

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

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
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SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING) IN THE SCHOOL
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DECLARATION

I assert that this dissertation is my original work, which has never been written or submitted for an award of degree award elsewhere. I can also state that it does not contain any material written or published by others, with the exception of areas where their work has been properly cited and the writers have been recognized.

Sign

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ABSTRACT

For many years, earnings management has become a major issue of policy makers and practitioners because it compromises integrity of financial statements and manipulates financial statement consumers by supplying them with misleading facts about the actual operating results of a business. Due to its importance to nations' economic growth and progress, corporate governance has also set off to be a topical subject. Poor institutional management is a big factor for even well performing firms to collapse. A claim has been made time and again that every corporate entity's governance system influences the capacity of the organization to adapt to external forces that have some effect on its performance. The key goal this study was to examine the effect of corporate governance on the earnings management of Nairobi Stock Exchange listed firms. The study was specifically guided by the following objectives; to establish the effect of board gender diversity, ownership structure, board independence and audit committee on the earnings management of companies listed at NSE. The finding of this study will benefit investors and financial institutions on the variables that influence share prices and provide better financial guidance on earning management. For the purpose of this study, descriptive research design was adopted. The study targeted sixty-two (62) firms listed at the NSE by the end of year 2021 using census. Secondary data was obtained from NSE published financial report for all firms targeted. The study covered a period of 5 years starting from year 2017-2021. Diagnostic post estimation tests that were analyzed included normality tests, multicollinearity tests, autocorrelation tests, heteroskedasticity tests and unit root tests. The data was analyzed using STATA. The findings of the study indicated that board gender diversity, ownership structure, board independence and audit committee all have a positive a significant relationship with the earnings management of the companies listed at the NSE. The study recommends that two-third gender rule should be observed, privately owned business companies provide better results, at least one of the company directors should also be nominated to be a board member and the involvement of a completely independent audit committee in the management of the operations of the company.

Key words: Corporate governance, earnings management, board gender diversity, ownership structure, board independence, audit committee

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DEDICATION

This work is dedicated to my husband and child, my beloved siblings and my peers for moral help and assistance all across my studies as well as in the course of undertaking this project.

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LIST OF ABBREVIATIONS AND ACRONYMS

AASE	- Association of African Securities Exchanges
AIMS	- Alternative Investment Market Segment
AU	- African Union
BOD	- Board of Directors
CACG	- Commonwealth Association for Corporate Governance
CBC	- Commonwealth Business Council
CDSC	- Central Depository and Securities Company
FIMS	- Fixed Income Securities Market Segment
GBMS	- Growth Business Market Segment
IFC	- International Finance Corporation
IPO	- Initial Public Offer
LSE	- London Stock Exchange
NSE	- Nairobi Stock Exchange
PIMS	- Primary Investment Market Segment
WEF	- World Exchange Federation

OPERATIONAL DEFINITION OF TERMS

Audit Committee - The audit committee pertains to leadership authority responsible for overseeing the audit and control activities of the company (Amudo & Inanga, 2019)

Board gender diversity – The involvement of female managers on management board of companies (Bhat, 2017)

Board independence - The situation in which, except as directors, all or most of the representatives of a board of directors have no connection to the company (Chou & Buchdadi, 2019)

Company to adjust the profits of the company purposefully such that the estimates fit a defined goal (Elliott, 2017)

Corporate governance - dealing with the aspects in which corporate finance providers ensure a return on their investment (Dunn, 2016)

Earnings management - Management of earnings is a technique used by executives of a

Ownership structure – It is the allocation of equity in terms of votes and capital, but also the name of the shareholders of the equity (Xiaohui, 2017)

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Earnings management involves the use of accounting and estimates that are in line with the generally accepted accounting principles (GAAP). The selection of the use of the accounting and estimates is bestowed on the management of the company. The managers therefore have the liberty to present the company earnings report in a manner that is most suitable for the company or for themselves (Ghazali et al. 2015). Earnings management is the ability to raise or lower the net income in the financial reports in a reliable manner (Abdel, 2005). Corporate governance plays an important role in ensuring that earnings are managed and reported in a manner that gives the true financial position of the company.

Earnings management is used by managers to entice naive shareholders into financial frauds. As a result, a good corporate governance framework oversees the use of a company's resources and guarantees that financial reports are of high quality (Njiru & Nyamute, 2018). As a result of the fact that some accounting choices are left up to the discretion of managers, there are some unethical managers who take advantage of the fact that they have the ability to make the financial statements seem better than they really are. As a result, an effective board is required to provide oversight during the financial reporting process in order to verify that the financial reports are completed correctly (Manyaga, Muturi & Oluoch, 2020).

In Jordan, Al Omush et al. (2019) while studying on the impact of earnings management on stock returns for listed industrial firms on the Amman Stock Exchange indicated that the published accounting information provided in the financial statements play an important role in stock exchange. This is because, the shareholders largely depend on these financial statements to assess the performance of the company and hence will be able to make informed judgements on their investments and on stock returns. These statements will also be a determinant of cash flow of the company because shareholders make investments based on the performance of the company.

The corporate governance in the Chinese listed companies has been used to mitigate agency costs especially between the large and the small shareholders referred to as tunneling. The study points out that the size of private control benefits that the controlling shareholders are able to extract are related to listed firms' earnings management. These results explain why listed firms in China have strong incentives to manage earnings when facing a de-listing risk (Feng et al.,2020). The interrogation of the mis-allocation of raised capital by controlling shareholders in cases of rights issues also suggested that earnings management in the Chinese listed companies is largely due to tunneling (Liu & Lu, 2007).

In a study on earnings management through loss avoidance in all companies listed on the Johannesburg Stock Exchange, South Africa, Pududu and De Villiers, (2016) argued that there was no evidence of earnings management to avoid reporting small losses or small earnings decreases in South Africa. This finding was attributed to the relatively smaller size of the Johannesburg Stock Exchange compared to stock exchanges in the United States. Furthermore, the finding was attributed to the possibility of investors

and analysts in South Africa being fixated on other performance indicators including revenue and headline earnings per share, and not necessarily on earnings.

In Kenya a research was conducted to determine the effect of corporate governance on the earnings management of the listed firms in the Nairobi securities Exchange. The study pointed out that weak governance structures provides managers with opportunity to engage in behaviors that would lead to lower quality of reported earnings. The study concluded that board size had a statistically significant negative effect on earnings management. In overall, the results indicated that corporate governance significantly influences earnings management of companies listed at the Nairobi Securities Exchange (Nyatichi et al. 2020). Corporate governance therefore is a significance determinant of the earnings management of the company companies listed at NSE.

In today's market atmosphere, corporate governance has gotten a lot of recognition recently. Increased social expectations on organizational behavior and efficiency necessitate the need for good governance. The recent failures of multinational corporations such as Lehman Brothers, Enron, Xerox, and WorldCom, among others, have strengthened the significance of corporate governance in organizations (Suryanto & Grima, 2018). There have been wide researches on corporate governance resulting into various definitions. However, they all converge to one common goal which is to promote the wellbeing of shareholders, stakeholders and the public (Sergi, Popkova, Bogoviz & Ragulina, 2019).

Studies on corporate governance have been in the rise in the recent years due to the increased cases of financial fraud in local and international organizations. The International Accounting Standards Board requires companies to offer shareholders with useful, timely, and accurate information to assist them in making decisions. Managers, on the other hand, have authority over some financial reporting rules and may use earnings management strategies to manipulate the numbers to their benefit. Vanauken et al. (2017) explain that proper governance structures like instituting an operational board can create an opportunity through the established internal controls to monitor the earnings, quality and hence minimize the practice of earning management in firms (Sorensen & Miller, 2017).

Numerous studies have found a correlation between weak corporate governance and higher levels of earnings management (Moşteanu & Faccia, 2020). Over the years, Kenya has experienced an increase in the collapse of big firms such as Nakumatt, Chase bank, Athi River Mining Cement, Webuye Pan Paper Mills among others. The collapse of these companies was attributed to weak corporate governance measures including lack of equal access of information by the shareholders, accounting discrepancy practices, compromised auditing and that the board expertise and experience and board composition highly affected performance of the Board of Directors (Abdulla, 2018). Due to the potential for fines from the NSE or CMA for noncompliance, listed businesses in Kenya place a premium on adhering to good governance procedures and being transparent with shareholders. According to Nyatichi, Iraya, Mwangi, and Njihia (2020), a weak board that is unable to implement its duty properly is to blame for business failure. In spite of this, other ideas exist that provide alternative perspectives on why corporate governance

tools are so crucial. This research will assist isolate the degree to which listed businesses adhere to the established standards.

Different theories, such as the agency theory and the stewardship theory, provide explanations for the connections between the variables in this research (Berle & Means, 1932; Donaldson & Davis, 1991). According to the agency theory, the split between control and ownership of a company results in agency costs, which in turn contribute to an adverse correlation among earning management and corporate governance (Jensen & Meckling, 1976; Berle & Means, 1932). As a result, it is crucial to put in place a set of checks and balances to keep an eye on things, such as a board of directors and some kind of internal controls (Dibia & Onwuchekwa, 2019).

Shareholders, according to Jensen and Meckling (1976), believe that managers can only operate in good faith if there are enough methods in place to oversee their actions and incentive systems. According to agency theory, a company's board of directors is better able to carry out its supervision responsibilities when it includes a large percentage of independent directors and when the CEO and the Chairman are two different people. There is no longer any need to keep tabs on management thanks to the assurances provided by the Stewardship idea that they would always operate in a manner that is beneficial to the company's shareholders. The proponents of stewardship theory believe that the board should be comprised mostly of inside directors and that the same individual should serve as both chairman and chief executive officer (Donaldson & Davis, 1991).

Were (2018) in a similar study of the firms quoted at NSE, concluding board independence and board activity had a negative correlation whereas firm size was linked positively to earnings management. Additionally, ownership characteristics and board size were found not to be statistically significant determinants of the dependent variable (earnings management). Related study by Nyatichi et al. (2020) for public businesses found that board independence has a detrimental effect on the degree of earnings management, whereas CEO duality is strongly correlated with earnings management.

1.1.1 Corporate Governance

Corporate governance is a framework formulated to control and direct an organization based on principles of good governance; fairness, accountability, transparency, independence and responsibility (Naimah & Hamidah, 2017). It is concerned with processes and procedures put in place to allow business enterprises to grow and thrive as well as management of affairs among board members, shareholders and other stakeholders whilst protecting their rights and promoting transparency (Sarbah & Xiao, 2019).

The main aspects of corporate governance entail accountability, transparency, sustainability, fairness, independence, control environment, openness, board commitment, good board practices, reputation and stakeholder interface. Accountability entails a board that is accountable to the shareholders, transparency entails the accurate and timely disclosure of information including the financial performance of the company. Fairness ensures lack of bias to any group of persons. Structures and procedures should be in place to reduce the conflicts of interests between the management and the

shareholders (Ashiru et al. 2019). Companies with sound corporate governance maintain complex systems of checks and balances. The role of good corporate practices is ensuring board members and board committees are independent of management thereby taking actions that are of best interest to shareholders (Micklethwait & Dimond, 2017). Toghil (2017) indicated that for companies to improve their operations and performance they require to enhance their corporate governance frameworks' expectations.

Financial stability, economic efficiency, and long-term development are all aided by good corporate governance, but these things are not the end aim. As a result, a firm is able to get access to capital while also fairly accounting for the interests of its owners and stakeholders, who contribute to its long-term development via means such as increased returns and better service (OECD, 2020). The elements that require a board to be in charge of the company and its resulting outcomes, allowing for better performance and transparency, are known as good governance practices. Further, Todorovic (2018) established that entities that embrace effective corporate practices are associated with benefits of increased profitability, enhanced credibility and competitiveness as well as effective management of stakeholders' relationships.

In this study, the aspects of corporate governance to be considered are namely board independence, gender diversity, board audit committee and ownership structure as there exist a number of research gaps on these variables in the existing literature. Empirical investigations show that the degree of successful oversight is proportional to the degree of board independence (Xiaohui, 2017). As a result, board independence is becoming more critical, and the number of outside directors has a major impact on board success. Outside directors have a strong desire to keep an eye on management because

their reputations are on the line, and it also helps them develop their human resources. In addition, Reddy, Locke, Scrimgeour, and Gunasekarage (2019) discovered the percentage of outside board members is simply the inverse of the capital expenditure contribution (a proxy for sustainability).

In efforts to fulfill their role and mandate, it is important for the board of directors to have gender diversity (Pucheta-Martínez, 2018). Diversity is a crucial part of the board of diversity. In that point of view, the main function of the boards in this context is to ensure that they have their rights mixed to provide different perspectives. The board that tends to have more women tends to have more perspectives and skills as compared to the board that has more men. Logical enlightenment for this line of reasoning is that women are prone to diversity ability to deal with more critical situations despite the fact that they remain stereotyped with some of the imagery in the modern societal backgrounds (Martin & Roper, 2018).

Audit committees are important in performance, according to the majority of previous study. The role of an audit committee is to examine a company's operating methods and policies in order to identify any potential loopholes through which fraudulent acts could be carried out. As a result, the corporation has the opportunity to close these gaps using the auditors' decisions and views (Iyer & Samociuk, 2016).

According to Hickman and Silva (2018), ownership structures are important in commercial governance because they influence managers' motivation and, as a result, business productivity. The increased volatility of business portfolios in recent years has prompted a renewed focus on firm ownership arrangements, particularly for international

enterprises (Senge, 2018). Globalization has a role to ensure that economies become interconnected, which has an impact on how ownership structures are formed; with diverse investors in the form of organizations or individuals who may be from a country other than the one where the company is located (Dragomir, 2018).

