sq: within = 0.7093					Obs per group: min=14	
between = 0.6196					avg = 14	
overall = 0.6685					max = 14	
corr(u_i, X) = 0 (assumed)					Wald chi2(2) = 1142.22	
					Prob > chi2 = 0.000	
em	Coef.	Std.Err.	z	P>z	[95% Conf.]	
fs	0.0388194	0.0460716	0.84	0.399	-0.051479	0.1291182
fa	-0.0016647	0.0021116	-0.79	0.430	-0.005803	0.002474
aci	-0.9039598	0.1028074	-8.79	0.000	-1.105459	-0.7024609
acmf	-0.026319	0.0112743	-2.33	0.020	-0.048416	-0.0042218
acfe	-1.779621	0.1401091	-12.70	0.000	-2.05423	-1.505012
bown	-2.047846	0.2845617	-7.20	0.000	-2.605576	-1.490115
iown	2.811427	0.2613681	10.76	0.000	2.299155	3.323699
cp	1.0029637	0.1074858	3.40	0.000	-0.017636	0.0117081
aci_cp	0.2310053	0.0300607	7.68	0.000	0.1720873	0.2899232
acmf_cp	-0.1415328	0.0274036	-5.16	0.000	-0.195243	-0.0878227
_cons	0.8475935	0.3826904	2.21	0.027	0.0975341	1.597653
sigma_u	0.35343566					
sigma_e	0.35452313					
rho	0.49846395 (fraction of variance due to u_i)					

**EM, Control, Independent, Interaction 1, Interaction 2, Interaction 3**

Random-effects GLS regression					Number of obs = 490	
Group variable: firmid					Number of groups = 35	
R-sq: within = 0.7103					Obs per group: min= 14	
between = 0.6201					avg = 14	
overall = 0.6692					max = 14	
corr(u_i, X) = 0 (assumed)					Wald chi2(2) = 1145.72	
					Prob > chi2 = 0.000	
em	Coef.	Std.Err.	z	P>z	[95% Conf.]	
fs	0.0456085	0.04646	0.98	0.326	-0.045451	0.1366684
fa	-0.0016006	0.0021221	-0.75	0.451	-0.00576	0.0025586
aci	-0.8569188	0.1091232	-7.85	0.000	-1.070796	-0.6430412
acmf	-0.0201416	0.0122673	-1.64	0.101	-0.044185	0.0039018
acfe	-1.907841	0.1725713	-11.1	0.000	-2.246075	-1.569608
bown	-1.984857	0.2890673	-6.87	0.000	-2.551418	-1.418295
iown	2.784994	0.2623828	10.61	0.000	2.270733	3.299255
cp	1.0076823	0.1083433	3.92	0.000	-0.024035	0.0086702
aci_cp	0.2030748	0.037186	5.46	0.000	0.1301915	0.2759581
acmf_cp	-0.1547011	0.0292592	-5.29	0.000	-0.212048	-0.0973542
acfe_cp	0.0622243	0.0487678	1.28	0.202	-0.033359	0.1578075
_cons	0.8357765	0.3829787	2.18	0.029	0.0851519	1.586401
sigma_u	0.35608822					
sigma_e	0.35433744					
rho	0.50246439 (fraction of variance due to u_i)					



