BOARD DIVERSITY, FIRM PROFITABILITY, INTERNAL CONTROLS AND FINANCIAL REPORTING QUALITY OF NAIROBI SECURITIES EXCHANGE-LISTED COMPANIES IN KENYA

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES UNIVERSITY OF NAIROBI

APRIL 2022

DECLARATION

This thesis is my original work and has not been presented for a degree at any other university. All materials referred to have been duly acknowledged.

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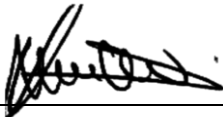
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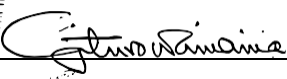Prof. Cyrus Iraya

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ACKNOWLEDGEMENTS

DEDICATION

I dedicate this doctoral thesis to my husband and children, who have stood with me through this academic journey up to the end.

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ABBREVIATIONS AND ACRONYMS

BOD   Board of Directors

BQ   Qualification of Board Members

CBK   Central Bank of Kenya

CMA   Capital Markets Authority

COSO   Committee of Sponsoring Organization of the Treadway

Commission

CPA   Certified Public Accountant

FASB   Financial Accounting Standards Board

FBM   Foreign Board Members

FRQ   Financial Reporting Quality

IASB   International Accounting Standards Board

ICDI   Internal Control Disclosure Index

ICF   Internal Control Framework

ICPAK   Institute of Certified Public Accountants of Kenya

IFRS   International Financial Reporting Standards

NSE   Nairobi Securities Exchange

RDT   Resource Dependency Theory

ROA   Return on Assets

ROE   Return on Equity

SEC   Securities Exchange Commission

SOX   Sarbanes-Oxley Act

VIF   Variance Inflation Factor

ABSTRACT

Corporate accounting scandals have cast doubt on the accounting profession's integrity and usefulness. To safeguard stakeholders' interests, the government of Kenya has enacted and released several laws, rules, and guidelines over the years. Despite these interventions, several organizations' annual audited financial statements have failed to demonstrate quality financial reporting that promotes accountability and transparency through comprehensive disclosures. Financial reporting primarily provides high-quality financial data on economic entities, essential for making economic decisions. The study examined the relationship between board diversity and financial reporting quality, the impact of firm profitability on board diversity and financial reporting quality, the influence of internal controls on board diversity and financial reporting quality, and the combined impact of board diversity, internal controls, and firm profitability on financial reporting quality of Nairobi Securities Exchange(NSE)-listed firms. To assess the quality of financial reporting, researchers have utilized a variety of measures. However, this study used IFRS disclosure, qualitative characteristics, and auditor type as indicators of financial reporting quality. This research was anchored on agency theory supported by upper echelons theory, resource dependence theory, and social psychology theory. The researcher utilized a positivist research philosophy and a correlation descriptive study design. Secondary data was gathered from NSE-listed companies' audited annual reports from 2014 to 2018. Descriptive statistics, correlation analysis, and panel data model estimations were conducted using fixed effects regression model as Hausman test found it appropriate. Moreover, the study adopted Baron and Kenny's (1986) model estimation processes in testing for moderation and mediation effects of firm profitability and internal controls respectively on the relationship between board diversity and financial reporting quality of NSE-listed firms. The results revealed a statistically significant relationship between board diversity and financial reporting quality while firm profitability was found not to moderate the relationship between board diversity and financial reporting quality at 5% significant level. Likewise, internal controls did not significantly mediate the relationship between board diversity and the financial reporting quality of NSE-listed firms in Kenya. Lastly, board diversity, firm profitability and internal controls jointly significantly predicted the financial reporting quality of NSE-listed firms in Kenya. The findings complemented the key propositions of agency theory, upper echelons theory, resource dependence theory and social psychology theory. Also, the study made significant contribution to policy and management. On policy, regulators, such as ICPAK may use the research findings to enhance financial disclosure requirements. On management practice implication, the study recommends the need for NSE-listed firms to consider people with more experience and gender diversity while limiting the number of independent board members when constituting boards to improve the quality of financial reports and avert possible collapse. The study had limitations such as failure to consider unlisted firms hence any generalization of the results of this study cannot be made without that caution; study was carried out in a single country context hence likewise inhibiting generalizability of the findings. Finally, the study made suggestions for areas for further study such as the sample size may be enlarged, and non-listed companies may be researched alongside listed companies, hence results may inclusive of all companies, not only to champion but rather facilitate generalization.

CHAPTER ONE: INTRODUCTION

1.1   Background of the Study

The quality of financial reports has been an interesting issue for board directors, shareholders, researchers and professional accountants (Salehi, Tarighi, & Sahebkar,2018). Recent major financial scandals in the globe raise greater doubts and issuesregarding the accuracy of financial reporting (Dong, 2022; Adeyemi, Okpala & Dabor, 2012). According to earlier research (Bushman & Smith, 2013; Lambert et al., 2007), quality financial reporting can lead to significant economic benefits, such as improvementin investment efficiency. Therefore, without timely and accurate financial information, it is impossible to make sensible economic decisions to efficiently allocate scarce resources to superior activities. Accordingly, the degree to which financial statements give true and fair information about underlying financial positions and economic performance is represented by financial reporting quality. But furthermore, the quality of financial reporting may vary as a result of intricate interplay between numerous factors including; board diversity, firm profitability and internal controls, more so among NSE-listed companies.

In Kenya, corporate scandals include the collapse of Eurobank in 2004, the uncovering of hidden offshore bank accounts used by some directors to steal company funds at The Cooper Motor Corporation (CMC) motors, and the manipulation of books of accounts at Uchumi Supermarkets (Iraya, Mwangi, & Muchoki, 2015; Herbling, 2016). The corporate failures shook investors' confidence in the corporate boards' ability to promote transparency and stewardship, highlighting the importance of improved measures to enhance financial information quality to protect the corporate owners' and other relevant

stakeholders' interests (Keay, 2015). Accordingly, this study motivated by the growing concern over FRQ, effectiveness of internal controls and reliable corporate governance structures, explored the relationship among board diversity, internal controls and firm profitability on FRQ of NSE-listed enterprises in Kenya.

Financial reporting is a vital tool for businesses to communicate financial information to their owners and other stakeholders (Kajola, 2008; Zhou & Chen, 2004). As a result, financial statements must disclose high-quality data so that users can make quality and informed decisions based on them (Abubakar, 2011). Accountability and transparency are upheld by quality financial reports (Verdi, 2006; Nalukenge, Tauringana & Ntayi, 2017). The fundamental goal of financial reporting is to offer quality financial information about businesses, primarily financial in nature so that sound business decisions can be made. Financial reporting of high quality is crucial because it aids capital providers and other stakeholders in making investment, lending, and other resource allocation decisions that can improve overall market efficacy (International Accounting Standards Board (IASB), 2008; Financial Accounting Standards Board (FASB), 1999). Furthermore, financial reporting quality is a broad notion that encompasses financial and non-financial data crucial in decision-making (Herath & Albarqi, 2017).