1.1.2 Earnings Management

Earnings management is defined as attempts made by management to influence or manipulate reported earnings by use of specialized accounting techniques, the identification of one-off items, the acceleration of cost and income transfers, or the use of additional techniques designed to affect transient proceeds. This can be done in a variety of ways, including: (Soliman & Ragab, 2019). Earning management is a technique that is used by the management of a business to actively monitor the earnings of the firm in order to reach a goal that has been predetermined. This technique is done out in order to maintain a steady flow of income (Mikhail et al., 2020). Businesses will aim to maintain their statistics by adding and deducting money from their savings account in an effort to keep their numbers consistent rather than experiencing years of extremely excellent profitability. Earnings management of a firm is measured as total sales less total expenses.

Earning management occurs when leaders make the decision to change financial data in the company's financial statements and contract structure in order to fool other customers about the company's core economic performance (Filip & Raffournier, 2019). Profits are managed by management for a number of different reasons and via a range of different strategies. The majority of a company's profits go toward incentivizing managers in one of four ways: via external contract incentives, through contract subsidies

for manager compensation, through regulatory incentives, and through stock market incentives (Gunny, 2020). The operational cash flows and accruals are what determine profits, and everything else is proportionate to those two factors. It's possible that stated profits may be managed by accounting trickery or genuine activities that impact operational cash flows (Roychowdhury & colleagues, 2012). Other methods of earnings management include the employment of an audit committee as well as manipulations using selling and leaseback transactions. According to Kaya and Turegun (2017), some of the tactics that are used in earnings management include altering the accounts receivable or the bad debt allowance, the profits or losses on disposals, adjusting the depreciation scheme, and operational income (Garane, 2017).

Shareholders willingly entrust their resources to management for self-serving management to correctly and exercise their contractual rights to maximize owner income and not mismanage shareholder assets (Zang, 2016). Managerial influence may interfere in earnings management to hide poor results or exaggerate excellent results, either for work considerations or for incentive purposes. Regulators and practitioners have long been concerned about financial transaction transparency, especially in the aftermath of high-profile accounting scandals involving well-known companies like Enron and WorldCom (Alves, 2019). In order to mislead creditors about the company's real level of economic performance or to influence the outcomes of contractual agreements based on recorded accounting statistics, managers fabricate financial data (Kumai, 2020). Regulators and industry experts have been worried for years that revenue accounting compromises financial reporting integrity and misleads financial statement consumers by

supplying them with misleading details about a company's actual operating results (Chatterjee, 2019).

The financial statements of any firm provide information that is valuable to all of the organization's stakeholders, both internal and external. In addition to this, the transfer of knowledge to capital markets is an essential component of the success of a firm. If markets' information is incorrect, it would be unnecessary for them to value shares correctly (Yasser & Al Mamun, 2020). Earnings management would hide actual results, limiting the ability of shareholders and analysts to make aim decisions. The recent bankruptcy of many major companies, owing in part to accounting fraud, has raised serious questions about the role of multiple monitoring systems, which are supposed to protect customers' interests and control opportunistic managerial conduct (Zgarni et al., 2019). The incidents of company failures raise questions about the usefulness of corporate governance as a tool for keeping tabs on how well businesses are managing their profits. Thus, the purpose of this study is to examine the effect of corporate governance on earning management in the Kenyan context, with an emphasis on publicly listed enterprises.

According to Salihi and Kamardin (2020), the manipulation of actual profits has acquired fresh attention in the aftermath of recent corporate financial scandals in the US financial markets. This is despite the fact that accounting regulations permit the manipulation of accounting statistics. These incidents have shown that neither corporate management nor market investors are able to accurately foresee the effect that market manipulation would have on the value of a firm. A previous study, according to Jermias and Gani (2019), has attempted to categorize revenue management using various

methods, such as actual transactions for accounting policy compilation, revenue smoothing, and accrual processes. The accounting techniques approach is predicated on the idea that management has the ability to choose from a variety of accounting procedures or procedures, and that the choices they make will either result in an increase or a loss in accounting revenue (Liu & Tsai, 2020).

Accounting decisions are preferred as a measure of earnings control, according to Alzoubi and Selamat (2020), since accounting rules are usually applied with their effect considered by control, and thus provide a purely discretionary indicator. This approach tries to collect income that increases (or decreases) earnings management using a dichotomous variable, and thus misses out on the combined impact of multiple choices (Adams et al., 2020). Managers can control earnings using real-world transactions. For instance, managers may boost sales by increasing bonuses or offering more favorable payment terms. Research has found it challenging to define earning management using this technique since there are no criteria to quantify the action that managers ought to have taken instead of the one they really did take (Salem & Selamat, 2012). Benefit smoothing aims to reduce earnings volatility in the short term, resulting in a steady stream of income. The most difficult aspect of this method is distinguishing between naturally smoothed earnings and earnings that have been purposefully smoothed (Kang & Kim, 2012).

1.1.3 Nairobi Securities Exchange

Nairobi Stock Exchange (NSE) is largest Kenya-based African Exchange, one of Sub-Saharan Africa's fastest-growing economies. NSE, established in 1954, has a history of six decades in the listing of equity and debt securities. It provides a world class trade amenity for local and foreign investors wanting to unveil the economic development of Kenya and Africa. In 2014, NSE demutualized and self-listed. The board and management team consists of some of Africa's leading experts in the financial markets, who are centered on creativity, expansion and trade operating success (NSE, 2020).

By fostering savings and investment, as well as by supporting local and foreign businesses access cost-effective resources, NSE takes a crucial place in development of Kenya's economy. NSE functions under the oversight of the Kenyan Authority for Capital Markets. It is a full member of the WEF, a founding member of the ASEA and EASEA. The NSE is a member of the Futures Trading Alliance and is an exchange participant of the SSE project led by the United Nations (NSE, 2020).

NSE is made of Primary Investment Market Segment (PIMS), the Alternative Investment Market Segment (AIMS), the Fixed Income Securities Market Segment (FISMS) and the Growth Business Market Segment (GEMS), each with their own entitlement requirements. In this report, the companies discussed classified their shares under MIMS. In addition, the MIMS is divided into 10 parts: automobiles and accessories; banking; building and alliances; energy and petroleum; insurance; manufacturing and alliances; telecommunications and technology; agriculture; commerce and services; and finance. NSE is among most dynamic markets in Africa that has drawn

investors globally and has risen dramatically, with record of 5,030 points reported on NSE 20-share index on February 18, 1994. Between 2006 and 2007, a record of six IPOs and additional offers were made. NSE was ranked as the highest growing emerging business across the globe by the IFC in 1994 with a yield of 179% in dollar terms, and they recalled this in 2007 when six IPOs and incremental offers were made between 2006 and 2007.

1.2 Statement of the Problem

The value of good corporate governance and financial regulation for an organization has been demonstrated by the global financial crisis. In order to increase or decrease the reported profits and stop disclosing losses periodically, administrators use earnings management. Insolvency, resource scarcity and bribery are the detrimental consequences arising from accounting manipulation. In the recent history, Kenya has witnessed a variety of organizational setbacks due to poor systems of corporate governance placed in action within entities. Corporate governance remains to destabilize in Kenya, amidst a strict legal framework. There has been revived concern in corporate governance matters in Kenya.

Despite the attention paid to corporate governance as a means of safeguarding investors' funds, companies throughout the world continue to experience crises of varying severity as a result of lapses in corporate governance. Some instances of global situations include the collapse of companies like Enron, WorldCom, and Ahold in the United States, and the failure of Pramuka Bank in Sri Lanka. Local companies in Kenya have experiencing challenges related to lapses in corporate governance. In 2015, Imperial Bank was put into receivership, and Dubai Bank was shut down (CBK, 2018). Further,

Uchumi supermarkets have been facing struggles to the point of being delisted from the Ugandan Securities Exchange. These incidents raise questions about the usefulness of corporate governance as a tool for keeping tabs on how well businesses are managing their profits. Thus, the purpose of this study is to examine the effect of corporate governance on earning management in the Kenyan context, with an emphasis on publicly listed enterprises.

Many researchers have carried out numerous researches relating of corporate governance and earnings. Corporate governance impact and transparency of corporate social obligations on earnings management activity of stock exchange-listed non-financial corporations was investigated by Christina and Alexander (2018). This study was conducted in a developed context whereas the current study focuses on the firms listed at NSE. Corporate governance effects on earnings control in Pakistan were investigated by Muhammad et al (2018). The research was based in Pakistan. Abbadi et al. (2016) analyzed the effect on earnings control in Jordan of the standard of corporate governance. Some aspects of corporate governance like gender diversity and ownership structure were however left out. The methods of corporate governance, sensitive variables, and earning management in Nigeria's oil and gas business were examined by Miko and Kamardin (2016). Aspects of corporate governance, such as the role of the audit committee, were ignored in the research.

Although there have been local studies conducted on this topic, they have produced conflicting results. Iraya, Mwangi, and Muchoki (2015) found that although a favorable relationship exists between board activity and CEO duality, earnings management is negatively impacted by ownership concentration, board size, and board

independence. Were, (2018) found an inverse correlation among board independence, earning management and board activities. In a related analysis for publicly traded businesses, Nyatichi et al. (2020) showed that a more independent board was associated with less earnings management. Many studies on earnings management have been conducted in light of the above. Earnings management has been a significant issue for NSE-listed businesses, but there has not been nearly enough work done to understand how corporate governance factors like gender parity, ownership structure, and diversity may affect earnings management. Furthermore, the aim of the study is to bridge the methodological gaps existing and further interrogate the conflicting results from past studies. These were the motivations behind the study's aim to examine how corporate governance affects the earning management of companies traded on the Nairobi Securities Exchange.

1.3 Research Objectives

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

1.3.1 Specific objectives.

- i. To establish the effect of board gender diversity on the earnings management of companies listed at NSE.
- ii. To examine the effect of ownership structure on the earnings management of companies listed at NSE.
- iii. To examine the effect of board independence on the earnings management of companies listed at NSE.

- iv. To examine the effect of audit committee on the earnings management of companies listed at NSE.

1.4 Research Questions

The study was guided by the following research questions:

- i. What is the effect of board gender diversity on the earnings management of companies listed at NSE?
- ii. How does ownership structure affect the earnings management of companies listed at NSE?
- iii. In what ways does board independence on the earnings management of companies listed at NSE?
- iv. What is the impact of audit committee on the earnings management of companies listed at NSE?

1.5 Significance of the Study

Policy Makers

The study will help in development and application of share price strategies and the supervision of stock exchange trading. The government will also be made aware about how to build trading rules policies, rules and regulations that help shield investors in order to stimulate investment and stimulate economic growth.

Investors

The findings would facilitate investors in recognizing the variables that influence share prices and they will be more advised about how to gauge their investing opportunities

while banks and other financial institutions will be able to provide better financial guidance and offerings to investors who need funds to finance share purchases.

Researchers and Academicians

This research will contribute to a greater thoughtful of problem and will serve as supplementary material for future researchers. The report will make recommendations for potential research areas that scholars could recommend. The urgent need for scholarly work will be addressed as well.

1.6 Scope of the Study

The study analyzed how firms listed at the NSE handle their profits. Incorporating gender diversity on boards, ownership diversity, board independence, and the role of the audit committee were all discussed as important tenets of good corporate governance in this article. However, earnings management relied on maximizing net sales. Organizations trading on the Nairobi Securities Exchange were the target of the probe. Descriptive research methods are used in this investigation. This study was done in the year 2022. The study period for the study was from 2017-2021.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes work carried out by other scholars in the same area of study. Research outcomes, approaches used and conclusions will be discussed. A theoretical analysis, an empirical analysis, a conceptual framework and an operationalization of variables will be carried out.

2.2 Theoretical Literature Review

This section covers hypotheses related to analysis. Key theories that anchor thesis are: stewardship theory, stakeholders' theory, resource dependence theory and agency theory.

2.2.1 Stewardship Theory

The stewardship theory came up as a result of seminar work by Donaldson and Davis (1991). It suggests that executives are stewards whose decisions are consistent with the interests of their directors. The principle is founded on the premise that the needs of shareholders are associated with the interests of management, so management is empowered to make choices that optimize the company's output and overall value. Directors are believed to be faithful to enterprise and are involved in good results (Donaldson & Davis, 1991). The theory believes that cooperative behavior is more useful than individualistic behavior, and therefore, while management activities would increase shareholder capital, they would satisfy their individual expectations at the same time (Davis, Schoorman & Donaldson, 1997). The theory proposes that an organization needs a system that makes it easier to establish harmonization between managers and owners

more effectively. Managers secure and optimize the resources of shareholders by business efficiency, since their utility functions are greatly increased in so doing (Madison, 2014).

The shareholders must enforce effective enabling governance systems and processes, knowledge and jurisdiction to promote management control to take actions that will optimize their usefulness when they accomplish corporate instead of self-serving purposes in order to accomplish this aim congruently (Epps and Ismail, 2008). Their pro-organizational acts are better encouraged by CEOs who are trustees because the corporate governance systems grant them legitimate power and control (Ikechukwu, 2013). Five dimensions of the management theory of stewardship were defined as trust, open dialogue, empowerment, long-term orientation and success development by Davis et al. (1997). Iraya, *et al.*, (2015) concluded that executives and directors are motivated to run company to improve financial results as well as shareholder benefits in order to maintain their credibility as policy makers in companies. In this way, the success of the company is assumed to have a significant effect on expectations of their individual success. In comparison, the philosophy of stewardship proposes unifying position of the CEO and chairman in order to minimize department expenses and to have a larger role in the enterprise as stewards. It was clear that the rights of shareholders would be best secured (Kamran & Shah, 2019).