**EM, Control, Independent, Interaction 1, Interaction 2, Interaction 3, Interaction 4**

Random-effects GLS regression					Number of obs = 490	
Group variable: firmid					Number of groups = 35	
R-sq: within = 0.7225					Obs per group: min= 14	
between = 0.6268					avg = 14	
overall = 0.6790					max = 14	
corr(u_i, X) = 0 (assumed)					Wald chi2(2) =1210.66	
					Prob > chi2 = 0.000	
em	Coef.	Std.Err.	z	P>z	[95% Conf.]	
fs	0.0391422	0.0460108	0.85	0.395	0.051037	0.1293216
fa	-0.0013701	0.0021472	-0.64	0.523	-0.006	0.0028385
aci	-0.8274780	0.1073260	-7.71	0.000	-1.038	-0.6171229
acmf	-0.0233997	0.0120495	-1.94	0.052	-0.047	0.0002170
acfe	-2.0412390	0.1720294	11.90	0.000	-2.378	-1.7040680
bown	-1.6960980	0.2931430	-5.79	0.000	-2.271	-1.1215480
iown	2.6608740	0.2607115	10.21	0.000	2.150	3.1718590
cp	1.0071311	0.1082284	3.87	0.000	-0.023	0.0089964
aci_cp	0.2061381	0.0364653	5.65	0.000	0.135	0.2776088
acmf_cp	-0.1189915	0.0297565	-4.00	0.000	-0.177	-0.0606698
acfe_cp	0.1309137	0.0502754	2.60	0.009	0.032	0.2294517
bown_cp	-0.1144612	0.0256645	-4.46	0.000	-0.165	-0.0641597
_cons	0.7943492	0.3784181	2.10	0.036	0.053	1.5360350
sigma_u	0.36487867					
sigma_e	0.34772841					
rho	0.52405299	(fraction of variance due to u_i)				

**EM, Control, Independent, Interaction 1, Interaction 2, Interaction 3, Interaction 4, Interaction 5**

Random-effects GLS regression					Number of obs = 490	
Group variable: firmid					Number of groups = 35	
R-sq: within = 0.7295					Obs per group: min= 14	
between = 0.6111					avg = 14	
overall = 0.6768					max = 14	
					Wald chi2(2) = 1247.31	
corr(u_i, X) = 0 (assumed)					Prob > chi2 = 0.000	
em	Coef.	Std.Err.	z	P>z	[95% Conf.]	
fs	0.0289926	0.0459417	0.63	0.528	-0.061052	0.1190367
fa	-0.0014116	0.0021779	-0.65	0.517	-0.00568	0.0028571
aci	-0.8129375	0.106347	-7.64	0.000	-1.02137	-0.6045012
acmf	-0.0284714	0.0120171	-2.37	0.018	-0.05202	-0.0049183
acfe	-2.063794	0.1704046	-12.1	0.000	-2.39778	-1.729807
bown	-1.777065	0.2928609	-6.07	0.000	-2.35106	-1.203069
iown	2.952035	0.2739103	10.78	0.000	2.41518	3.488889
cp	1.0052001	0.1081988	3.63	0.000	-0.02127	0.0108692
aci_cp	0.214068	0.0361419	5.92	0.000	0.14323	0.2849049
acmf_cp	-0.0874373	0.0309747	-2.82	0.005	-0.14815	-0.0267281
acfe_cp	0.1436943	0.049921	2.88	0.004	0.04585	0.2415377
bown_cp	-0.0785769	0.0276696	-2.84	0.005	-0.13281	-0.0243455
iown_cp	-0.1008465	0.0310484	-3.25	0.001	-0.16170	-0.0399927
_cons	0.7001649	0.37763	1.85	0.064	-0.03998	1.440306
sigma_u	0.37378975					
sigma_e	0.34357835					
Rho	0.54203966	(fraction of variance due to u_i)				

**Hausman's Test: Model 1**

---- Coefficients ----				
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
fs	0.24974	0.171	0.079	0.0850483
fa	-0.0054	0.006	-0.011	0.0086549

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic  
 $\chi^2(2) = (b-B)'[(V_b-V_B)^{-1}](b-B)$   
= 1.89  
Prob>chi2 = 0.3883

**Hausman's Test: Model 2**

	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
fs	-0.002	0.062	-0.064413	0.0483905
fa	0.002	-0.001	0.0036857	0.0050946
aci	-0.595	-0.623	0.0279628	0.0294007
			-	
acmf	-0.068	-0.067	0.0014361	0.0028407
acfe	-2.051	-2.109	0.0583305	0.0390874
			-	
bown	-2.727	-2.546	0.1815762	0.1823307
iown	3.209	3.009	0.1994919	0.1507343

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg  
Test: Ho: difference in coefficients not systematic  
 $\chi^2(7) = (b-B)'[(V_b-V_B)^{-1}](b-B)$   
= 8.10  
Prob>chi2 = 0.3243