Board diversity provides boards with access to a broad range of skills, viewpoints, and experiences that help board effectiveness and enhances the board's monitoring roles (Firoozi, Magnan & Fortin, 2016). A diverse committee efficiently assesses management effectiveness and takes timely corrections to deal with the financial situation as may deem essential (Fung, 2014). There is sufficient empirical and theoretical evidence that board

diversity influences financial reporting quality (Krishnan & Lee, 2008; Srinidhi, Gul, & Tsui, 2011; Kim & Yang, 2014). However, board diversity alone may not adequately explain variation in the FRQ of companies. Hence, this shows that some other elements mediate to catalyse, decelerate or moderate the impact of board diversity on FRQ. Such variables could be firm profitability and internal controls.

Internal controls are firm policies and procedures which guide organizations to achieve and maintain their goals (Committee of Sponsoring Organizations (COSO), 2013; Widyaningsih, 2016). Likewise, firm profitability positively impacts FRQ. For instance, profitable firms with growth opportunities may reveal more information to illustrate the consistency of their earnings and the projects they aim to complete; this will spread their reputations and prevent their activities from being undervalued (Fathi, 2013). Studies seeking joint influence among internal controls, firm profitability, board diversity, and FRQ of firms are limited.

The following theories were used in this study: agency theory (Jensen & Mackling, 1976), upper echelons theory (Hambrick & Mason, 1984), resource dependency theory (Pfeffer & Salancik, 1978), and social psychology theory (Lewin, 1944). Agency theory explains the study as financial reporting issues emerge with information asymmetries besides conflicting interests among owners and managers. Despite the agency problem, financial reporting integrity is unaffected. In all its forms, board diversity aims to eliminate the agency problem, enhancing financial reporting quality. Managers may participate inactions that can likely result in creative financial statements due to earnings distortion if board systems are ineffective. According to Hassan (2011), an effective board should

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provide quality financial reports. Corporate governance is vital for quality financial reporting. Gender diversity, for instance, has been associated with fewer profit manipulations and high-quality financial reporting (Jiang, Petroni, & Wang, 2008). According to Arthurs and Busenitz (2003), the board acts as a shareholder representative, ensuring that financial reporting is accurate and reflects the organization's true and fair financial status. In other words, the board is an internal governance mechanism put in place by a company to resist opportunistic managerial behaviour. It serves as an effective instrument in addressing stakeholders' ambitions and demands.

The upper echelons theory claims that an organization's strategic decisions and subsequent performance, including financial reporting quality, are a replication of its directors (Hambrick & Mason, 1984). Furthermore, the theory proposes that demographic characteristics serve as valid proxies for top executives' unobserved cognitive and psychological aspects. Despite the success of board diversity research (Bolo, Muchemi & Ogutu, 2011), studies in social psychology theory have revealed the inadequacy of demographic measures as proxies for behaviour. Resource Dependence Theory (RDT) asserts that organizations cannot produce all the resources or services required to manage themselves internally. Therefore, organizations must form relationships with external entities to obtain those resources and services. The benefits that boards provide to firms through links to external organizations are the focus of RDT. According to Pfeffer and Salancik (1978), such links serve four key functions: provision of resources such as information and expertise, communication channels between the corporation and key network constituents, additional support from outside groups or organizations, whether financial or reputational and added legitimacy for the firm in environments where it does

not reside. As a result, the theory suggests that by hiring directors with a variety of backgrounds and qualities, a company will be able to gain better access to various resources and, as a result, will perform better including quality financial reporting (Hillman, Cannella, & Paetzold, 2000). The board tends to be of paramount importance as a resource supplier. As a result, diversity appears to be a good indicator of the resources a board can bring to the table. Directors with significant political ties, for example, can help companies navigate changing regulatory environments, whereas, directors with thorough financial knowledge, on the other hand, can assist organizations to connect with significant investors and use their substantial financial reporting experience to improve the quality of a company's financial reports, boosting stakeholders' confidence in the organization (Abdullah & Valentine, 2009; Ezelibe, Nwosu, & Orazulike, 2017).

Due to highly publicized financial reporting scams, regulators have reformed corporate governance systems (such as board diversity), stating that excellent governance may lead to accurate financial reporting (Farber, 2005). In examining governance arrangements, (Dechow, Sloan & Sweeney, 1996) discovered flaws in management supervision, such as the lack of an audit committee, CEO-chairman duality, and insider board membership dominance with the risk of profits manipulation. According to Che Haat, Rahman, and Mahenthiran (2008), the performance and behaviour of members of the financial reporting ecosystem, such as directors, management, and auditors, are equally crucial to the credibility of financial reports.

The broader public and potential investors must be provided with accurate and complete financial information by reporting entities. Capital markets function on the precept that

corporations present reliable and comprehensive economic statistics to traders who make

funding choices to bridge the information gap among diverse stakeholders (Shi & Wang,

2011). As a result, financial reporting entities must develop corporate governance practices

to provide excellent financial reports and eliminate information asymmetry. According to

Norwani et al. (2011), a breakdown in corporate governance causes a reporting failure.

Corporations falsify their financial statements and produce reports that lack transparency,

accountability, and integrity. Board diversity has been found to affect accounting quality

in Kenya (Omoro, 2014). Within the context of Nairobi Securities Exchange (NSE) the

impact of board diversity on financial reporting quality is yet to be thoroughly investigated

empirically.

1.1.1 Board Diversity

Board diversity refers to the board's makeup regarding age, education, gender, ethnicity,

experience, lifestyle, culture, nationality, religion, and other factors that distinguish us as

people (Jhunjhunwala & Mishra, 2012). While according to Van der Walt and Ingley

(2013), board diversity is concerned with a variation in the makeup of the board of

directors. In this way, the diversity is both demographic and cognitive. Demographic

diversity refers to directors' easily detectable attributes like race, ethnicity, age, nationality,

and sex. On the other hand, cognitive diversity is related to the unobservable or less evident

characteristics of managers, such as academic, operational, and professional histories,

experience in business, and membership in organizations (Firoozi et al., 2016).

Nonetheless, diversity advocates argue that the diversity of boards of directors should be

embraced to ensure that managers and board members act ethically (Fields & Keys, 2003).

Tornyeva and Wereko (2012) argue that board diversity in a corporation is helpful because of the related benefits it offers to organizations. For instance, Carter, D'Souza, Simkins, and Simpson (2010) stressed that the diversity of boards leads to increased imagination, environmental and technology awareness, and a greater capacity to solve problems. Furthermore, a gender, ethnically, and culturally diverse board in terms of its members facilitates more active global partnerships and board independence (Arfken, Bellar, & Helms, 2014). However, despite the benefits associated with a diverse board, Forbes, and Milliken (2009) highlight that the demographics of each portion of the board members are likely to have complex and varied effects on their performance. A case in point is that although a diverse board is more likely to have spread views, due to the failure to accept the expertise of other members in the problem-solving process, it may also experience communication and coordination challenges.