The theory of stewardship notes that executives are excellent business stewards who strive resolutely to obtain strong corporate profits who stockholder earnings metrics. (Karamanou & Vafeas, 2005). One of the company law criteria is that boards should show fiduciary responsibility to the firm's stockholders. This relies on the premise that

directors with fiduciary responsibilities can be trusted and can serve as guardians of the organization's properties (Khalil, 2020). In such dimensions, director's responsibilities are grounded on a hypothesis of stewardship which is relatively high responsibility than that of an official, since the person would go around just as he was the director instead of a principal delegate (Khan, 2016). Additionally, stewardship researchers suggest that senior leaders would not inconvenience shareholders for fear of damaging their credibility. Advocates of the hypothesis of stewardship claim that board must possess a notable level of internal executives to ensure more systematic and productive simple leadership (Jallow, Leventis & Dimitropoulos, 2012).

This theory will be relevant to the study in illustrating the importance of independent boards in a firm. A board of directors with a majority of independent members, that is, directors who are not family members, firm employees, consultants, consumers, or suppliers, will offer significant value to a company and the family that owns it. The management of the company are trusted by the company directors to manage the company and provide the correct financial position of the company hence act as stewards. The growth of the company also is largely dependent on the management of the company and not the directors. This theory is therefore relevant in explaining the role of board independence and ownership structure on the earnings management of the listed firms at NSE.

2.2.2 Resource Dependency Theory

The resource dependency theory was introduced by Pfeffer (1973). The theory focuses on stressing essential role played by the board of directors in having access to

services that would increase efficiency of the organization and defend it against externalities. The central proposal is the need for environmental linkages between the business and external infrastructure. Companies need financial, human, technological, media, communication and technology services to work properly and to achieve their goals. Davis and Cobb (2020) proposed that resource usability increases the working, efficiency and sustainability of organizations. Through co-opting the capital required to function, directors help to link the company with external forces. The organization that needs to be established contributes to the establishment of organizational trade relationships. The theory offers a persuasive argument for the development by boards of relations between the organization and its external world as businesses that establish connections could enhance their sustainability and efficiency (Pfeffer & Salancik, 1978).

Hillman, Paetzold and Cannella (2000) argued that the principle of dependency theory reflects on central part that managers play in supplying or protecting the organization with vital resources through their interactions with the external world. They claim that managers provide the organization with tools in form of information, expertise, gain to key stakeholders, such as vendors, customers, public policy makers, social groups and credibility (Llukani, 2013). Organizations rely on each other for business since they constitute the greatest portion of the customer base of the company, meaning that one organization's activities will have a substantial effect on the other's financial results, either positively or negatively. There is also a need for organizations to develop board-level partnerships (Mulyadi & Anwar, 2020). The philosophy centers on the selection of autonomous corporate leaders as a way of obtaining access to information vital to the progress of the organization. Boards provide guidance, advice, and know-how, as well as

reputation and prestige, forums for sharing knowledge with external organizations, and privileged access to commitments or assistance from key external players (Pfeffer & Salancik, 1978).

According to this theory, by integrating the company with the external climate, the BOD is used as a mechanism to control external reliance, minimize environmental instability and reduce transaction costs associated with environmental interdependence (Tangjitprom, 2013). According to the resource dependency principle, a board of directors can greatly benefit a company in four ways: by providing valuable knowledge and insight, by connecting the business with influential outsiders, by securing financial backing from influential outside groups, and by building trust in the company's abilities (Ali, Salleh & Hassan, 2008).

A significant concept of this philosophy is that managers bring multiple resources and relationships to the board, and the structure of board diversity can thus be tailored to the unique needs of the organization (Antle & Fellingham, 1997). In addition, the representation of the board can be changed over time as its company's requirements change. Leuz, Nandab and Wysocki (2003) indicated that in the early stages of the lifecycle, small businesses and companies could still benefit better from the services offered by the board relative to larger and more experienced businesses. The correct size of the board for a company relies on a broad variety of internal and external considerations, so it is important that a company is mindful of both its internal and external environments (Agyei-Mensah & Yeboah, 2019).

This principle would be applicable to the report, as it would illustrate the crucial function of board of directors in having accessibility to services that will increase efficiency of the firm and shield it from externalities. Through corporate governance and diversity management participation of women in organization management will be promoted corporate governance and diversity management will help increase the number of women in top management positions in organizations. The expectation is that by increasing the number of women in leadership roles and on boards of directors, shareholder value and business efficiency would increase.

2.2.3 Stakeholder Theory

The stakeholder theory was formulated by Freeman (1984). The theory stresses on the need for management, instead of owners, to provide organizational responsibility to stakeholders. Stakeholders are "any group or individual that may impact the achievement of the intent of a company or is influenced by it." The philosophy assumes that, in the interest of all its owners, an enterprise should be run. It suggests the realistic importance of shareholder responsibility even though a board takes care of other concerns in a company's actions (Freeman, 1984). The philosophy is concerned with how all stakeholders are influenced by managerial decisions and no one benefit should be able to control the others. The balanced scorecard reflects the involvement of key stakeholders in a particular series of metrics that relate significant operating factors to financial results (Ntiamoah, Egyiri & Kwamega, 2019).

The philosophy of stakeholders suggested the inclusion of the different pressure groups on the board of the organization to ensure mutual sharing and conflict avoidance. The board then functions as an intermediary on stakeholders' competing desires and

ensures in stability required to accomplish its organizational goals (Alipour, 2013). It has been criticized for placing so much pressure on management, considering the positive motives of the principle, by rendering them responsible to multiple stakeholders without clear guidance for addressing issues arising from competing interests. This scenario has allowed executives the discretionary power to settle about their satisfaction in serving (Gould, 2012). Managers should follow goals that would maximize the company's long-term value, although this would not be accomplished by disregarding the wishes of any of the stakeholders (Ayuso, Rodríguez, García-Castro & Arino, 2019).

An organization's success is not only calculated by returns to customers, but the control of knowledge in the organization with special regards to vertical contact, interpersonal interactions in the organization and the workplace atmosphere is vitally valuable (Bart & McQueen, 2013). The organization should also take into account the desires and influences of persons who are already influenced or who may be influenced by the policies and actions of the company (Carter, D'Souza, Simkins & Simpson, 2020).

This hypothesis will help pinpoint where the audit committee stands in the final report. Financial reporting, audits, internal controls, and legal compliance are all things that the audit committee keeps an eye on. To recognize the possible effect on financial statements, the audit committee should expect to review major accounting and reporting concerns, as well as recent technical and regulatory pronouncements. To determine if reports are complete and reliable, you must first understand how management produces internal interim financial information.

2.2.4 Agency Theory

The agency hypothesis was first developed by Jensen and Meckling in 1976. It is generally accepted that the idea refers to the ties that exist between the principals of an organization, such as its founders, and the agents of that organization, such as its executives and managers. This theory proposes that shareholders who also serve as directors of a company engage agents to undertake specific responsibilities on their behalf. Jensen and Meckling (1976) further pointed out that principals assign to the directors or administrators, who are representatives of the shareholder, the running of the company. The presence of agency costs occurring due to disputes between management and shareholders or between shareholders and debt holders.

The division of ownership and power develops an implicit conflict of interest between shareholders (principal) and the management (agent) according to the agency model (Cheng, Su & Zhu, 2012). While managers are assumed to be reasonable, by often behaving in best interest of principal, they cannot be believed to stay loyal because they are often believed to be self-interested (Duke & Kankpang, 2016). Managers must also be monitored by such risk-bearing and surveillance processes that verify their deviant actions in order to prevent moral hazard. Agency philosophy promoted a strong distinction between decision-making and access management (Ekadah and Mboya, 2020)

In addition, Balachandran, Rahman, Mather and Khan (2019) clarified that the theory of agencies is concerned with addressing two concerns that may exist in partnerships with agencies. Problems with the agency arise when the principal and the agent have conflicting preferences or priorities, or when it would be difficult or expensive for the principle to monitor the agent's actions (Lappalainen and Niskanen, 2012). The

agency's management strategy is founded on two tenets: a focus on behavior and results. Effectiveness evaluation is central to both approaches. When considered in light of an agency's guiding principles, a company's achievements may provide insight into a pressing internal problem (Kiruri, 2013).

This theory is relevant to this research since it clarifies the ownership structure of companies. The principals may believe that the agents are making the best decisions for the business, according to the theory. As a result, they implement incentives such as bonuses and benefits to compensate the agents, but the reward instead promotes earnings management. This is common in governance where there is a division of ownership and control between shareholders and managers. The principle would be useful in ensuring that the company's hired skilled managers run the company in the best interests of its owners, or that they operate with the greatest possible quality, maximizing the firm's added profit and the owners' welfare.

2.3 Empirical Review

This segment covers researches performed by other scholars across the world and locally on the association among the independent factors and the variable being studied (the dependent variable).

2.3.1 Board Gender Diversity and Earnings Management

A study was conducted by Ouni et al. (2020) on the effect of gender diversity on the board of directors and the executive committee of participating Canadian firms with regard to the financial performance and the mediating role of environmental, social, and governance) orientation in this relationship. There were 133 participating businesses with 925 observations collected over a period of 18 years (2002-2019). The findings of the

study indicated that financial performance is affected by gender diversity in turnover, and this effect accounts for 53% of the variation, according to the research. Supporting the favorable effects of gender diversity on performance, the research also reveals a mediating mechanism, such as a company's environmental, social, and governance orientation, which accounts for around 4% of the total effect of gender diversity on performance. This study was conducted in a developed context and its findings might not be applicable in Kenya.

A research was done by Brahma, Nwafor and Boateng (2020) on the board gender diversity and firm performance in United Kingdom. 100 firms in the UK were used to examine how gender diversity, selected female attributes and financial performance are associated. Using critical mass theory to measure gender diversity via the number of women on corporate boards, we find a positive and statistically significant correlation between gender diversity and financial success. However, as compared to when just two women are appointed to the board, the outcomes are clear and decisive when three or more women are included. The post-appointment financial success of a company is favorably correlated with the proportion of women on its board of directors, the number of women on its board of directors, and the proportion of women on its executive team, according to a separate investigation. Return on assets and Tobin's Q, two alternative metrics of company performance, are used to account for endogeneity issues, but the conclusions are the same. Because of the different cultural setting, the results of this research may not be transferable to Kenya.

Research on the impact of gender diversity on the bottom line of Kenyan insurance firms was undertaken by Ibrahim, Ouma, and Koshal (2019). The purpose of

this research was to examine how gender parity affects bottom lines at insurance firms in Kenya. Female representation on the boards of Kenyan insurance companies is on the rise. Primary data came from a survey of 412 board directors, CEOs, CFOs, Audit Committee members, and internal auditors, while secondary data came from the 2017 audited financial statements. The financial success of insurance companies in Kenya has been shown to improve significantly when they increase their gender diversity. The influence of gender diversity on earning management was not explored in this research because of its exclusive emphasis on financial success.

Empirical investigation on the link between diverse boards of directors and strong financial results was undertaken by Adesanmi, Sanyaolua, Isiaka, and Fadipe (2019) in Nigeria. This research looked at how having a diverse board of directors affected the bottom lines of Nigerian deposit money institutions. A study of Nigerian deposit money institutions revealed that adopting policies like gender diversity and board independence improved their bottom lines. The study's results suggest that deposit money institutions should make it simpler for eligible women to be nominated to their boards of directors. In addition, by hiring well-respected outsiders as non-executive directors, deposit money institutions may maintain their management's autonomy. The impact of gender diversity on revenue management was not a primary focus of this investigation.

A study was conducted by Ghaeli (2019) on the impact that women have on business leadership. The report discussed the effects of gender on business leadership. Both the financial success of businesses and the extent to which they participated in climate change mitigation efforts were examined in the research. Female-led firms were shown to be more concerned about the effects of green gas than male-dominated ones.

The inclusion of a woman on the board of directors is seen as a positive sign of future financial success by most investors, it was determined. The impact of gender diversity on the management of profits was not a primary focus of this research because of its narrow emphasis on profitability.

Ullah, Fang, and Jebran's (2019) research examined the impact of CEO gender and gender diversity on the value of companies in Pakistan's developing economy. Next, the study delves into the question of why state-owned and non-state-owned businesses collaborate in different ways. The presence of women on corporate boards has been demonstrated to significantly increase a company's worth. Findings also show that having a female CEO is beneficial to a company's bottom line. The findings indicated that in business decisions, gender inequality and CEO gender play a major role. The results showed that management control, the elimination of agency disagreements, thereby strengthened corporate governance, yielding higher firm valuation. This research was conducted in Pakistan whose operating environment is different from Kenya.

Rono (2019) set out to test the hypothesis that having more women on boards of directors improves a bank's bottom line in Kenya. A total of 146 workers were employed to provide a usable sample size of 106 for the study's explanatory research methodology. With the use of a closed-ended questionnaire, primary data was gathered for this research via the use of a purposeful sampling strategy. The data was analyzed using a regression technique. In conclusion, the results demonstrate a robust and statistically significant correlation between gender diversity on boards and corporate success. The study concludes that board gender diversity is crucial for leadership capacity building in the

organization. This study focused on financial performance leaving a gap on gender diversity effect on earnings management.