**Hausman's Test: Model 3**

	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
			-	
fs	-0.006	0.049	0.0547636	0.0480156
fa	0.000	-0.002	0.0016085	0.005321
aci	-0.597	-0.612	0.015056	0.0295056
			-	
acmf	-0.069	-0.068	0.0011805	0.0028832
acfe	-2.015	-2.063	0.0477868	0.0391644
			-	
bown	-2.616	-2.466	0.1496138	0.1904784
iown	3.118	2.952	0.1664262	0.1579964
			-	
cp	0.011	0.012	0.0007786	0.0031043

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg  
Test: Ho: difference in coefficients not systematic  
 $\chi^2(7) = (b-B)'[(V_b-V_B)^{-1}](b-B)$   
= 7.70  
Prob>chi2 = 0.4635

**Hausman's Test: Model 4**

	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
fs	-0.006	0.060698	-0.0667376	0.0453114
fa	0.00314	-0.001223	0.0043608	0.0050919
aci	-0.8344	-0.847927	0.0135292	0.0267148
acmf	-0.0529	-0.050932	-0.0019574	0.0025087
acfe	-1.7648	-1.804076	0.0392886	0.0347137
bown	-2.2357	-2.168485	-0.0671927	0.1798904
iown	3.11947	2.954529	0.1649384	0.1461907
cp	-0.0223	-0.018686	-0.0036562	0.0035291
aci_cp	0.19747	0.191497	0.0059691	0.0065669

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(7) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 9.46$$

$$\text{Prob}>\chi^2 = 0.3958$$

**Hausman's Test : Model 5**

	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
fs	-0.0247894	0.0388194	-0.0636088	0.0437079
fa	0.0015708	-0.0016647	0.0032355	0.0049418
aci	-0.8973647	-0.9039598	0.0065951	0.0264309
acmf	-0.0287097	-0.026319	-0.0023907	0.0024292
acfe	-1.747082	-1.779621	0.0325385	0.0335558
bown	-2.042663	-2.047846	0.005183	0.1738934
iown	2.921469	2.811427	0.1100418	0.1416203
cp	-0.005104	-0.0029637	-0.0021402	0.0036842
aci_cp	0.2359727	0.2310053	0.0049674	0.0064126
acmf_cp	-0.1405073	-0.1415328	0.0010255	0.004246

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(7) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 8.62$$

$$\text{Prob}>\chi^2 = 0.5682$$

**Hausman's Test: Model 6**

	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
fs	-0.0115241	0.0456085	-0.0571326	0.0446118
fa	0.0013305	-0.0016006	0.0029311	0.0049383
aci	-0.8489744	-0.8569188	0.0079444	0.0307412
acmf	-0.0225314	-0.0201416	-0.0023898	0.0029007
acfe	-1.872925	-1.907841	0.0349164	0.0418639
bown	-1.989365	-1.984857	-0.0045079	0.1716826
iown	2.90226	2.784994	0.117266	0.1402994
Cp	-0.0103283	-0.0076823	-0.002646	0.0043056
aci_cp	0.2089185	0.2030748	0.0058437	0.0077508
acmf_cp	-0.152936	-0.1547011	0.0017651	0.004173
acfe_cp	0.0612927	0.0622243	-0.0009316	0.0135434

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic  
 $\chi^2(7) = (b-B)'[(V_b-V_B)^{-1}](b-B)$   
= 8.74  
Prob>chi2 = 0.6455

**Hausman's Test: Model 7**

	---- Coefficients ----			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
fs	-0.007	0.039	-0.0465778	0.0433511
fa	0.001	-0.001	0.002278	0.0048287
aci	-0.816	-0.827	0.0114285	0.0302816
acmf	-0.025	-0.023	-0.0015496	0.0028641
acfe	-2.014	-2.041	0.0274387	0.0426219
bown	-1.701	-1.696	-0.0053858	0.1651671
iown	2.754	2.661	0.0929665	0.135811
Cp	-0.010	-0.007	-0.0027243	0.0041475
aci_cp	0.211	0.206	0.004521	0.0077596
acmf_cp	-0.119	-0.119	0.0002114	0.0041454
acfe_cp	0.132	0.131	0.0010291	0.0142401
bown_cp	-0.113	-0.114	0.0012407	0.0042525

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic  
 $\chi^2(12) = (b-B)'[(V_b-V_B)^{-1}](b-B)$   
= 7.13  
Prob>chi2 = 0.8489