Empirically, demographic diversity has analyzed observable traits like age, functional background, disability, religion, personality, and working style. Cognitive diversity concerns personality traits (Hambrick & Mason, 1984). Consistent with the upper echelon's theory, company effects replicate its board and senior administration attributes (Finkelstein, Hambrick, & Cannella, 2008; Hambrick & Mason, 1984; Ge & McVay, 2005). Board's experience, expertise, and skills have influenced the quality of corporate financial records (Kent, Davidson, & Goodwin-Stewart, 2005). The current study investigated how the FRQ links to five dimensions of board diversity; age, gender diversity, educational level, board independence, and nationality.

The proportion of females to males is referred to as gender diversity. Women are more intuitive in their decision-making, better at multitasking, and better at developing relationships. Men are more task-oriented, and their decisions are informed by information and procedures. Women offer various attributes to the board, which allows them to supervise managers' decision-making better. For instance, women have more decision-making autonomy, are less tolerant of unethical behavior, and take fewer risks than men (Srinidhi et al., 2011). Consequently, female board members may be able to keep a closer eye on managers' decisions, particularly regarding quality financial reporting.

Age diversity is operationalized as the average age of directors. Young people are seen as more adaptable, have a greater comprehension of new concepts and technologies, and are more willing to take risks. On the other hand, the board may profit from the senior members' extensive expertise. Companies can benefit from senior members' strong networks and influence. The percentage of foreign board members to total board members reflects the diversity of nationalities represented on the board. Companies are now a part of the global economy, with operations in various parts of the globe. It's critical to have a board that understands how other countries function, their business environments, and personnel (Kent, Davidson, & Goodwin-Stewart, 2005). Furthermore, people from various countries have different lives, cultures, and upbringing, contributing to new insights and solutions. Education level is operationalized as the ratio of directors who have either training in finance or accounting, master's degree, or Ph.D. in accounting or finance. Finance and accounting education, knowledge, and skills enable boards to adopt a more holistic approach to problem solutions, especially financial reporting (Jhunjhunwala et al.,

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2012). The ratio of independent directors on the board compared to the total number of directors is board independence.

The board's independence is a tenet that must be met for the board to monitor the executive directors effectively. As a result, according to Fama and Jensen (1983), independent board directors must oversee and supervise their non-independent colleagues' conduct. Companies having the most non-executive directors on their boards of directors are less likely to violate US GAAP, according to Dechow et al. (1996). However, dishonest organizations raise the percentage of independent directors to improve their reputation when fraud is discovered, resulting in high-quality financial reporting, according to Farber (2005). Because the size of an audit committee affects its efficacy in monitoring financial reporting quality, according to both the Sarbanes-Oxley (SOX) Act (2002) and the Capital Marker Act (2002b), an audit committee should include at least three independent directors.

Makhlouf, Al-Surf, and Almubaideen (2018), Ho, Li, Tam, and Zhang (2015), Klai and Omori (2011), Barua, Davidson, Rama, and Thiruvadi (2010), and Yunos (2011) all discovered a significant association among board diversity and the FRQ. A significant and negative link among board diversity and the FRQ was identified in other research (Labelle, Gargouri, and Francoeur, 2010; Dobbin and Jung, 2010). Similarly, according to another line of research, board diversity has nothing to do with the quality of financial reporting (Firoozi et al., 2016; Muhammad, Ayoib & Noor, 2016). Traditional board makeup does not easily support the linear link between gender diversity and financial reporting quality,

especially when it comes to gender diversity. The number of male board members is always greater than that of female board members (Ilaboya & Lodikero, 2017).

1.1.2 Firm Profitability

Reshid (2015) defines profitability as an investment's ability to earn a return from its uses. Financial management's critical goals include profitability. Commonly, a firm examines its performance by measuring its profitability. Abate and Yuvaraj (2013) explain that profitability ratios are financial indicators that assess a company's potential to earn revenue relative to its expenditures over a specific period.

Return on Assets (ROA), Return on Equity (ROE), and Return on Invested Capital (ROIC) are among the profitability ratios discussed by Malik (2011). The return on assets (ROA) is a metric that assesses a company's profitability about its total assets. It illustrates how well management manages its assets to maximize profit. At the same time, the return on equity (ROE) is a metric that estimates the percentage of earnings generated by investments made by shareholders.

Empirically, the profitability of organizations has shown contradictory evidence on its relationship with FRQ. For example, Raffournier (2006), Fathi (2013), and Al-Asiry (2017) found a strong positive relationship between profitability and FRQ. This finding suggested that profitable businesses have growth opportunities and can reveal better information to demonstrate the quality of their projects and the undertakings they plan to achieve - this will expand their reputations (Fathi, 2013). Camfferman and Cooke (2002) and Ebrahimabadi and Asadi (2016) concluded a negative association between information disclosure and profitability. This current study measured profitability using ROA to

measure profit earned compared to the company's total assets. ROA is the profitability ratio obtained by the following formula: $ROA = (Net\ Profit\ /Total\ asets)\ x\ 100\%$. The return on assets (ROA) is a formula that determines how profitable a company's total assets are. This is the ratio of earnings (net income) to the capital invested in assets. The higher the return on assets, the more productive and efficient the management of financial resources.

1.1.3   Internal Controls

To improve FRQ, companies must have more robust internal controls. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013) defines internal controls as "procedures carried out by an entity's board of directors, management, and other people to assure operating, reporting, and compliance with existing rules and regulations". Efficient internal controls help firms stop fraud errors and minimize wastage, according to Mawanda (2008). In addition, Bongani (2013) strongly affirmed that efficient internal control systems act as the first line of protection in securing money, avoiding and even helping to detect fraudulent activities. McMullen, Raghunandan, and Rama (1996) demonstrated that the disclosure of internal control components is positively related to quality financial reporting in a study of 4154 annual reports from 1989 to 1993. Furthermore, internal control flaws are strongly associated with company complexity while adversely related to profitability and firm size, according to Ge and McVay (2005). Internal control objectives in the COSO (1992) definition include operational efficiency, financial reporting reliability, and regulatory compliance.

The financial report is, after all, a tool for making decisions. As a result, the information should be tailored to the needs of decision-makers (owners, managers, and investors). The

report must be relevant and reliable as a decision-making tool. Being relevant entails the ability to make a conscious decision to be unique. The quality report must be produced on time, provide information that aids decision-makers in making forecasts, and provide input for reporting reasons. Meanwhile, the term "reliable" implies that decision-makers must trust the financial statements. To acquire a dependable quality, it is necessary to evaluate and validate the financial statements' substance and fair presentation to ensure that it does not influence a decision (IASB, 2010). This corresponds to the study done by Widyaningsih (2016) and Edward (2011) that reveals a close relationship between financial reporting and internal control quality. The Sarbanes-Oxley (SOX) Act of 2002 mandates that all firms regularly analyze and report on the effectiveness of internal controls. In addition, the auditors are mandated by the law to certify the disclosures to keep the report's users well and better informed.