The impact of board diversity on the financial performance of commercial banks in Kenya was studied by Rajula (2016). This research sought to fill that void by analyzing how having a more diverse board of directors affects the bottom lines of Kenya's commercial banks. Age, gender, and level of education were all taken from audited back files at commercial banks that have been publicly traded. Based on the findings of this research, it seems that diversity may play a more important role in corporate governance outside of boardrooms than previously thought. The efficiency of commercial banks can be positively influenced by any metric that may be used to improve individuals chosen as directors in terms of their age, average experience span, ethnicity and education level. The impact of gender diversity on revenue management was not a primary focus of this investigation.

A research was conducted by Gulzar et al. (2019) on the impact of board gender diversity and foreign institutional investors on the corporate social responsibility engagement of Chinese listed companies. This paper used data from the China Stock Market and Accounting Research database to analyze the effect of gender diversity on boards and foreign institutional investors on the CSR practices of businesses listed on the Shanghai and Shenzhen stock exchanges. The survey found that the presence of more women on boards was positively correlated with CSR initiatives. These results deepen our understanding of how ethnicity shapes social networks, in line with critical mass theory and team dynamics.

Research was conducted by Rana and Mwangi, (2017) on the impact of board gender diversity on profitability of agricultural listed companies in Kenya between 2008-2015. ROA and Tobins Q were used as the proxies for profitability. Irrespective of the profitability measure used, presence of women was found to be positive and statistically significant. This means that presence of women in boards of agricultural listed firms will lead to increased profitability. Having women on boards has been demonstrated to increase profitability, therefore NSE-listed agricultural firms should make sure they include them, the research says. The impact of gender diversity on earning management was not a primary focus of this research since the authors narrowly focused on profitability.

A study was done by Karamahmutolu and Kuzey (2016) on the effectiveness of gender diversity on boards of publicly traded Turkish firms. In this work, the study applied instrumental variables regression analysis on data from firms listed on the Borsa Istanbul between 2008 and 2012 to determine the correlation between gender diversity on boards and business performance. The findings indicate that male executives predominate on company boards in Turkey. Financial success, as assessed by ROA, ROE, and ROS, is positively correlated with the percentage of female directors present, according to the research. Because of the different cultural setting, the results of this research may not be transferable to Kenya.

2.3.2 Ownership Structure and Earnings Management

Mudi (2017) investigated the ways in which the ownership structure of companies that were traded on the NSE impacted their financial performance. The primary purpose of this research was to figure out how the amount of management ownership influenced

the businesses' financial performance. In this study, a descriptive survey, a cross sectional research design, and a longitudinal research design were used. All companies that were listed on the NSE during the years 2016 and 2016 made up the sample for this research. According to these findings, 52 businesses met the requirements to be included in the survey. The findings of the research indicate that the structure of a company's ownership has a substantial impact on the financial success of the company. Return on assets is positively impacted in a considerable way by management ownership, even after taking into account the length of time the firm has been in operation. Even when the age of the company is taken into consideration, the influence of individual ownership has been shown to have a positive and substantial impact on return on assets. This study's primary emphasis was on financial performance; hence it did not investigate how ownership structure influences earnings management. As a result, there is a gap in our knowledge.

Gitundu et al. (2016) conducted research to investigate the impact that ownership has on the economic performance of Kenyan enterprises that have been privatized. According to the findings, there is a close connection between the ownership structure of a company and its level of financial efficiency. Distributed investors have a beneficial influence on return on investment (ROI), but a detrimental effect on cost efficiency. This study suggested that Kenya's Privatization Commission should restructure privatized company ownership in order to further decrease government ownership and disperse ownership in order to move on more power and decision - making to private investors. However, to raise shareholder confidence, investment security and managerial monitoring, the government should maintain some ownership of privatized companies. In order to encourage privatized businesses to draw managerial and technological skills

necessary for enhancing governance and financial efficiency, a strategic institutional investor in each organization should be established and appropriate equity distributed. This study focused on financial performance leaving a gap on the effect of structure of company ownership on earning management.

A research was conducted by Chol et al. (2019) to evaluate the effect that South Sudan's ownership structure has on the stability of commercial banks as well as their financial performance. The main data were collected via the use of a semi-structured questionnaire, and the secondary data were collected through the use of audited annual financial reports of individual banks as well as reports from the Central Bank of South Sudan for the period of 2012-2017. During the course of the investigation, both descriptive and inferential statistical approaches were put to use. According to the results of the research project, the ownership structure of South Sudan's commercial banks had a moderating influence that was statistically significant on the banks' financial performance. The study advises that stronger steps to safeguard publicly owned commercial banks should be taken by the government to increase their productivity and performance. This study focused on financial performance leaving a gap on how earning management is affected by ownership structure.

Lagat and Tenai (2017) explored the impact of the arrangement of ownership on financial institutions' results. Explanatory analysis methodology was used in the study. It was developed that the Central Bank of Kenya and the Sacco Regulatory Authorities as regulators should take account of complexities of financial sector nowadays before any policy review should focus on various metrics and primarily on those that represent the entire reality of performance of the firm and specifically consider and carefully

implement certain regulations across multiple categories of financial institutions, the regulatory consequences could be different. Central Bank should consider developing clear and effective frameworks for risk identification that can help financial firms assess their risk sooner. This study focused on financial performance leaving a gap on the effect of ownership structure on earnings management.

Oketch (2017) conducted research during the period of 2012-2016 to investigate how the ownership structure of companies that were traded on the NSE affected their financial performance. The major purpose of this research was to analyze the relationship between the ownership structure of NSE-listed firms and their financial performance. Using secondary data, we were able to collect information from 58 different organizations about their levels of management ownership, institutional ownership, ownership concentration, and profitability, as well as their overall financial success. According to the findings, there is a correlation that points in the other direction between ownership structure and financial success. In general, the research led the authors to the conclusion that the ownership structure of listed firms in Kenya had a significant association with the financial success of such companies. This study's primary emphasis was on financial performance, hence it did not investigate how ownership structure influences earnings management. As a result, there is a gap in our knowledge.

Shohreh et al. (2020) conducted research to analyze how the institutional ownership of listed firms on the Tehran Stock Exchange is related to the financial policies and performance of such companies. A random sample of 90 businesses was selected to represent the years 2006 to 2010 in this study. In order to accomplish the goals of the study, analyses of Pearson correlation and multiple regressions were carried out.

According to the findings, a noteworthy positive association exists between institutional ownership and dividend policy, but a notable negative relationship exists between leverage and institutional ownership. Additionally, the findings demonstrated a strong and significant connection between institutional ownership and financial success as measured by return on equity (ROE). Due to the fact that this research was carried out in a developed setting, it is possible that its conclusions will not be relevant to the context of Kenya.

Afang and Musa (2016) evaluated the link between the ownership structure and return on equity of Nigerian conglomerates that were listed on the Nigerian Securities Exchange using an exploratory research approach. The research was conducted on a population of fifty different conglomerates over a period of five years of panel data. The findings of a numerous sort of regression equation revealed that management and foreign ownership shares had a negative impact on ROE. The size of the company has a favorable correlation with its performance. This research was conducted in an overseas context with circumstances that differed from those in the United States.

2.3.3 Board Independence and Earnings Management

Miruka (2020) in his study sought to determine how Kenyan listed firm's financial earning management is affected by corporate governance on financial earnings management of listed firms in Kenya. Specifically, the study concentrated the board independence effect on financial performance of NIC bank. The target population for this study was 135 employees at 8 NIC bank branches within Nairobi Central Business District. Stratification was done based on three management levels: Managers, head of departments and operations staff where a sample of 101 employees was sampled. A

questionnaire was used for data collection and 81 responded. There was a detailed analysis on the results using SPSS and a presentation of the findings in Figures and Tables. The research showed that an independent board results in candid discussion of pertinent issues and positively impacts on performance. This study focused on financial performance leaving a gap how management of earning is affected by the independence of the board.

Afzalur (2019) examined whether the firms' economic performance is influenced by the board independence amid the listed firms in Bangladesh. The research employed a simultaneous equation technique to control the possible endogeneity issue. This approach is supported by data obtained from 135 companies that are listed on the Dhaka Stock Exchange, as well as the use of accounting and market performance measurements. It is concluded that the independence of the board does not have a favorable impact on the economic success of the company. Nevertheless, the size of the board has a considerable and beneficial effect on both the success of the company and the independence of the board. Many developed countries have adopted board independence as a vital attribute of corporate board practices but in Bangladesh it may still be an illusion. This research was conducted in an overseas context with circumstances that differed from those in the local setting.

A study was conducted by Zubeltzu-Jaka et al. (2019) on how corporate financial performance is influenced by the firms' boardroom independence and also addresses the way countries moderate the connection between social and institutional contexts. It was discovered via the use of a meta-regression that encompasses 126 different independent samples that the independence of businesses' boardrooms has both a positive and negative

impact on accounting and market-based metrics of corporate financial success. Further, the results showed that the relationship between the independence of a company's board of directors and the financial performance of the company is stronger in societies that do not practice communitarianism, whereas in nations that have more developed mechanisms to protect the interests of investors with non-controlling interests, the relationship is weaker. This finding suggests that in order for businesses to be financially successful, they should proactively re-balance the proportion of independent directors that they have across a variety of social and institutional contexts.

With the assistance of the NYSE and NASDAQ listing regulations for board independence from 2003, Bird et al. (2017) did a study to estimate a causal association between independent boards of directors and the variability of business performance. In contrast to conforming businesses, non-compliant enterprises that lacked a majority of independent directors were shown to have had a greater reduction in the variability of their firm's performance, according to the data obtained using a difference-in-difference methodology. The unpredictability of monthly stock returns, ROA, Tobin's Q, the inaccuracy of analyst forecasts, accounting accruals, extraordinary items, capital expenditures, cash holdings, and the frequency of acquisition activities are some of the negative aspects associated with the independence of the board. The conclusion is that higher board independence reduces the influence of the CEO, which in turn reduces the amount of risk that corporations are willing to take. As a result, the performance of companies with more independent boards differs because the choices that are taken by are not as severe. The emphasis of this research was on financial success, hence it did not investigate how the independence of boards of directors affects earnings management.

A research was done by Zattoni et al. (2017), freedom from the board has the potential to boost a company's financial performance. The researchers wanted to investigate the boundary conditions of this dominant governance mechanism, so they looked at the impact of the formal and knowledge frameworks of 18 national business systems on the relationship between board independence and financial performance. This was done so that they could learn more about the conditions. According to the results, the studies indicated that while the direct impact of independence was minor, the link between independence and performance was considerably modified by national-level institutions. The findings suggested that it was probable that the effectiveness of the board systems depended on the specific national circumstances, but that the kind of legislative framework had no significant role in the outcome. This research was carried out in a developed setting; hence, it is possible that the results cannot be generalized to the Kenyan context.

2.3.4 Audit Committee and Earnings Management

Chou and Buchdadi (2020) investigated the efficiency of Indonesian financial institutions in relation to the impacts of the features of the audit committee. The study employed a two-stage least squares panel that's data regression and Tobin's Q as the proxy for the firm's performance. According to the findings of the study, the attendance levels of committee members have a significant impact on the efficacy of the oversight function that the committee plays. It also indicated an improved level of financial reporting as a consequence of the audit committee meeting more often and placing a greater emphasis on the relevancy of its agenda. Due to the fact that this research was carried out in a

developed setting, it is possible that its conclusions will not be relevant to the context of Kenya.

Ali, Salleh, and Mohamat (2016) evaluated the efficacy of the board of directors, audit committee, and concentrated ownership control roles in decreasing earning management for 97 firms that were listed on the Bursa Malaysia Main Board during the period of 2002-2003. According to the analysis, there is a clear connection between the make-up of the board of directors and the management of profits. This lends credence to the claim that, in compared to boards of lesser size, those of bigger size are less effective in carrying out their supervisory tasks. There are a number of potential reasons why other corporate governance systems, the board of directors, the audit committee, and earnings regulation do not work together. One of these reasons is that the board of directors is perceived as being ineffective in carrying out its oversight responsibilities due to management's control over company matters. This study was conducted in a developed context and therefore its findings might not be applicable in the Kenyan context.

Sharma (2018) provided analytic data on how the audit committee moderates the relationship between a consumer's economic importance to the auditor and earnings regulation. The study found a positive relationship between customer importance and our two earnings management proxies. This correlation was stronger in the case of income-increasing earnings regulation. However, where the audit committee doesn't quite conform with standard practices, the correlation between consumer importance and earnings control is more pronounced. It was argued that the economic value of the entity threatens to jeopardize the integrity of the auditor and, ultimately, the efficiency of financial statements, but only where the audit committee shows the characteristics of

having poor control. This study was conducted in a developed context and therefore its findings might not be applicable in the Kenyan context.

Earnings management was studied by Albersmann and Hohenfels (2017), who investigated the executive committee, audit committee and board of directors. We provide evidence to support the SEC Panel Study's claim that members of the audit committee need financial knowledge by demonstrating a correlation between board composition and the probability of earnings management. Board and audit committee members with corporate or financial knowledge were compared to businesses with smaller budgeted current accruals. The reduction in the rate of current budgeted accruals was also discussed in meetings of the board and the audit committee. Managers' propensity to participate in management of earnings was hypothesized to be moderated by the activities of the board and the audit committee, as well as the financial maturity of its participants. This study was conducted in a developed context and therefore its findings might not be applicable in the Kenyan context.