**Hausman's Test: Model 8**

	---- Coefficients ----			
	(b)	(B)	(b-B)	$\sqrt{\text{diag}(V_b - V_B)}$
	fe	re	Difference	S.E.
fs	-0.0231254	0.0289926	-0.052118	0.0425654
fa	0.0017925	-0.0014116	0.0032041	0.0047526
aci	-0.7984679	-0.8129375	0.0144696	0.0292817
acmf	-0.030168	-0.0284714	-0.0016966	0.0027684
acfe	-2.043996	-2.063794	0.0197974	0.041296
bown	-1.779977	-1.777065	-0.0029111	0.1590093
iown	3.097147	2.952035	0.1451125	0.1391944
Cp	-0.0081089	-0.0052001	-0.0029088	0.0039916
aci_cp	0.2197024	0.214068	0.0056344	0.0075946
acmf_cp	-0.0846869	-0.0874373	0.0027505	0.0045578
acfe_cp	0.1464984	0.1436943	0.0028041	0.0138401
bown_cp	-0.0751785	-0.0785769	0.0033984	0.0042818
iown_cp	-0.1091849	-0.1008465	-0.0083384	0.0071587

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic  
 $\chi^2(12) = (b-B)'[(V_b - V_B)^{-1}](b-B)$   
= 8.03  
Prob>chi2 = 0.8413

**Appendix II: Listed Firms**

<b>No.</b>	<b>Company</b>	<b>Sector</b>	<b>Year of incorporation</b>	<b>Comment</b>
1	Eaagads Ltd	Agricultural	1946	Excluded, Missing data:2004,2005,2008,2009-2012,2014-2017
2	Kakuzi Ltd	Agricultural	1906	Included; data available for 2004-2017
3	Kapchorua Tea Co. Ltd	Agricultural	1869	Included; data available for 2004-2017
4	Limuru Tea Co. Ltd	Agricultural	1895	Excluded, Missing data:2014,2015
5	Sasini Ltd	Agricultural	1952	Included; data available for 2004-2017
6	Williamson Tea Kenya Ltd	Agricultural	1952	Included; data available for 2004-2017
7	Car & General (K) Ltd	Automobiles & Accessories	1936	Included; data available for 2004-2017
8	Marshalls (E.A.) Ltd	Automobiles & Accessories	1947	Excluded, Missing data: 2008,2012,2013
9	Barclays Bank of Kenya Ltd	Banking	1916	Included; data available for 2004-2017
10	Cfc Stanbic of Kenya Holdings Ltd	Banking	1955	Included; data available for 2004-2017
11	Diamond Trust Bank Kenya Ltd	Banking	1945	Included; data available for 2004-2017
12	Equity Group Holdings Ltd	Banking	1984	Excluded, listed in 2006
13	Housing Finance Group Ltd	Banking	1965	Included; data available for 2004-2017
14	I&M Holdings Ltd	Banking	1950	Excluded, Listed in 2013 and missing data; 2004-2009
15	Kcb Group Ltd Ord	Banking	1896	Included; data available for 2004-2017
16	National Bank of Kenya Ltd	Banking	1986	Included; data available for 2004-2017

17	Nic Group Plc	Banking	1959	Included; data available for 2004-2017
18	Standard Chartered Bank Kenya Ltd	Banking	1911	Included; data available for 2004-2017
19	The Co-Operative Bank of Kenya Ltd	Banking	1965	Excluded; Listed in 2008
20	Atlas African Industries Ltd	Commercial And Services	2012	Excluded, Missing data; 2004-2013 and 2016
21	Express Kenya Ltd	Commercial And Services	1918	Included; data available for 2004-2017
22	Hutchings Biemer Ltd	Commercial And Services	1982	Excluded, Missing all data, Suspended in 2001
23	Kenya Airways Ltd	Commercial And Services	1977	Included; data available for 2004-2017
24	Longhorn Publishers Ltd	Commercial And Services	1965	Excluded, Missing 2004-2012
25	Nairobi Business Ventures Ltd	Commercial And Services	2012	Excluded, Missing 2004-2015
26	Nation Media Group Ltd	Commercial And Services	1959	Included; data available for 2004-2017
27	Standard Group Ltd	Commercial And Services	1902	Included; data available for 2004-2017
28	Tps Eastern Africa Ltd	Commercial And Services	1970	Included; data available for 2004-2017
29	Uchumi Supermarket Ltd	Commercial And Services	1975	Excluded
30	Sameer Africa Ltd	Commercial and Services	1969	Included; data available for 2004-2017
31	WppScangroup Ltd	Commercial And Services	1996	Excluded, Listed in 2006
32	Athi River Mining	Construction & Allied	1974	Included; data available for 2004-2017