The Internal Control Disclosure Index (ICDI) assesses internal control disclosure in annual reports. Content analysis and rating agencies (Association for Investment and Research (AIMR) –index and Center for International Financial Analysis and Research (CI-FAR) –index) were employed by the researchers (Leng & Ding, 2011). The research adopted content analysis to establish the ICDI to measure disclosure quality. The selection of items to be used was guided by the COSO framework which included a statements of management's commitment to ethical ideals and integrity; overall responsibility for detecting risks and assessing their impact on corporate objectives; implementation of control activities; and effective communication of internal control objectives and obligations; assessment and reporting of control flaws for feedback are some of the items used as guided by the COSO framework. The CMA mandates all listed companies to have

proper internal controls. The board and management of NSE-listed firms must comment on the efficacy of internal controls in their annual reports.

1.1.4 Financial Reporting Quality

Financial reports' accuracy in conveying information about the company's business in compliance with accounting standards, or even to the extent that accurately presented financial statements reflect the reporting company's core operations and financial position, is called the quality of financial reporting (Biddle, Hillary & Verdi, 2009; Nasser & Nuseibeh, 2003; Robinson & Munter, 2004). According to Verdi (2006), financial reporting quality refers to the accuracy with which financial reports transmit information about a company's activities, particularly its cash flows to equity investors.

According to Tang, Chen, and Zhijun (2008), FRQ is the degree to which financial statements provide an accurate and fair picture of the underlying economic situation and performance. Financial reports in accordance with applicable accounting standards accurately depict a company's true and fair financial status and performance and are deemed high quality (Kusnadi, Leong, Themin, & Wang, 2016; Martí, C., & Kasperskaya, 2015). According to Jonas and Blaurchet (2000), financial reporting quality is comprehensive and precise information not meant to deceive users. According to the International Accounting Standards Board (IASB) (2010) the primary purpose of financial reporting is to offer decision-useful information. As a result, FRQ should be characterized by its decision-usefulness (Beuselinck & Manigart, 2007; Jonas & Blanchet, 2000; McDaniel, Martin & Maines, 2002). As a result, in this study, FRQ is a report that provides information about an entity's financial situation, performance, and cash flows useful to a wide range of users in making economic decisions (IASB, 2010). This description

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highlights that FRQ is more than just a source of financial data about a company's financial position. It also includes non-financial information and other disclosures that aid in comprehending financial reports and making sound decisions.

Furthermore, the International Accounting Standards Board defines financial reporting quality as qualitative characteristics that support accounting data in decision-making (International Accounting Standards Board (IASB), 2008). The qualitative aspects of FRQ aid in determining the decision usefulness of financial reporting data in a more comprehensive manner (IASB, 2008). According to IAS1, FRQ is a fundamental and improving qualitative attribute that underpins decision usefulness (IASB, 2008; Beest, Braam & Boelens, 2009). Relevance and faithful representation are the two most critical qualitative factors that determine the content of financial reporting data. Enhancing qualitative traits like understandability, comparability, verifiability, and timeliness complement the core qualitative characteristics to improve decisions. The income statement, balance sheet, cash flow statement, statement of changes in equity, accounting policies, and explanatory notes are all included in financial statements, according to CMA (2002a). Accounting rules that adhere to International Accounting Standards (IAS) should be chosen and implemented by directors. Directors should establish procedures to ensure that financial statements provide information relevant to users' decision-making needs and are accurate, neutral, complete and that the information adheres to the precept of substance over form where there is no precise requirement. CMA (2002a) also emphasizes the value of item presentation and categorization being maintained from one period to the next unless otherwise noted.

Financial reporting's primary purpose is to produce high-quality financial data that can be used to make sound economic decisions (IASB, 2008). Quality financial data is crucial because it impacts the investment, lending, and other resource allocation decisions of capital suppliers and other stakeholders, boosting overall market efficiency. Operationalizing and measuring this quality is one of the key challenges raised in past studies. An empirical evaluation of financial reporting efficiency undoubtedly involves expectations from many stakeholders due to its context-specificity (Botosan, 2004; Daske & Gebhardt, 2006). Financial reporting of high quality aids shareholders and other stakeholders to comprehend and absorb information from financial statements, reducing information asymmetry. Some scholars find that increase in FRQ can have a significant economic value, such as increased investment efficiency (Bushman & Smith, 2001; Lambert et al., 2007). There will be less information asymmetry due to high-quality financial reporting, allowing investors to oversee executive investment actions better.

Financial data must be relevant and accurately reflect what it is intended to portray (International Accounting Standards Board (IASB), 2010). Further, IASB (2010) notes that financial data becomes more valuable if verifiable, timely, comparable, and understandable. Financial reports quality is not observable per se, building on existing literature; it can only be expressed in terms of attributes and thus cannot be directly measured (Schipper & Vincent, 2003).

International Financial Reporting Standards (IFRS) compliance, earnings persistence, quality of disclosure, audit fees charged, auditor type, earnings management, qualitative characteristics, timeliness, and value relevance have all been used to evaluate the quality

of financial reporting. Though accrual-based measures use the only financial information that excludes non-financial details (Biddle et al., 2009; Van & Vanstraelen, 2005), the studies reviewed mainly applied accrual-based measures resulting in inconclusive findings; the current study applied IFRS Disclosure (IFRSD), qualitative characteristics and auditor type to validate FRQ findings in NSE listed firms. These measures are regarded as attributes that influence financial reporting quality based on the literature reviewed in support of the study. The studies further reveal that financial reporting quality remains the main source of external information to financial reporting stakeholders.

1.1.5   Companies Listed on the Nairobi Securities Exchange.

The Nairobi Securities Exchange (NSE) is Kenya's sole principal stock exchange, an online platform for different securities listing and trading. The NSE is governed by the Capital Markets Authority (CMA) and is authorized to manage the affairs of its associated firms. As of December 31, 2018, NSE had 66 listed companies, and a listed firm's securities may be suspended or delisted according to the NSE listing rules 2014 if the rules and procedures are not followed. Financial Reporting Quality characteristics of disclosure, timeliness in release of financial information and key announcements by firms and consistency in application of accounting standards are some of the key emphases by NSE as an oversight body (Swartz & Firer, 2005).

The CMA's fifth schedule (continuing duties) requires publicly traded companies to prepare annual reports with audited financial statements within three months after the end of the fiscal year. When profitable firms with good internal controls and suitable corporate governance structures (board diversity) are put under receivership, questions arise over

their FRQ, and NSE is on the spot over its oversight role. Companies at the NSE operated for a long time without clear structures of command and management, raising issues about corporate governance among stakeholders. Changes in corporate governance laws and norms have since been experienced. In addition, improvements have been made to the method and structures used to coordinate and control a company within corporate accounting laws of the listed company with a definitive objective of recognizing long- term importance to investors while considering the interests of the different stakeholders (Capital Markets Authority, 2018).