Salleh and Haat (2017) tried to test the efficacy of some aspects of the audit committee, i.e. the independence of members, scale, meeting frequency and members' expertise, to track management actions with regard to their efforts to control earnings. Design / approach / methodology. As a signal of the existence of earnings control, this paper used budgetary accruals derived from the defined model. It has been established that the inclusion of audit committee which is independent lowers the frequency of management of earnings, according to the study's authors. It was observed that businesses that reported fewer earnings monitoring activities tended to be those with more competent audit committee members and more frequent audit committee meetings. The

results of this research may not be generalizable to the Kenyan setting since it was carried out in a more developed setting.

The connection between the aspects of audit committees' roles and responsibilities and their success in minimizing the number of restatements of financial statements for state companies in Kenya was analyzed by Ogoro and Simiyu (2017). The aim was to provide answers to two primary study objectives by using cross-sectional secondary data collected from the audited financial statements of Kenya's 177 state companies. The results found that numerous directorships and audit committee tenure were the most relevant and powerful features of audit committees, since they were statistically significant in minimizing the number of restatements of financial statements. A main recommendation of this study is that regulations regulating audit committees should be enforced by the government of Kenya and stiff penalties should be levied on audit committees that have not been successful. It was not determined how the audit committee's involvement affected management of earnings.

Yameen, Farhan, and Tabash (2019) looked at the impact of corporate governance standards on the success of companies in the Indian tourist industry. The findings indicated that the audit committee's make-up and thoroughness impacted the performance of Indian hotels as judged by accounting proxies in a good way. Because there are so many moving parts in corporate governance, this study also takes into account other factors. Furthermore, the study was derived from secondary information hence the need for research that employs primary data. This study was conducted in a developed context and therefore its findings might not be applicable in the Kenyan context.

Waweru(2018) investigated how audit committee composition, board diversity, and earning management all had a role in Eastern Africa. The purpose of this research was to examine the effect on earning management of adhering to audit committee recommendations in a context where corruption control is seen as lenient. The results indicated both negative and positive associations between the control of profits and the audit committee's independence, the participation of the audit committee's financial expert, and the ethnic makeup of the board. In addition, the audit committee's methods are discovered to be universal. However, the research did not include audit committee sessions as a potential confounding factor.

Accountability, effectiveness, of audit committee and function of internal audit were all examined at Uganda's statutory corporations by Bananuka, Nkundabanyanga, Nalukenge, and Kaawaase (2018). The studies used a cross-sectional design and correlated the results. In all, 52 different Ugandan statutory entities provided data for the research. According to the study the internal audit function has significant contribution towards the accountability of statutory corporations. Furthermore, the audit committee meetings resulted to enhanced effective audit committee duties. Nonetheless, the results from the research indicated that audit committee effectiveness has significantly contributed to the improving accountability, despite the absence of the internal audit function. There was no evidence to suggest that the audit committee had any impact on management of earnings.

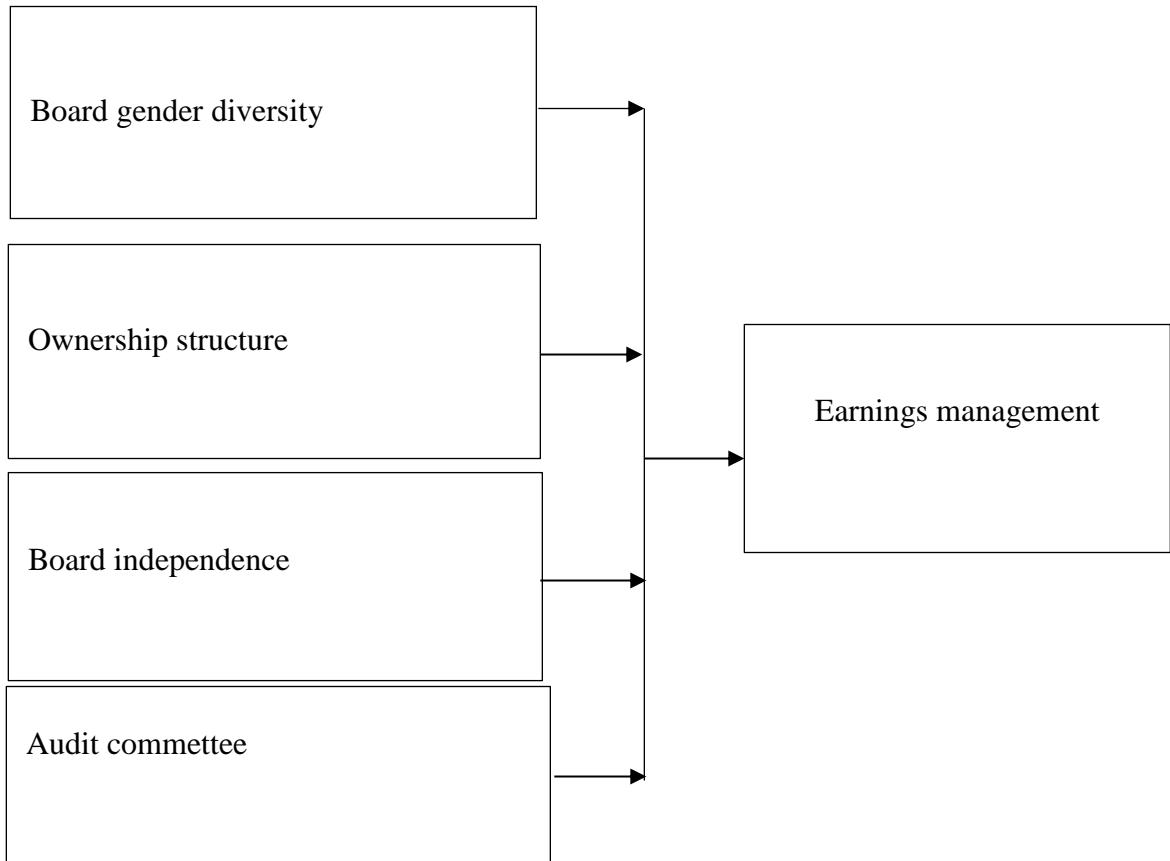
2.4 Conceptual Framework

This section makes a clear distinction between independent variables and the dependent variable of the sample and their precise measurements.

FIGURE 2.1:
Conceptual Framework

Independent variable

Dependent variable



2.5 Operationalization of Variables

TABLE 2.1:

Operationalization of Variables

Variable type	Variable	Indicators	Measurement scales
Dependent	Earnings management	<ul style="list-style-type: none"> Total sales less total expenses 	Ratio
Independent	Board gender diversity	<ul style="list-style-type: none"> Ratio of women in the board to total board members 	Ratio
	Ownership structure	<ul style="list-style-type: none"> Proportion of ownership held by the main shareholder of institutional nature of the quoted company. 	Ratio
	Board independence	<ul style="list-style-type: none"> Proportion of non-executive directors inside the board (non-executive directors / total directors) 	Ratio
	Audit committee	<ul style="list-style-type: none"> Number of audit committee meetings held during the year 	Interval

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology that was used in this study is discussed in this chapter. It concentrates on the study's research architecture and data collection approach.

3.2 Research Design

The study used a descriptive analytic methodology. Mugenda and Mugenda (2003) define descriptive study design as a methodical, observational inquiry in which the researcher has no direct control over the independent variable since it has already manifested or cannot be controlled intrinsically. The what, where, and how of a phenomenon are then studied further in informative studies in order to build a profile of it (Mugenda & Mugenda, 2003). In light of the fact that the purpose of this investigation was to assess the influence of corporate governance on earning management in firms that are traded on the Nairobi stock market, a descriptive research methodology was the one that was most appropriate for the work.

3.3 Target Population

The actual population for whom information is required is referred to as the target population. According to Ngechu (2004), a population is a well-defined concept that may be thought of as a collection of people, resources, goods, and activities, as well as a community of objects or houses that is being researched. For the purposes of this research, the population of interest consisted of companies that were listed on the NSE as of December 2021 for the period 2017-2021. During this period, a number of listed firms

recorded increased earnings owing to good corporate governance. NSE now has 62 companies from a variety of industries listed on its exchange.

TABLE 3.1
Target Population

Sector	Total No. of firms listed in NSE
Agriculture	6
Automobile	1
Banking	12
Commercial and services	12
Construction and Allied	5
Energy and Petroleum	4
Insurance	6
Investment	5
Manufacturing and Allied	8
Telecommunication	1
Real Estate investment Trust	1
Exchange Traded funds	1
Total	62

Source: (NSE 2021)

3.4 Sample and Sampling Method

The study used census technique since the target population was small. The study was a census of all the 62 firms listed at the NSE as of December 2021.

3.5 Data Collection

Data from companies listed on the Nairobi Securities Exchange was collected using a secondary data. The information was gathered from NSE financial reports released over a ten-year period, from 2017 to 2021. The timeframe chosen was adequate to provide enough data for robust regression analysis. The use of secondary data was justified on the grounds that some of these sources contain critical information for this study that has been examined and approved.

3.6 Data Analysis

Data analysis is to is carried out condense large amounts of information into manageable chunks by creating summaries, looking for trends, and employing statistical tools (Cooper et al., 2011). Data analysis was carried out in this study with the aid of the statistical analysis package known as STATA 16. The findings of this package helped to demonstrate the effects of corporate governance on the earnings management of NSE-listed firms. The data analysis results were presented in categories including the descriptive results, the correlation results and the panel regression results. Panel data regression allows for the control of individual heterogeneity, making it possible to exclude biases deriving from the existence of individual effects (Baltagi, 2005; Hsiao, 2007). The panel regression model was presented as

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it} + \beta_3 X_{it} + \beta_4 X_{it} + \varepsilon_{it}$$

Where:

Y= Earnings management of listed firms at NSE

β_0 – Constant

X_1 –Board gender diversity

X_2 – Ownership structure

X_3 – Board independence

X_4 – Audit committee

ε – Error

t =time 2017 to 2021

i=listed firms at the Nairobi Securities Exchange

β_1 – β_4 – Coefficient of independent variables

3.7 Diagnostic Tests

As the data that was gathered was for a span of 5 years, diagnostic checks were conducted to figure out if autocorrelation, heteroscedasticity, multicollinearity and normality tests were all adhered to before running a linear model. Diagnostic tests were carried so as to use it to make a decision on whether the data is sufficient to give reliable results. Normality tests, multicollinearity tests, auto-correlation tests and heteroscedasticity tests required diagnostic tests to be conducted on results.

3.7.1 Test for Normality

This study used Bera and Jarque (1981) tests for normality. The study tested the null hypothesis that the disturbances are not normally distributed. If the p-value is < 0.05 , then we fail to reject the null hypothesis at the 5% level. However, if the p-value calculated is > 0.05 the error variance is normally distributed.

3.7.2 Test for Multicollinearity

Multicollinearity is a phenomenon in which two or more predictor variables are strongly correlated in a multiple regression model, indicating that one can be estimated linearly with a significant degree of precision from the others. It is calculated using the variance inflation factor (VIF) or tolerance. VIF is a term used to describe a scenario in which two or more independent variables are highly correlated with a value of > 0.9 , resulting in a multicollinearity problem (Xu et al. 2003). According to Xu et al. (2003), researchers have used $VIF = 10$ as a critical value rule of thumb to assess whether there is too much association. When multicollinearity increases, regression coefficient might change from sample to sample, making interpretation of coefficient as a signal of relative importance of predicting factors more difficult (Cooper & Schindler 2003).

3.7.3 Test for Autocorrelation

The independent variables of a reliable panel regression model should not be correlated. To test autocorrelation, Wooldridge test for autocorrelation was used in the study. The null hypothesis of this test is that there is no serial correlation in the data. If the serial correlation is detected in the panel data, then the Feasible Generalized Least Squares estimation is adopted. The p value of > 0.05 indicates absence of serial correlation.

3.7.4 Test for Heteroscedasticity

One of the hypotheses of the panel regression model is that the error term of a regression model should be constant over time. To satisfy the regression assumptions and be able to trust the results, the residuals should have a constant variance. In this study, Heteroscedasticity was tested by Breusch-Pagan/Cook-Weisberg test. The null hypothesis of this study was that the error variance is homoscedastic. If the null hypothesis is rejected and a conclusion made that heteroscedasticity is present in the panel data, then this would be accounted for by running a Feasible Generalized Least Squares model. When p-value is <0.05 , there is heteroscedasticity; when p-value is >0.05 , there is no heteroscedasticity.

3.7.5 Hausman Test

When doing data analysis on the panel, one must choose between running a model with fixed effects or a model with random effects. In contrast to the fixed-effect model, which assumes that each business has its own unique set of features and a constant intercept, the random-effect model assumes that there is only one significant intercept, and that it fluctuates randomly between firms (Khan, 2018). Hausman's specification test (1978) was used to determine whether fixed or random effect should be used. If we fail to reject the null hypothesis, then random effect was an efficient estimator otherwise in case of rejection of null hypothesis, fixed effect estimation may give better or efficient estimation of betas. If Hausman test rejects the null hypothesis, therefore a decision is taken to use fixed effect model otherwise random model is used.

3.7.6 Unit Root Test

This study adopted the Fisher-type test was used to test for unit root in panel data. The assumption of this test is that all series are non-stationary under the null hypothesis against the alternative that at least one series in the panel is stationary. The null hypothesis of this test is that all panels have unit root. The alternative hypothesis is that at least one panel did not have unit roots, or some panels did not have unit root (Choi, 2006). If any of the variables has unit root, the researcher would difference it and run the equations using the differenced variable.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results and discussion of results. Descriptive results, diagnostic tests and panel models are presented. Results are presented in line with objectives of the study.