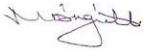



33	Bamburi Cement Ltd	Construction & Allied	1951	Included; data available for 2004-2017
34	Crown Paints Kenya Ltd	Construction & Allied	1958	Included; data available for 2004-2017
35	E.A.Cables Ltd	Construction & Allied	1966	Included; data available for 2004-2017
36	E.A.Portland Cement Co. Ltd	Construction & Allied	1933	Included; data available for 2004-2017
37	Kengen Co. Ltd	Energy & Petroleum	1954	Excluded; Listed in 2006
38	Kenolkobil Ltd	Energy & Petroleum	1959	Included; data available for 2004-2017
39	Kenya Power & Lighting Co Ltd	Energy & Petroleum	1922	Excluded, Missing 2007
40	Total Kenya Ltd	Energy & Petroleum	1955	Included; data available for 2004-2017
41	Umeme Ltd	Energy & Petroleum	2004	Excluded , Listed 2012 and Missing 2004-2009
42	Britam Holdings Ltd	Insurance	1965	Excluded , Listed 2011 and Missing 2004-2008
43	Cic Insurance Group Ltd	Insurance	1968	Excluded, Listed 2012 and Missing 2004-2007
44	Jubilee Holdings Ltd	Insurance	1937	Included; data available for 2004-2017
45	Kenya Re-Insurance Corporation Ltd	Insurance	1971	Excluded, Listed in 2006
46	Liberty Kenya Holdings Ltd	Insurance	1964	Excluded, Listed in 2007 and Missing 2004-2010
47	Pan Africa Insurance Holdings Ltd	Insurance	1946	Included; data available for 2004-2017
48	Centum Investment Co Ltd	Investment	1967	Included; data available for 2004-2017
49	Home Afrika Ltd	Investment	2008	Excluded, Listed 2013 and Missing 2004-2011

50	Kurwitu Ventures Ltd	Investment	2006	Excluded, Listed 2014 and Missing 2004-2016
51	Olympia Capital Holdings Ltd	Investment	1968	Excluded, Missing data; 2010,2011,2012,2016
52	Trans-Century Ltd	Investment	1997	Excluded, Listed in 2011 and Missing 2004-2008
53	Nairobi Securities Exchange Ltd Ord	Investment Services	1954	Excluded, Listed in 2014 and Missing 2007 and 2013
54	A.Baumann & Co Ltd	Manufacturing & Allied	1959	Excluded, Missing 2010-2016
55	B.O.C Kenya Ltd	Manufacturing & Allied	1940	Included; data available for 2004-2017
56	British American Tobacco Kenya Ltd	Manufacturing & Allied	1907	Included; data available for 2004-2017
57	Carbacid Investments Ltd	Manufacturing & Allied	1961	Included; data available for 2004-2017
58	East African Breweries Ltd	Manufacturing & Allied	1922	Included; data available for 2004-2017
59	Eveready East Africa Ltd	Manufacturing & Allied	1967	Excluded, Listed 2006
60	Flame Tree Group Holdings Ltd	Manufacturing & Allied	1989	Excluded, Missing data; 2004-2013
61	Kenya Orchards Ltd	Manufacturing & Allied	1959	Excluded, Missing 2005,2006,2008,2012,2015
62	Mumias Sugar Co. Ltd	Manufacturing & Allied	1971	Included; data available for 2004-2017
63	Unga Group Ltd	Manufacturing & Allied	1908	Included; data available for 2004-2017
64	Safaricom Ltd	Telecommunication & Technology	1993	Excluded, Listed in 2008
65	Stanlib Fahari I-Reit	Real Estate Investment Trust	2002	Excluded missing data for 2004-2015 and 2017.



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