Poor quality financial reports lead to managers of firms into making poor decisions, missing crucial red flags and also damages the company's credibility. There are examples of firms in Kenya which posted huge profits and collapsed the following years such as Uchumi supermarket and Chase Bank. In December 2013, Uchumi Supermarket reported a profit of Kshs 106 million, only for it to report a huge loss of Kshs 263 million in December 2014. Similarly, the Kenya power company reported a net profit of Kshs 262 million in 2019 down from a net profit of Kshs 3.3 billion in 2018 which translates to 92% decrease in net profit. This makes the consumers of financial information to question the quality of the financial reports. This study consequently assessed the relationship among board diversity, internal controls, and firm profitability on financial reporting quality of companies listed at Nairobi Securities Exchange in Kenya.

1.2   Research Problem

Financial information is essential for making effective economic decisions. Therefore, it is crucial that the information presented in companies' financial statements is substantially

accurate, realistic, and reliable. The quality of financial reporting upholds accountability and transparency through complete disclosures (Akeju & Babatunde, 2017; Eginiwin & Dike, 2014; Kajola, 2008). Managers' unethical accounting has been identified as a significant threat to financial reporting (Shen & Hsiang-Lin, 2007; Bello, 2010). Because managers decide on various accounting policies that govern the preparation and presentation of financial reports, they may be subjective in their application of some accounting policies, particularly when recognizing, measuring, and allocating values to specific expenditure and revenue items in finance reports. Additionally, managers may be tempted to misrepresent earnings to satisfy investors' expectations since accounting outcomes are more important to shareholders than other components of financial statements (Pattaraporn, 2016). The majority of executives from insolvent businesses such as Parmalat, Worldcom, and Enron were discovered to be involved in profits manipulation and related parties' fraud, decreasing the quality of financial reporting (Shen & Hsiang-lin, 2007; Bello, 2010).

In Kenya, financial misreporting was witnessed in the placement of Uchumi under receivership in 2006, Euro Bank collapse in 2004, near collapse of Unga limited, secret accounts and siphoning of funds by CMC's directors in 2011, and reporting of huge losses by Kenya Airways immediately after a rights issue casts doubts on the effectiveness of corporate governance (Iraya, Mwangi & Muchoki, 2015; Okiro, 2014). It is widely acknowledged that financial crises are frequently caused by a lack of quality financial disclosure and poor corporate governance (Fung, 2014). Consequently, given the impact of corporate failures on businesses and economies worldwide, governments had to take steps to establish appropriate corporate governance structures (Garba & Abubakar, 2014).

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In response to the scandals, regulators advocate for inclusivity in boards through diversity. This is founded on the premise that heterogeneous groups are likely to self-check each other. A board ensures credible financial reporting by complying with IFRS, ensuring strict adherence to internal controls, minimizing fraud, and improving the quality of earnings reported (Xie, Davidson & DaDalt, 2003).

The relationship between BD and FRQ has attracted debate among the academics and policy makers. Although theoretical literature points to a positive relationship between BD and FRQ, the empirical perspective is however controversial due to reported mixed empirical findings. These findings can be clustered into three categories: positive association (Srinidhi et al., 2011; Mensah, 2015; Singoei, 2022), negative association (Kim & Yang, 2014; Labelle, Gargouri & Francoeur, 2010) or no association Firooz et al. 2016, Ayoib & Noor, 2016). Divergence in findings is attributed to varied theoretical foundations, lack of universal measures of study variables, contextual differences , methodological variations and sampling shortcomings (Rhode & Packel, 2014).

Financial reporting quality is envisioned in the NSE-listed companies due to existence of board diversity in these organizations. Supported by the agency theory perspective board diversity, internal controls and firm profitability have positive effect on financial reporting quality (Singoei, 2022; Kim & Yang, 2014). NSE-listed firms have utilized accounting standards in selecting accounting policies and judgements in financial reporting procedures and processes and have continued to operate in weak control environment that have impacted on their FRQ. This has led to inaccurate financial reporting, imprudent utilization of resources and poor governance as evidenced in Uchumi supermarket, chase bank and

the Kenya power company in Kenya. This makes the consumers of financial information to question the quality of the financial reports.

The lack of convergence in findings on the empirical studies can be partly attributed to research methodological differences and measurement or selection of the key variables. Operationalization of board diversity, internal controls, firm profitability and FRQ still poses conceptual challenges owing to existence of divergent metrics that can be used to proxy these variables. Another plausible explanation for conceptual disconnects is that bulk of empirical studies have been bivariate; focusing only on BD and FRQ. These studies however have one limitation. Due to their bivariate nature, the findings can only be interpreted as significant correlations, not causal relationships. The link between BD and FRQ is not direct, but is mediated and moderated by a number of external factors. Omission of mediating and moderating factors such as internal controls and firm profitability may lead into biased findings by over-estimating the effect of BD on FRQ. Moreover, BD-FRQ bidirectional causality relationships have also contributed to divergent outcomes.

Establishing a clear BD-FRQ empirical link is extremely difficult since these variables differ from one setting to another. These contextual differences are attributed to variation in regulatory, economic, political and cultural environments between develop and developing markets as well as industry related differences. In order to establish a causal link between BD and FRQ, this study extends the prior bivariate studies by integrating internal controls and firm profitability as intervening and moderating variables respectively. Furthermore, this study relies on local context which is largely understudied. This study therefore seeks to fill these critical research gaps. Consistent with the research

problem, this study seeks to address the following research question: What is the relationship among board diversity, firm profitability, internal controls and financial reporting quality of NSE-listed companies?

1.3   Research Objectives

The study's overall goal determined the relationship among board diversity, firm profitability, internal controls, and FRQ of Kenyan NSE-listed companies. The specific goals established:

(i)   The relationship between board diversity and FRQ of the NSE-listed firms in Kenya.

(ii)   The moderating influence of firm profitability on the relationship between board diversity and the FRQ of the NSE-listed firms in Kenya.

(iii)   The intervening influence of internal controls on the relationship between board diversity and the FRQ of the NSE-listed firms in Kenya.

(iv)   The joint impact of board diversity, firm profitability, and internal controls on the FRQ of the NSE-listed firms in Kenya.

1.4   Value of the Study

This study makes contribution to the existing literature on board diversity, internal controls, firm profitability and FRQ. The preeminent input of the research is that board diversity, internal controls and firm profitability jointly predict financial reporting quality. This provided more insight on the results of the previous studies which provided inconsistent results. The research results are useful to future scholars analysing board diversity, firm profitability, internal controls, and FRQ as it documents the results of NSE-listed firms.