4.2 Descriptive Statistics

Table 4.1 presents the descriptive results for board gender diversity, ownership structure, board independence, audit committee and earnings management. The target population was the 61 firms listed at the NSE but only 55 firms had complete data set for the 5 year period giving a total of 275 data points. The descriptive results are presented in Table 4.1.

The results presented in table 4.1 indicate that earnings management had a mean value of 0.4862 and a standard deviation of 0.1669. The standard deviation ranged between 0.0158 and within 0.1663. Furthermore, the minimum and the maximum values are -0.369 and 1.842 respectively. The range of standard deviation implies that the earnings management varied during the period of study. Abdel, (2005) defined earnings management as the ability to raise or lower the net income in the financial reports in a reliable manner. The essence of earning management to the listed firms is to ensure the continuity of operation of the firms and also forms the basis with which the shareholders will make decisions regarding the investments in the firm whether to invest more shares or not.

TABLE 4.1
Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observ.
Earnings management	Overall	0.4862	0.1669	-0.369	1.842	N = 275
	Between		0.0158	0.4711	0.5106	n = 55
	Within		0.1663	-0.3540	1.8393	T = 5
Gender Diversity	Overall	0.5133	0.0975	0.029	0.692	N = 275
	Between		0.0159	0.4900	0.5317	n = 55
	Within		0.0965	0.0299	0.6928	T = 5
Ownership structure	Overall	0.7905	0.3153	0.0071	2.2417	N = 275
	Between		0.0177	0.7782	0.8199	n = 55
	Within		0.3149	-0.0108	2.2333	T = 5
Board independence	Overall	6.5891	5.0597	4	25	N = 275
	Between		0.3079	6.2909	6.9818	n = 55
	Within		5.0522	3.6073	25.2982	T = 5
Audit committee	Overall	0.1573	0.4124	0	2.2427	N = 275
	Between		0.0093	0.1425	0.1648	n = 55
	Within		0.4123	-0.0075	2.2535	T = 5

The descriptive results of gender diversity indicate that the mean value of gender diversity was 0.5133 and the standard deviation was 0.0975. The standard deviation ranged between 0.0159 and within 0.0965. Furthermore, the minimum and the maximum values are 0.029 and 0.692 respectively. The range of standard deviation implies that the gender diversity varied during the period of study. Pucheta-Martínez, (2018) argue that the gender diversity is a crucial part of the board of diversity and ensures that the board have their rights mixed to provide different perspectives. Women have the ability to deal with critical situations in the operations of a company and hence the gender diversity is seen to have an effect in the earnings management of the companies listed at NSE.

The descriptive results of ownership structure indicate that the mean value of ownership structure was 0.7905 and the standard deviation was 0.3154. The standard deviation ranged between 0.0177 and within 0.3149. Furthermore, the minimum and the maximum values are 0.0071 and 2.2417 respectively. The range of standard deviation implies that the ownership structure varied during the period of study. Hickman and Silva (2018) posit that ownership structures are important in commercial governance because they influence managers' motivation and, as a result, business productivity. Ownership structure therefore is seen to influence the earnings management by the managers of the firms listed in NSE.

The results of board independence indicate that the mean value of board independence was 6.5891 and the standard deviation was 5.0597. The standard deviation ranged between 0.3079 and within 5.0522. Furthermore, the minimum and the maximum values are 4 and 25 respectively. The range of standard deviation implies that the board independence varied during the period of study. For the public businesses, board independence has a detrimental effect on the degree of earnings management (Nyatichi et al. 2020). Board independence has an effect on the earnings management of the companies listed at NSE.

The mean value of audit committee was 0.1572 and the standard deviation was 0.4124. The standard deviation ranged between 0.0093 and within 0.4123. Furthermore, the minimum and the maximum values are 0 and 2.2427 respectively. The role of an audit committee is to examine a company's operating methods and policies in order to identify any potential loopholes through which fraudulent acts could be carried out. As a result, the corporation has the opportunity to close these gaps using the auditors' decisions and

views (Iyer & Samociuk, 2016). Audit committee is therefore relevant in explaining the variations in the earnings management of the firms listed at NSE.

4.3 Correlation Analysis

The correlation analysis was conducted to ascertain the relationship between the independent variables that is board gender diversity, ownership structure, board independence and audit committee and the dependent variable that is the earnings management. Table 4.2 indicates the correlation matrix of board gender diversity, ownership structure, board independence, audit committee against the earnings management. The correlation results are presented in Table 4.2

TABLE 4.2:
Correlation Results

	Earnings Management	Gender Diversity	Ownership Structure	Board Independence	Audit Committee
Earnings Management	1.000				
Gender Diversity	0.0699 0.0248	1.000			
Ownership Structure	0.1194 0.048	0.0196 0.7466	1.000		
Board Independence	0.2743 0.000	0.243 0.000	0.0434 0.4733	1.000	
Audit Committee	0.1872 0.0018	0.0823 0.1733	-0.1626 0.0069	0.2097 0.0005	1.000

The correlation results of the study indicated that the relationship between gender diversity and earnings management is positive and statistically significant ($r=0.0699$, $p=0.0248 > 0.05$). Gender diversity is the involvement of both male and female in the company boards of management. Pucheta-Martínez, (2018) argue that the gender diversity is a crucial part of the board of diversity and ensures that the board have their rights mixed to provide different perspectives. The results in this study provide that the correlation between board gender diversity and earnings management is positive, its contribution is significant.

The correlation results of ownership structure on the other hand indicate that the association between the ownership structure of the listed firms under study and their corresponding earnings management is positive and statistically significant ($r=0.1194$, $p=0.048 < 0.05$). Ownership structure is the allocation of equity in terms of votes and capital, but also the name of the shareholders of the equity. Hickman and Silva (2018) argued that ownership structures are important in commercial governance because they influence managers' motivation and, as a result, business productivity.

The results of correlation between board independence and earnings management indicate that the relationship between board independence and earnings management is positive and statistically significant ($r=0.2743$, $p=0.000 < 0.05$). Board independence and earnings management by the listed firms move in the same direction. Outside directors have a major impact on the board's success because of the strong desire to keep an eye on management because their reputations are on the line, and it helps them develop their human resources (Xiaohui, 2017).

The correlation results between audit committee and earnings management portrayed a positive and statistically significant relationship with earnings management ($r=0.1872$, $p=0.0018<0.05$). Audit committee and earnings management of the listed firms under study move in the same direction. The audit committee pertains to leadership authority responsible for overseeing the audit and control activities of the company (Amudo & Inanga, 2019). The audit committee therefore gives the corporation the opportunity to close these gaps using the auditors' decisions and views (Iyer & Samociuk, 2016).

4.4 Diagnostic Tests

This section presents the diagnostic tests that were carried out in the study. The diagnostic tests include the normality tests, multicollinearity, autocorrelation test, tests for heteroscedasticity, hausman and unit root test.

4.4.1 Test for Normality

Bera and Jarque (1981) tests for normality were conducted in the study. Normality tests are conducted to ascertain whether the data set used in the study has been drawn from a normally distributed population. The study tested the null hypothesis that the disturbances are not normally distributed. If the p-value is < 0.05 , then we fail to reject the null hypothesis at the 5% level. However, if the p-value calculated is >0.05 the error variance is normally distributed. The Normality test results are shown in Table 4.3.

The results presented in Table 4.3 show that the p values of all the study variables are significant ($0.415>0.05$, $0.629>0.05$, $0.602>0.05$, $0.255>0.05$). This implies that the study error variance is normally distributed.

TABLE 4.3:
Normality Test Results

	Obs	Pr(Skewness)	Pr(Kurtosis) adj	chi2(2)	Prob>chi2
Gender Diversity	275	0.969	0.171	1.360	0.415
Ownership structure	275	0.572	0.851	0.405	0.629
Board independence	275	0.101	0.070	23.091	0.602
Audit committee	275	0.000	0.010	50.660	0.255

4.4.2 Test for Multicollinearity

Multicollinearity tests are conducted to ascertain the presence of correlation among the variables that are used in the study. Multicollinearity in this study has been tested using the variance inflation factor method where value of $VIF > 10$ indicates presence of multicollinearity. The multicollinearity test results are presented in Table 4.4.

TABLE 4.4:
Multicollinearity Test Results

Variable	VIF	1/VIF
Board Independence	1.11	0.899687
Audit Committee	1.08	0.925354
Gender Diversity	1.06	0.939688
Ownership structure	1.03	0.96705
Mean VIF	1.07	

The results presents in Table 4.4 show that all the VIF values are less than 10 implying the absence of multicollinearity. The VIF values for board independence

1.11<10, audit committee 1.08<10, gender diversity 1.06<10 and ownership structure 1.03<10. Therefore, the variables used in the study are not correlated.

4.4.3 Autocorrelation Test

Autocorrelation test in this study was done using the Wooldridge test. The essence of this test was to check the presence of serial autocorrelation. The following hypotheses were tested. The results are presented in Table 4.5.

H₀: Residuals vales are not present in this model.

H₁: Residuals vales are present in this model

TABLE 4.5:

Autocorrelation Results

Wooldridge test for autocorrelation in panel data
H₀: no first-order autocorrelation
F (4, 280) =1.97
Prob > F = 0.1507

The results presented in Table 4.5 indicate that the test statistic (F-test) from the results is 1.482 and a $p= 0.1016>0.05$. Therefore, we fail to reject the null hypothesis that no first autocorrelation exists. The study concludes that there is no serial autocorrelation in the data.

4.4.4 Heteroscedasticity

Heteroscedasticity was tested by using Breusch-Pagan test. Heteroscedasticity tests are carried out to check the distribution of variances in the data set. The null

hypothesis was error terms have a constant variance. When p-value is <0.05 , there is heteroscedasticity; when p-value is >0.05 , there is no heteroscedasticity. Heteroscedasticity test results are presented in Table 4.6.

TABLE 4.6:
Heteroscedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance	
Variables: fitted values of Earnings Management	
chi2(1)	27.56
Prob > chi2	0.064

The results presented in 4.6 indicate that p value is greater than 0.05 ($0.065 > 0.05$). Therefore, the null hypothesis the error terms have a constant variance, is rejected and the alternative hypothesis the error terms are heteroscedastic adopted. The data in this study do not suffer from heteroscedasticity.

4.4.5 Hausman Test

The Hausman tests results are shown in Table 4.7. The tests are carried out to determine the type of model to be used in the model whether the fixed effects model or the random effects model. The null and the alternative hypotheses are,

H₀: Random effect is appropriate

H₁: Fixed effect is appropriate

TABLE 4.7:**Hausman Test**

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
Gender Diversity	0.00709	0.01095	0.0038605	0.031195
Ownership structure	0.578315	0.571773	0.006542	0.047409
Board independence	0.30842	0.308207	0.0002135	0.010744
Audit committee	0.013061	0.013049	0.0000117	0.000672
chi2(4)	0.03			
Prob>chi2	.9999			

Hausman tests are carried out to determine whether random or fixed the model to be used in the study (Baltagi, 2005). The null hypothesis was that random is preferred to fixed model. Hausman test results revealed a chi-square of 0.03 and p-value $0.9999 > 0.05$. Hence, we fail to reject the null hypothesis that the random effect model is appropriate. Random effect model will therefore be used in the study.

4.4.6 Fisher-Type Test of Unit Root

Fisher-type test of unit root is used to test for the stationarity of the time series. The estimation of the times series assumes that the variables are stationary. This test improves the reliability of the study results. The hypotheses to be tested were;

H_0 : All panels contain unit roots

H_a : At least one panel is stationary

TABLE 4.8:**Fisher-type Test of Unit Root**

Variable		Inverse chi-squared (114) P	Inverse normal Z	Inverse logit (289) L*	t Modified inv. chi-squared Pm
Earnings Management	test statistic	230.7728	-2.6603	-4.2285	8.1425
	p-value	0.0000	0.0039	0.0000	0.0000
Ownership Structure	test statistic	400.7970	-1.5655	-7.1853	19.6055
	p-value	0.000	0.0387	0.000	0.000
Board Independence	test statistic	312.9207	-6.7878	-16.5868	13.6809
	p-value	0.000	0.000	0.000	0.000
Audit Committee	test statistic	312.8213	-4.1483	-7.3417	13.1673
	p-value	0.000	0.000	0.000	0.000
Gender Diversity	test statistic	272.3816	-6.1177	-16.4744	10.9478
	p-value	0.0000	0.0139	0.0000	0.0000

The stationarity test results for unit root indicated that board gender diversity, ownership structure, board independence and audit committee were all stationary since their P values < 0.05 at P, Z, L* and Pm. This results gives way for the generation of the panel regression model for the study and further analysis be conducted.

4.5 Panel Regression on Corporate Governance and Earnings Management

A random effect model was conducted between corporate governance that included board gender diversity, ownership structure, board independence, audit committee and the earnings management among the companies listed at NSE. The panel regression results are shown in Table 4.8.