Also, the study results benefit various shareholders of public firms in NSE since the diversity attribute studied informs the boards' future constitution to achieve optimality in firms. From the study's findings, they can demand good quality financial reports from their management and put in place adequate measures to guarantee quality financial reporting.

The study makes contribution to the agency theory, resource dependence theory, upper echelons theory and psychological theory by conducting empirical analysis on the relationships among board diversity, internal controls, firm profitability and FRQ. For instance, according to the findings, board diversity significantly predicts the FRQ of Kenyan NSE-listed companies. To defend the interests of shareholders, the board of directors oversees the operations of organizations. The findings show that board age, board independence, and board gender significantly impact financial reporting quality, minimizing conflicts among management and shareholders, validating the agency theory, which focuses on agency conflicts between agents (management) and principals (shareholders). The impact of board diversity attributes on FRQ strengthens resource dependence theory and upper echelons theory. Through its monitoring functions in the governance systems of NSE-listed firms, the board protects stakeholders' interests. Furthermore, when robust IC systems are created and implemented, institutions' capacities are increased and strengthened in the best interests of stakeholders.

The research findings contribute valuable insights on drawing policy prescriptions in regard to standards setting in financial reporting and accounting by providing an opportunity to International Accounting Standards Board to make considerations when reviewing and developing new accounting and financial reporting standards to incorporate

the interest of financial reporting stakeholders. Also, the study outcome regulators like ICPAK define minimum disclosure requirements for listed firms to ensure quality financial reports.

The study makes contribution to practice by providing an opportunity to those entrusted with governance within NSE-listed companies to make appropriate choices in terms of board diversity, particularly in terms of female representation, board independence and age to effectively deliver on the oversight roles. This will improve governance structures leading to improved financial reporting quality.

1.5   Thesis Structure

The study is broken down into six chapters. Chapter one gives a brief overview of the four concepts of the study: Board Diversity, Firm Profitability, Internal Controls, and FRQ. In addition, the NSE contextual discourse is introduced, which informs the formulation of the study objectives and the research problem. The chapter ends by providing the value of the research.

The empirical literature and theories that support the research are discussed and analyzed in chapter two. This study looked into four theories: agency theory (Jensen & Meckling, 1976), upper echelons theory (Hambrick & Mason, 1984), resource dependence theory (Pfeffer & Salancik, 1978), and social psychological theory (Kruglanski & Stroebe, 2011). The empirical literature is reviewed, summarizing empirical studies and research needs identified. This section also establishes the foundation for the study's conceptual framework and the hypotheses investigated.

Multiple diagnostic checks of statistical assumptions, including research philosophy, research design, study population, and data collecting were among the research approaches discussed in the third chapter. Variable operationalization and data analyses. The analysis and outcome of descriptive and correlation analysis of the study variables are covered in the fourth chapter.

Hypotheses testing and outcomes are covered in Chapter 5, which includes tests on four hypotheses. The pertinent findings are given, and a discussion of the research outcomes. The hypotheses investigated the association between board diversity and the FRQ, the moderating effect of firm profitability on board diversity and FRQ, the intervening influence of internal controls on board diversity and FRQ, and the joint impact of board diversity, firm profitability, and internal controls on FRQ. A summary, conclusions, the study's contribution to the body of knowledge, theory, policy, study limitations, and research recommendations are included in chapter six.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The literature on board diversity, internal controls, firm profitability, and FRQ is reviewed empirically and theoretically. Additionally, a summary of the knowledge gaps is highlighted, and then a conceptual framework of the study is argued, and research hypotheses are developed.

2.2 Theoretical Underpinning

While the agency theory is the fundamental theoretical underpinning of the relationship between board diversity, internal controls, firm profitability, and FRQ, several other theories explain these relationships. Echelons theory, resource dependence theory, and social psychological theory are some of the other theories covered in this study. The following subsections go over these theories in detail.

2.2.1 The Agency Theory

The agency theory was founded by Jensen and Meckling (1976). The interplay between principals (shareholders) and agents (corporate executives and managers) is described by agency theory. According to this theory, the shareholders (company owners or principals) hire the agents to work for them. The principals delegate business management to the agents (managers), who ensure that the shareholders' goals are met (Clark, 2004). Agents, according to the theory, have more information than principals. Information asymmetry has a negative impact on the ability of principals to monitor whether agents are properly serving their interests.

The theory distinguishes the roles of the corporation's stakeholders by regarding managers as having explicit firm's specific knowledge of running its operations and that if not kept under the scrutiny of the board of directors, they might pursue personal interests at the expense of the ultimate beneficiaries, the investors and other stakeholders (Jensen & Meckling, 1976). However, Eriotis, Dimitrios, and Zoe (2007) contend that managers are empowered to run the business. Hence, owners can only try to prevent this transfer of interest through monitoring and control measures, for example, oversight by an independent board of directors. Nonetheless, complete control is costly, and investors are looking for alternatives that do not require an enormous sum of money from the company while also monitoring the managers' activities.

The board of directors is an important corporate governance structure that is responsible for leading and guiding a company while also safeguarding the interests of all stakeholders (Fama & Jensen, 1983; Jensen & Meckling, 2019). The board of directors plays a paramount role for the company in providing good corporate governance to reduce information asymmetry, control insider opportunism, and mitigate managerial incentives in earnings management techniques, all of which contribute to the financial reporting's integrity (Chi, Hung, Cheng & Liu, 2015; Khalil & Ozkan, 2016).

The major criticism of the agency theory is its assumption of inefficient markets. In this regard, the theory assumes that information flow in all the markets is uneven and as such, agents in all ventures might at one time make irrational decisions, hence negating the efficient market hypothesis (Arthurs & Busenitz, 2003). In some markets, however, information flow is even to the extent that agents may not have a chance of irrationality in

decision making, and even if it was present at some point in the business venture, it might not take place throughout the life of the business (Kumalasari & Sudarma, 2018). In addition, the agency theory has been criticized for only focusing on controlling directors and management instead of focusing on boards bringing more valued resources to foster firm performance including financial reporting quality (Hillman, Withers, & Collins, 2009).

Despite the criticisms, the agency theory remains essential for this study because it implies that for effective FRQ, NSE-listed firms should employ the board of directors' services to track management actions continuously, without giving chances of whether irrationality will occur or not. In doing so, the board manages the firms' operations by ensuring the effectiveness of the internal control systems, which fosters efficiency, transparency, and accountability in using firm resources to ensure that the financial goals of the firms are attained (Abhayawansa & Johnson, 2007). Cao and Cheung (2010), tested the applicability of this theory to internal control and accounting quality, using it to assess the quality of internal control reporting and accounting quality. Quality internal controls, they discovered, reduce information asymmetry through quality reporting. The quality internal control system improves reporting transparency and lowers agency costs. Consequently, this theory formed the basis of formulating the hypothesis on the intervening influence of internal controls on the relation between board diversity and FRQ.

2.2.2 The Upper Echelons Theory

The Upper Echelons Theory (UET) was introduced by Hambrick and Mason (1984), who described how personal experiences and beliefs explain executives' actions. The theory

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suggests that the previous experiences of executives are particularly noticeable in board positions so that independent directors can leverage their extensive and varied sets of expertise and abilities to boost the company's performance, including FRQ.

According to Carter et al. (2010), the directors' education, experience, and skills level will benefit the organization, and the more diverse these characteristics are, the better for a firm. The upper echelon theory opines that board diversity capital is a primary determinant of business financial performance and financial reporting. This theory is highly relevant when discussing the impact of the diversity of boards on the efficacy of financial reports. For instance, gender diversity often leads to differences in human capital (Terjesen, Sealy & Singh, 2009). On the other hand, it is argued that firm profitability, an aspect of financial performance, influences FRQ.

Earlier studies on UET analyzed the heterogeneity effect of the top management team using characteristics like age, career experience, functional background, and the level of education on organizational outcomes (Elbashir, Collier, & Sutton, 2011; Lee, Elbashir, Mahama, & Sutton, 2013; Naranjo-Gil, Maas, & Hartmann, 2009; Pavlatos, 2012; Burkert & Lueg, 2013). The theory predicts that board diversity and firm profitability can affect a corporate board's performance in numerous ways, and still, this effect can be both positive and negative (Carter et., 2010).

 The UET criticism is that it only emphasizes the traits of the top management of an organization, ignoring other important factors like the motivation of staff, emotional stability, and other social factors (Kyj & Parker, 2008; Elbashir et al., 2011; Lee et al., 2013; Speckbacher & Wentges, 2012). Based on this theory, the researcher will be able to

analyze the traits of the board and their effect on FRQ. Therefore, the theory can be used to formulate the following hypothesis; the link between board diversity and FRQ of NSE-listed firms is not significant, and firm profitability has no moderating influence on the connection between board diversity and FRQ of NSE-listed firms.

2.2.3   The Resource Dependence Theory

Pfeffer and Salancik (1978) proposed the Resource Dependence Theory (RDT) and position that organizations cannot produce all the resources or services necessary to manage themselves internally and thus must establish relationships with external entities to acquire the resources and services needed. Therefore, organizational structures that fulfill the expectations of both internal and external suppliers need to be set in place.

From the board diversity perspective, since corporate boards function as a conduit between the company and external stakeholders, resource dependence theory explains how the diversity of corporate boards affects the firm FRQ. The theory focuses on the board's function in providing the organization with access to resources. Their traits tend to be of paramount importance as resource providers (Abdullah & Valentine, 2009; Ezelibe, et al., 2017). Size, independence, expertise, nationality, gender, and education level are just a few of their characteristics. These board attributes are thought to improve the quality of financial reports in a business, which in turn boosts the stakeholders' trust in the organization. As a result, the diversity of a board reflects the resources it brings to the table. Directors with extensive financial knowledge, for example, can connect companies with key investors and exploit their financial expertise hence improve the firm's financial

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reporting quality. Likewise, boards with diverse ethnic and gender makeup will provide management with more information to help them make informed decisions.

According to RDT, independent directors have access to valuable knowledge and relationship resources such as individual expertise and social networks that can be leveraged in their board roles (Hillman, Cannella & Paetzols, 2002). Similarly, the unique experiences of independent directors acquired from other firms can be useful for decision-making at high-level board meetings. This position was supported by a study among Italian directors claiming that the essential roles of families characterize the networks of female directors and that women can extend their networks over time (Bianco, Ciavarella, & Signoretti, 2011). Therefore, it can be concluded that women can better comprehend specific markets and consumers than their male counterparts. Consequently, board diversity can enhance overall creativity and innovation regarding problem-solving, including ensuring the quality preparation of financial reports.

The resource dependency hypothesis has been criticized for not focusing on the internal process of work and decision making (Ovidiu-Niculae, Lucian & Cristiana, 2012). However, RDT was useful in investigating the roles of independent boards of directors, in particular, and how they contribute to a firm through their expertise and connections to other corporates and institutions. The RDT supported this study through the joint effect of board diversity, internal controls and firm profitability on financial reporting quality because the theory advances the board of directors' function of providing information and skills to improve the company's financial reports.

2.2.4   Social Psychological Theory

Social psychological research started when scientists systematically measured people's feelings, emotions, and actions (Kruglanski & Stroebe, 2011). The interaction between a person and a social condition is a matter of social psychology (Haslam, Wegge, & Postmes, 2009). The main feature of the social situation is that people create social impact or mechanisms that change perceptions, feelings, and actions (Kruglanski & Stroebe, 2011). Group members rely on behavioral and cognitive effects to help groups establish effective social relations (Carlson, Vazire, & Oltmanns, 2011). Thus, social psychology is committed to understanding human relationships and relationships from an individual perspective (Nielsen, 2010). According to the theory, people usually prefer to identify others in groups and distinguish between internal and external groups.

Social psychology theory indicates that it is less likely that representative groups will suffer from group thought since different participants can discourage majority-level leaders from imposing unequal influence on group decisions (Carter et al., 2010). Others, on the contrary, have argued that diversity could lead to less group unity, coordination being disrupted, and more confrontation. This, in turn, could make decision-making less accurate, less effective, and more time-consuming. Nevertheless, research suggests overwhelmingly that the diversity of groups contributes to more innovative development in problem-solving approaches and more informed decision-making. Kim, Burns, and Prescott (2009) state that diversity changes how people think by encouraging individuals in a community to scrutinize current facts, analyze solutions more carefully, and develop distinct opinions.

As Apfelbaum, Bartelt, Bernard, Levine, Massey, Stark, and Zajac (2014) noted, when asked to quantify market fluctuations for induced stocks, individuals in more diverse groups responded closer to the actual prices than individuals operating in a more homogeneous category. Moreover, diversity puts about the right amount of cognitive stress to boost deliberation in these situations requiring analytical thinking, enabling participants to experience increased identification of errors, challenge current lines of thought and prevent speculative behavior (Levin & Stark, 2015). In addition, because of various variables, upper echelon theory and social psychology are quite compatible. First, group performance is typically superior to individual performance, and collective decisions are usually more precise than individual decisions (Allen & Hecht, 2004). Second, when group members stay in touch and communicate regularly, the group's cohesion improves. When it comes to interdependence, which defines how much group members rely on each other to complete tasks, interaction is crucial (Carlson et al., 2011). As a result, this notion was used to develop the hypothesis about the influence of board diversity on FRQ and the effect of internal controls in this relationship.

2.3   Empirical Literature Review

This section summarizes prior studies on the association among board diversity and FRQ, moderating role for firm profitability, and the intervening effect of internal controls. It also examines studies jointly linking the impact of board diversity, firm profitability, and internal controls on FRQ.