TABLE 4.9:**Panel Regression Results**

Earnings management	Coefficient s.	Std. Err.	z	P>z	[95% Conf.	Interval]
		0.003431	3.1			
Gender Diversity	0.01095	7	9	0.003	0.40967	0.38777
		0.246796	2.3			1.05548
Ownership structure	0.571773	8	2	0.021	0.08806	6
		0.079130	3.8			
Board independence	0.308207	4	9	0.000	0.153114	0.4633
		0.004863	2.6			0.02258
Audit committee	0.013049	5	8	0.007	0.003517	1
		0.164272	2.8			
_cons	0.46064	7	0	0.005	0.78261	0.13867
R-squared:	0.1106					
Wald chi2(4)	33.56					
Prob > chi2	0.0000					

** sig at 5%

The results presented in Table 4.9 indicate that the R Squared of the panel regression model is 11.06% meaning that gender diversity, ownership structure, board independence and audit committee explain 11.06% of the total variations in the earnings management of the companies listed at the NSE. The lower R Squared value is attributed to the high variability of the data set around the regression line. All the variables of the study are positive and statistically significant. The coefficients results give an estimated panel regression model as presented in the subsequent section.

$$Y = .461 + .011X_1 + .572X_2 + .308X_3 + .013X_4$$

Where,

Y is the Earnings Management

X₁–Board gender diversity

X₂ – Ownership structure

X₃ – Board independence

X₄ – Audit committee

ε– Error

The panel regression results of the study posit that board gender diversity of the listed firms had a positive and statistically significant relationship with the earnings management of the listed firms ($\beta = 0.011$, $p = 0.003 < 0.05$). This implies that a unit increase in the board gender diversity leads to a corresponding 0.011 units increase in the earnings management. A board that tends to have more women tends to have more perspectives and skills as compared to the board that has more men because of the believe that women are prone to diversity ability to deal with more critical situations in the modern societal backgrounds (Martin & Roper, 2018). In another study by Brahma et al., (2020) on the board gender diversity and firm performance in United Kingdom indicated that there was a positive and statistically significant correlation between gender diversity and financial success and that the post-appointment financial success of a company is favorably correlated with the proportion of women on its board of directors and the proportion of women on its executive team, according to a separate investigation.

The regression results for ownership structure indicate that ownership structure has a positive and statistically significant relationship with the earnings management of the companies listed at NSE ($\beta = 0.572$, $p = 0.021 < 0.05$). This implies that a unit improvement in ownership structure yields 0.572 units increase in the earnings management of the listed companies. Hickman and Silva (2018) argue that ownership

structures are important in commercial governance because they influence managers' motivation and, as a result, business productivity. Ownership structure catalyzes increased volatility of business portfolios (Senge, 2018). However, for firms that have not been privatized, Gitundu et al. (2016) argued that privatized firms have better financial efficacy than the non-privatized.

The panel analysis results for board independence indicate that board independence has a positive and statistically significant relationship with the earnings management of the companies listed at NSE ($\beta = 0.308$, $p = 0.000 < 0.05$). This implies that a unit increase in board independence yields 0.308 units increase in the earnings management of the listed companies. For the public businesses, board independence has a detrimental effect on the degree of earnings management (Nyatichi et al. 2020). Outside directors have a major impact on the board's success because of the strong desire to keep an eye on management because their reputations are on the line, and it helps them develop their human resources (Xiaohui, 2017). However, in Bangladesh, Afzalur (2019) postulated that the independence of the board does not have a favorable impact on the economic success of the company. Nevertheless, the size of the board has a considerable and beneficial effect on both the success of the company and the independence of the board.

The results for audit committee indicate that audit committee has a positive and statistically significant relationship with the earnings management of the companies listed at NSE ($\beta = 0.013$, $p = 0.007 < 0.05$). This implies that a unit increase in audit committee yields 0.013 units increase in the earnings management of the listed companies. The audit committee examines a company's operating methods and policies for them to

identify any potential loopholes through which fraudulent acts could be carried out. The corporation therefore has the opportunity to close these gaps using the auditors' decisions and views (Iyer & Samociuk, 2016). A study by Chou and Buchdadi (2020) in Indonesia indicated that the attendance levels of committee members have a significant impact on the efficacy of the oversight function that the committee plays. It also indicated an improved level of financial reporting because of the audit committee meeting more often and placing a greater emphasis on the relevancy of its agenda.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of major findings of this study, sets out the relevant conclusions and makes recommendations for practice and suggestions for further research based on the findings of this study.

5.2 Summary of Major Findings

This section contained the summary of the findings.

5.2.1 Influence of Board Gender Diversity on Earnings Management

The first objective of the study was to establish the effect of board gender diversity on the earnings management of companies listed at NSE. The descriptive results of gender diversity indicate that the mean value of gender diversity was 0.476553 and the standard deviation was 0.120038. The correlation results of the study indicated that the relationship between gender diversity and earnings management is positive and statistically significant. The panel regression results of the study posit that board gender diversity of the listed firms had a linear positive and statistically significant relationship with the earnings management of the listed firms. Board gender diversity according to the study results is a significant component in the determination of earnings management by the listed companies.

5.2.2 Influence of Ownership Structure on Earnings Management

The second objective of the study was to examine the effect of ownership structure on the earnings management of companies listed at NSE. The descriptive results of ownership structure indicate that the mean value of ownership structure was 0.513346 and the standard deviation was 0.097536. The correlation results indicate that the association between the ownership structure and corresponding earnings management is positive and statistically significant. The regression results for ownership structure indicate that ownership structure has a linear positive and statistically significant relationship with the earnings management of the companies listed at NSE. Ownership structure from the results of the study is a significant determinant of earnings management of the firms listed at NSE.

5.2.3 Influence of Board Independence on Earnings Management

The third objective of the study was to examine the effect of board independence on the earnings management of companies listed at NSE. The descriptive results of board independence indicate that the mean value of board independence was 0.790518 and the standard deviation was 0.315384. The results of correlation between indicate that the relationship between board independence and earnings management is positive and statistically significant. The panel analysis results for board independence indicate that board independence has a linear positive and statistically significant relationship with the earnings management of the companies listed at NSE. Board independence according to the results is significant in explaining the variations in earning management of the companies listed at NSE.

5.2.4 Influence of Audit Committee on Earnings Management

The fourth objective of the study was to examine the effect of audit committee on the earnings management of companies listed at NSE. The mean value of audit committee as per the descriptive results of the study was 6.589091 and the standard deviation is 5.059705. The correlation results between audit committee and earnings management portrayed a positive and statistically significant relationship with earnings management. The results for audit committee indicate that audit committee has a linear positive and statistically significant relationship with the earnings management of the companies listed at NSE. The role of audit committee is important in explaining the variations in earning management of the companies listed at NSE.

5.3 Conclusion

From the analysis of the study data, the study concludes that board gender diversity has a positive and a significant relationship with the earnings management of the companies listed at NSE. Furthermore, the study concluded that a unit increase in board gender diversity yields a corresponding 0.011 units increase in the earnings management of the listed companies. The contribution of women in the performance of the listed firms cannot be underestimated. Some women if given a chance will contribute immensely to the performance and the management of the listed companies.

The analysis of the data led to the conclusion that ownership structure has a positive and statistically significant relationship with the earnings management of the companies listed at NSE. A unit increase/improvement in the ownership structure of the listed companies leads to a corresponding 0.572 units increase in the earnings management. The allocation of equity in terms of the votes and capital affect the earnings

management of the listed companies. This is because his allocation influences the managers' motivation which ultimately affect their productivity and hence the management of the company.

The analysis of the data further concluded that board independence has a positive and a statistically significant relationship with the earnings management of the companies listed at NSE. This means that a unit increase in the board independence of the companies listed will result in 0.308 units increase in the earnings management of the firms listed at the NSE. Engaging board members who have no direct interests in the company will make the management of the company effective and efficient. This is because the outside directors have a strong desire to keep an eye on management because their reputations are on the line, and it helps them develop their human resources.

Finally, the analysis of the data concluded that the relationship between the company's audit committee and the earnings management of the company is positive and statistically significant. The results further conclude that a unit increase in the audit committee will lead to .013 units increase in the earnings management of the companies listed at the NSE. The audit committee is responsible for overseeing the audit and control activities of the company. They examine a company's operating methods and policies in order to identify any potential loopholes through which fraudulent acts could be carried out. The role of audit committee is therefore significant in explaining the variations in earnings management of the companies listed at NSE.

5.4 Recommendations

The policy recommendation of the study is that, the board composition of the listed firms should have both gender and preferably should observe two-thirds gender rule. The role of women in the boards of management in the management of the operations of a company is as important as that of men and hence when forming these boards gender balance should always be taken into account to balance the representation and also tap the diverse ideas. Furthermore, majority of the board members should be external members and should not be part of the company. The committee should not have any attachments to either the shareholders or the management of the company but should be an independent committee who will not give bias audit results that may be in favour of any party but will give an audit report that will give the true position of the company. The listed should should carry out at least two audits annually. This will be boost the earnings management of the listed firms and hence their overall performance.

To practice, the study recommends that during the board selection process, more women should be considered in the boards. In addition, the management of the listed firms should interfere with the operations of the board and hence the board should be left independent at all times. The study also recommends that other than investing in an independent board, at least one of the company directors should also be nominated to be a board member. This is because the interests of the company vests in its investors who are the shareholders. Championing these interests calls for the presence of one of the shareholders on behalf of the others on the table where management decisions are made. The management of the company should also be willing to allow audits whenever it

is deemed necessary so as to enhance the earnings management and further boost the performance of the listed firms.

5.5 Areas for Further Research

From the analysis of the data on the variables of this study, it was noted that board gender diversity, ownership structure, board independence and audit committee do not explain the total variations in the earnings management of the companies listed at the NSE. Therefore, the study recommends that further research be done on the effect of indebtedness on the earnings managements of the companies listed at the NSE.

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APPENDICES

Appendix I: Data Set

ID	Year	Earnings managem ent	Gender Diversity	Ownership structure	Board independence	Audit committee
1	2016	0.1600	0.327	0.662	0.727	4.000
1	2017	0.0600	0.489	0.655	0.889	4.000
1	2018	0.1500	0.500	0.644	0.900	4.000
1	2019	0.0400	0.500	0.591	0.900	4.000
1	2020	0.0500	0.500	0.519	0.900	4.000
2	2016	0.1400	0.544	0.492	0.944	4.000
2	2017	0.1500	0.544	0.504	0.944	4.000
2	2018	0.1200	0.544	0.538	0.944	4.000
2	2019	0.0900	0.544	0.525	0.944	4.000
2	2020	0.1100	0.489	0.505	0.889	4.000
3	2016	0.0100	0.475	0.552	0.875	4.000
3	2017	0.0200	0.475	0.492	0.875	4.000
3	2018	0.0200	0.475	0.490	0.875	4.000
3	2019	0.0400	0.475	0.442	0.875	4.000
3	2020	0.0600	0.475	0.416	0.875	4.000
4	2016	0.1300	0.489	0.607	0.889	4.000
4	2017	0.1200	0.314	0.575	0.714	4.000
4	2018	0.1300	0.314	0.539	0.714	4.000
4	2019	0.1700	0.314	0.470	0.714	4.000
4	2020	0.2200	0.314	0.482	0.714	4.000
5	2016	0.0400	0.314	0.587	0.714	4.000
5	2017	0.0500	0.418	0.636	0.818	4.000
5	2018	0.0100	0.418	0.614	0.818	9.000
5	2019	0.0100	0.418	0.645	0.818	4.000
5	2020	0.0700	0.433	0.647	0.833	4.000
6	2016	0.1000	0.433	0.640	0.833	4.000
6	2017	0.0800	0.433	0.640	0.833	4.000
6	2018	0.0200	0.433	0.643	0.833	4.000
6	2019	0.3900	0.433	0.621	0.833	4.000
6	2020	0.0600	0.433	0.648	0.833	4.000
7	2016	0.0400	0.433	0.426	0.833	4.000
7	2017	0.1500	0.457	0.430	0.857	4.000
7	2018	0.3100	0.457	0.433	0.857	4.000

7	2019	0.0200	0.457	0.433	0.857	4.000
7	2020	0.1100	0.457	0.443	0.857	4.000
8	2016	0.3500	0.467	0.526	0.867	4.000
8	2017	0.1800	0.467	0.524	0.867	4.000
8	2018	0.3900	0.467	0.523	0.867	4.000
8	2019	0.1900	0.475	0.522	0.875	4.000
8	2020	0.0500	0.475	0.521	0.875	4.000
9	2016	0.1000	0.475	0.520	0.875	4.000
9	2017	0.1100	0.475	0.518	0.875	4.000
9	2018	0.1200	0.475	0.517	0.875	4.000
9	2019	0.0400	0.475	0.516	0.875	4.000
9	2020	0.0500	0.489	0.515	0.889	4.000
10	2016	0.0200	0.489	0.513	0.889	4.000
10	2017	0.0200	0.489	0.512	0.889	4.000
10	2018	0.1900	0.489	0.511	0.889	4.000
10	2019	0.0200	0.489	0.510	0.889	4.000
10	2020	0.0300	0.489	0.508	0.889	4.000
11	2016	0.0900	0.489	0.507	0.889	4.000
11	2017	0.0900	0.489	0.506	0.889	4.000
11	2018	0.1000	0.489	0.505	0.889	4.000
11	2019	0.0400	0.489	0.503	0.889	4.000
11	2020	0.0200	0.489	0.502	0.889	4.000
12	2016	0.0200	0.489	0.501	0.889	4.000
12	2017	0.0200	0.489	0.500	0.889	4.000
12	2018	0.0300	0.489	0.498	0.889	13.000
12	2019	0.0400	0.489	0.497	0.889	8.000
12	2020	0.0300	0.499	0.496	0.899	8.000
13	2016	0.0600	0.499	0.495	0.899	4.000
13	2017	0.1900	0.499	0.493	0.899	4.000
13	2018	0.1900	0.499	0.492	0.899	4.000
13	2019	0.0200	0.499	0.491	0.899	4.000
13	2020	0.0400	0.499	0.490	0.899	4.000
14	2016	0.3000	0.500	0.488	0.900	4.000
14	2017	0.2400	0.500	0.487	0.900	4.000
14	2018	0.2000	0.500	0.486	0.900	4.000
14	2019	0.1700	0.500	0.485	0.900	4.000
14	2020	0.1400	0.500	0.483	0.900	4.000
15	2016	0.0000	0.509	0.482	0.909	4.000
15	2017	0.2000	0.509	0.481	0.909	4.000

15	2018	0.0100	0.509	0.480	0.909	4.000
15	2019	0.0200	0.509	0.479	0.909	4.000
15	2020	0.1200	0.509	0.477	0.909	4.000
16	2016	0.0200	0.509	0.392	0.909	4.000
16	2017	0.0300	0.509	0.391	0.909	4.000
16	2018	0.1300	0.509	0.392	0.909	4.000
16	2019	0.3800	0.509	0.394	0.909	4.000
16	2020	0.0100	0.509	0.393	0.909	4.000
17	2016	0.0500	0.509	0.394	0.909	4.000
17	2017	0.0500	0.509	0.620	0.909	4.000
17	2018	0.0700	0.509	0.648	0.909	4.000
17	2019	0.0500	0.509	0.654	0.909	4.000
17	2020	0.0500	0.509	0.638	0.909	4.000
18	2016	0.0700	0.509	0.645	0.909	4.000
18	2017	0.0600	0.517	0.668	0.917	4.000
18	2018	0.0500	0.517	0.691	0.917	4.000
18	2019	0.0400	0.517	0.541	0.917	4.000
18	2020	0.0300	0.517	0.478	0.917	4.000
19	2016	0.2100	0.517	0.492	0.917	4.000
19	2017	0.0500	0.523	0.492	0.923	4.000
19	2018	0.0500	0.523	0.492	0.923	4.000
19	2019	0.0800	0.523	0.492	0.923	4.000
19	2020	0.0300	0.523	0.492	0.923	4.000
20	2016	0.5700	0.535	0.645	0.935	4.000
20	2017	0.5300	0.600	0.668	1.000	4.000
20	2018	0.0800	0.600	0.669	1.000	4.000
20	2019	0.0600	0.600	0.688	1.000	4.000
20	2020	0.0000	0.600	0.513	1.000	4.000
21	2016	0.0600	0.600	0.533	1.000	4.000
21	2017	0.0700	0.600	0.541	1.000	4.000
21	2018	0.0600	0.600	0.491	1.000	4.000
21	2019	0.0400	0.600	0.477	1.000	4.000
21	2020	0.1200	0.600	0.416	1.000	4.000
22	2016	0.1300	0.600	0.690	1.000	4.000
22	2017	0.1600	0.600	0.692	1.000	4.000
22	2018	0.2000	0.600	0.675	1.000	4.000
22	2019	0.2300	0.600	0.581	1.000	15.000
22	2020	0.0200	0.600	0.561	1.000	4.000
23	2016	0.0600	0.314	0.428	0.714	4.000

23	2017	0.0600	0.418	0.558	0.818	4.000
23	2018	0.1000	0.418	0.615	0.818	4.000
23	2019	0.0800	0.418	0.619	0.818	4.000
23	2020	0.1200	0.418	0.571	0.818	4.000
24	2016	0.1600	0.600	0.628	1.000	5.000
24	2017	0.1400	0.600	0.631	1.000	13.000
24	2018	0.1100	0.600	0.602	1.000	13.000
24	2019	0.1100	0.517	0.500	0.917	16.000
24	2020	0.1700	0.517	0.367	0.917	16.000
25	2016	0.0500	0.517	0.645	0.917	16.000
25	2017	0.0100	0.517	0.668	0.917	16.000
25	2018	0.0900	0.517	0.503	0.917	16.000
25	2019	0.1000	0.517	0.382	0.917	16.000
25	2020	0.0300	0.517	0.173	0.917	16.000
26	2016	0.0500	0.457	0.495	0.857	16.000
26	2017	0.0100	0.475	0.493	0.875	16.000
26	2018	0.0900	0.475	0.492	0.875	16.000
26	2019	0.0300	0.475	0.491	0.875	16.000
26	2020	0.0500	0.457	0.490	0.857	16.000
27	2016	0.0100	0.475	0.488	0.875	4.000
27	2017	0.0700	0.538	0.487	0.938	4.000
27	2018	0.0900	0.538	0.486	0.938	4.000
27	2019	0.0700	0.523	0.485	0.923	4.000
27	2020	0.0800	0.538	0.483	0.938	4.000
28	2016	0.0100	0.457	0.550	0.857	4.000
28	2017	0.0000	0.529	0.620	0.929	4.000
28	2018	0.0800	0.529	0.676	0.929	4.000
28	2019	0.0700	0.489	0.640	0.889	17.000
28	2020	0.2500	0.489	0.622	0.889	4.000
29	2016	0.1400	0.600	0.637	1.000	4.000
29	2017	0.1600	0.600	0.602	1.000	4.000
29	2018	0.0000	0.600	0.546	1.000	4.000
29	2019	0.0100	0.600	0.563	1.000	4.000
29	2020	0.0000	0.600	0.505	1.000	4.000
30	2016	0.0300	0.500	0.432	0.900	25.000
30	2017	0.0100	0.500	0.347	0.900	25.000
30	2018	0.0300	0.500	0.416	0.900	25.000
30	2019	0.0400	0.500	0.439	0.900	25.000
30	2020	0.0300	0.500	0.439	0.900	25.000

31	2016	0.0200	0.400	0.302	0.800	16.000
31	2017	0.0400	0.400	0.555	0.800	16.000
31	2018	0.0600	0.400	0.605	0.800	21.000
31	2019	0.2300	0.400	0.649	0.800	21.000
31	2020	0.0300	0.400	0.620	0.800	21.000
32	2016	0.0300	0.509	0.545	0.909	8.000
32	2017	0.1000	0.509	0.360	0.909	11.000
32	2018	0.0300	0.509	0.424	0.909	21.000
32	2019	0.0400	0.509	0.403	0.909	13.000
32	2020	0.0400	0.509	0.364	0.909	22.000
33	2016	0.1000	0.600	0.029	1.000	22.000
33	2017	0.0000	0.600	0.302	1.000	12.000
33	2018	0.0300	0.600	0.302	1.000	12.000
33	2019	0.0800	0.600	0.266	1.000	5.000
33	2020	0.0300	0.600	0.379	1.000	5.000
34	2016	0.0000	0.350	0.309	0.750	5.000
34	2017	0.0000	0.350	0.453	0.750	5.000
34	2018	0.1100	0.350	0.480	0.750	5.000
34	2019	0.1000	0.350	0.487	0.750	5.000
34	2020	0.0900	0.433	0.462	0.833	5.000
35	2016	0.1600	0.314	0.496	0.714	12.000
35	2017	0.1900	0.314	0.611	0.714	12.000
35	2018	0.2300	0.418	0.652	0.818	12.000
35	2019	0.1900	0.418	0.658	0.818	12.000
35	2020	0.2600	0.418	0.626	0.818	12.000
36	2016	0.2700	0.418	0.654	0.818	5.000
36	2017	0.2300	0.400	0.624	0.800	5.000
36	2018	0.2200	0.475	0.689	0.875	5.000
36	2019	0.0600	0.475	0.645	0.875	5.000
36	2020	0.2300	0.475	0.668	0.875	5.000
37	2016	0.1200	0.475	0.528	0.875	4.000
37	2017	0.0500	0.475	0.629	0.875	4.000
37	2018	0.0600	0.171	0.609	0.571	4.000
37	2019	0.0500	0.171	0.539	0.571	4.000
37	2020	0.0900	0.171	0.543	0.571	4.000
38	2016	0.1300	0.171	0.517	0.571	4.000
38	2017	0.1700	0.314	0.517	0.714	4.000
38	2018	0.1200	0.489	0.517	0.889	4.000
38	2019	0.0400	0.489	0.517	0.889	4.000

38	2020	0.0300	0.489	0.517	0.889	4.000
39	2016	0.0400	0.489	0.517	0.889	4.000
39	2017	0.0498	0.489	0.517	0.889	4.000
39	2018	0.0389	0.489	0.457	0.889	4.000
39	2019	0.0387	0.489	0.475	0.889	4.000
39	2020	0.0360	0.489	0.475	0.889	4.000
40	2016	0.0284	0.541	0.475	0.941	14.000
40	2017	0.0498	0.533	0.457	0.933	14.000
40	2018	0.0389	0.533	0.475	0.933	14.000
40	2019	0.0387	0.533	0.538	0.933	14.000
40	2020	0.0360	0.533	0.538	0.933	14.000
41	2016	0.0284	0.538	0.523	0.938	12.000
41	2017	0.0449	0.538	0.538	0.938	12.000
41	2018	0.0446	0.538	0.457	0.938	12.000
41	2019	0.0471	0.538	0.529	0.938	12.000
41	2020	0.0278	0.538	0.529	0.938	12.000
42	2016	0.0374	0.517	0.489	0.917	12.000
42	2017	0.0417	0.517	0.489	0.917	12.000
42	2018	0.0414	0.523	0.600	0.923	9.000
42	2019	0.0427	0.538	0.600	0.938	9.000
42	2020	0.0386	0.541	0.600	0.941	6.000
43	2016	0.0364	0.509	0.600	0.909	14.000
43	2017	0.0140	0.509	0.600	0.909	15.000
43	2018	0.0074	0.509	0.500	0.909	15.000
43	2019	0.0096	0.509	0.500	0.909	15.000
43	2020	0.0012	0.509	0.500	0.909	39.000
44	2016	0.0378	0.400	0.500	0.900	4.000
44	2017	0.0396	0.400	0.500	0.900	4.000
44	2018	0.0454	0.400	0.400	0.900	4.000
44	2019	0.0391	0.400	0.400	0.900	4.000
44	2020	0.0407	0.400	0.400	0.900	4.000
45	2016	0.0400	0.509	0.400	0.900	4.000
45	2017	0.0420	0.509	0.400	0.900	4.000
45	2018	0.0230	0.509	0.509	0.899	4.000
45	2019	0.0410	0.509	0.509	0.899	4.000
45	2020	0.0410	0.509	0.509	0.899	4.000
46	2016	0.0189	0.600	0.509	0.899	4.000
46	2017	0.0185	0.600	0.509	0.899	4.000
46	2018	0.0162	0.600	0.600	0.899	4.000

46	2019	0.0212	0.600	0.600	0.889	4.000
46	2020	0.0113	0.600	0.600	0.889	4.000
47	2016	0.0560	0.350	0.600	0.889	4.000
47	2017	0.0560	0.350	0.600	0.889	4.000
47	2018	0.0670	0.350	0.350	0.889	4.000
47	2019	0.0520	0.350	0.350	0.889	4.000
47	2020	0.0420	0.433	0.350	0.889	4.000
48	2016	0.0400	0.314	0.350	0.889	4.000
48	2017	0.0420	0.314	0.433	0.889	4.000
48	2018	0.0330	0.418	0.314	0.889	9.000
48	2019	0.0340	0.418	0.314	0.889	4.000
48	2020	0.0380	0.418	0.418	0.889	4.000
49	2016	0.0233	0.418	0.418	0.889	4.000
49	2017	0.0290	0.400	0.418	0.889	4.000
49	2018	0.0320	0.475	0.418	0.889	4.000
49	2019	0.0254	0.475	0.400	0.889	4.000
49	2020	0.0219	0.475	0.475	0.889	4.000
50	2016	0.0212	0.475	0.662	0.889	4.000
50	2017	0.0097	0.475	0.655	0.889	4.000
50	2018	0.0330	0.475	0.644	0.889	4.000
50	2019	0.0340	0.475	0.591	0.889	4.000
50	2020	0.0290	0.475	0.519	0.889	4.000
51	2016	0.0265	0.600	0.492	0.875	4.000
51	2017	0.0171	0.600	0.504	0.875	4.000
51	2018	0.0126	0.600	0.538	0.875	4.000
51	2019	0.0162	0.600	0.525	0.875	4.000
51	2020	0.0105	0.600	0.505	0.875	4.000
52	2016	0.0546	0.600	0.552	0.875	4.000
52	2017	0.0489	0.600	0.492	0.875	4.000
52	2018	0.0411	0.600	0.490	0.875	4.000
52	2019	0.0493	0.600	0.442	0.875	4.000
52	2020	0.0375	0.600	0.416	0.875	4.000
53	2016	0.0269	0.314	0.645	0.875	4.000
53	2017	0.0219	0.418	0.668	0.875	4.000
53	2018	0.0126	0.418	0.503	0.875	4.000
53	2019	0.0123	0.418	0.382	0.875	4.000
53	2020	0.0071	0.418	0.173	0.875	4.000
54	2016	0.0330	0.600	0.495	0.875	4.000
54	2017	0.0410	0.600	0.493	0.875	4.000

54	2018	0.0390	0.600	0.492	0.875	9.000
54	2019	0.0310	0.475	0.491	0.875	4.000
54	2020	0.0390	0.475	0.490	0.875	4.000
55	2016	0.0498	0.467	0.488	0.867	4.000
55	2017	0.0389	0.467	0.487	0.867	4.000
55	2018	0.0387	0.467	0.486	0.867	4.000
55	2019	0.0360	0.457	0.485	0.857	4.000
55	2020	0.0284	0.457	0.483	0.857	4.000