2.3.1   Board Diversity and Financial Reporting Quality

Singoei (2022) investigated the moderating effect of audit committee activities on the relationship board gender diversity on financial reporting quality of firms listed in Nairobi

Securities Exchange (NSE). This study was anchored on the Upper Echelon theory and Stakeholder's theory, the study employed a longitudinal research design and was guided by the positivist philosophy. A census approach was used whereby all the firms that remained continuously listed for 7 years for the period 2011-2017 inclusive were studied. The data collection instrument used in this study was data collection sheet. Fixed Effect Model (FEM) was used to analyze the panel data, since it was found to be an appropriate estimation technique by the Hausman test. The findings revealed that gender diversity had negative and statistically significant effect on financial reporting quality. However, audit committee activities positively moderated the relationship between gender diversity and financial reporting quality.

Aifuwa and Embele (2019) evaluated the effect of board characteristics on the FRQ of Nigeria's Stock Exchange-listed manufacturing businesses. On May 31, 2018, 169 manufacturing businesses were registered on the Nigerian Stock Exchange. Secondary data was hand-selected from a sample of publicly-traded manufacturing corporations' annual reports (2013-2017). Descriptive and inferential statistics were used to summarize the data and draw conclusions about the population studied. According to the data, board expertise was statistically and positively associated with FRQ at a 5% significance level. In contrast, board independence and board diversity were statistically insignificantly linked to financial reporting quality.

Wahid (2018) conducted an empirical study to explore the effect of gender diversity on financial misconduct using financial manipulation as evidence. The author used a simple linear regression model to establish the hypothesized relationship. The study used primary data. Firms with gender-diverse boards reported less financial misconduct and fraud from the findings.

The research conducted by Firoozi et al. (2016) explored how Canadian companies' consistency of financial reporting related to two dimensions of board diversity (gender and geography). Between 2008 to 2012, the study comprised Canadian companies in Compustat. The study used descriptive and inferential statistics (multivariate analysis). Geographical diversity represents the geographical location of directors relative to corporate headquarters. From their results, the consistency of financial reporting, as calculated by the number of abnormal accruals and re-statements, was lower for companies with geographically dispersed independent directors than for companies with less geographically representative boards. They have also noticed that organizations with more geographically diversified committee members have a poorer FRQ. The research, however, established an insignificant link between the diversity of board gender and FRQ. They concluded that the company-specific effects of board diversity vary and are conditional on considering the diversity factor. Despite this conclusion, the study was based on a developed economy with different geographical dynamics compared to emerging economies like Kenya. Also, the study failed to incorporate core statistical tests such as multicollinearity.

Ogoro and Simiyu (2015) investigated the efficacy of audit committees in the public sector. Kenyan parastatals were the focus of this study. They explored the correlation between audit committee characteristics and the efficacy of audit committees in reducing financial restatements in Kenyan state corporations. The study employed a logistical regression model. From the findings, multiple directorship and tenure significantly reduced the number of financial statements restatements. The impact of gender on the quality of earnings in Fortune 500 firms was analyzed by Krishnan and Parsons (2008). The authors sampled 353 firms between the years 1996 to 2000. The earnings quality measures applied were asymmetric timeliness and conservatism, earnings skewness, accruals, earnings smoothness, earnings persistence, and loss avoidance tendency. Regression results suggest an improvement of the bottom line for firms having more females on their boards. A similar study examining the impact of female board members on the quality of earnings of US firms between the years 2001 to 2007 was done by Srinidhi et al. (2011). Discretionary accruals and earnings management were used to measure earnings quality. It was revealed that boards with female directors were associated with earnings quality. However, these studies did not consider other board diversity attributes such as nationality, qualifications, and age of the directors.

The study conducted by Oba (2014) explored the potential of board dynamics in Nigerian listed firms to influence management attitudes about reporting efficiency. The Dechow and Dichev model was used to calculate accruals, a proxy for the financial reporting quality. From 2008 to 2012, panel data was obtained from annual reports of 69 Nigerian listed companies. The study recorded the panel data collected from annual reports of 69 listed Nigerian firms from 2008 to 2012. The study documented that board tenure, board

independence, gender diversity, and directors' shareholding were essential predictors of Nigeria's reputation in financial reporting. Board size had a neutral impact on FRQ. However, the study did not consider some key board diversity factors such as the age of the directors, qualifications, and even nationality. They only measured dependent variables via one indicator: accruals, leaving out other measures such as auditor type, IAS disclosure quality, and qualitative characteristics.

Kim and Yang (2014) analyzed the effect of director tenure on FRQ in Korea. The study used earnings persistence, Modified Jones Model (1991), and Earnings Response Coefficient (ERC) as proxies for FRQ. The authors sampled 550 firm-year observations drawn from the Korean listed firms, excluding financial firms. The study's hypothesis was evaluated using univariate and multivariate analysis. A negative link between tenure of directors and FRQ as measured by the discretionary accruals was revealed. The persistence of earnings and ERC positively correlated with the tenure of directors. Though the research linked board diversity to FRQ, it only used one measure of board diversity. Also, the study did not use FRQ measures such as qualitative characteristics or IFRSD quality which this research has employed.

2.3.2   Board Diversity, Firm Profitability, and Financial Reporting Quality

Agyei-Mensah (2015) examined firm-level data (profitability) and how it influences the quality of financial ratios disclosed by firms listed on the Ghana Stock Exchange(GSE). The research looked at 35 companies listed on the GSE in 2012. Because most Ghanaian companies do not disclose financial ratios in their annual reports, the findings were especially compelling. As a result, they failed to meet the IASB's qualitative characteristic

requirements for the financial statements (reliability, relevance, comparability, and understandability). They also discovered that financial ratios and disclosure were negatively correlated with profitability. The study did not explore the direct effect of board diversity factors and how firm profitability influenced the relationship. The study used only one measure of FRQ, that is, qualitative characteristics which may on its own not show the comprehensive picture of FRQ.

Mensah (2015) conducted a case study in Ghana on the factors influencing financial reporting quality. "FRQ was influenced by independent directorship, profitability, business size, ownership concentration, leverage, and liquidity," according to the study. Audited financial statements for the year 2012 were used to collect cross-sectional data. Multiple regression analysis found a strong association between leverage, shareholders' concentration, board ownership, independent directorship, and FRQ, with an average voluntary disclosure of 63 percent. Though the study linked profitability to FRQ, the study did not establish how profitability influences the hypothesized relationships among the determinants of FRQ. In addition, the study only considered cross-sectional data for the year 2012 and thus challenging to account for time dynamics.

Aljifri, Alzarouni, Ng, and Tahir (2014) looked at the effect of corporate features on corporate disclosure in the United Arab Emirates (UAE), with profitability as a major variable. A total of 153 joint-stock companies, both publicly traded and privately held, were used in the research. The association between profitability and disclosure level was not statistically significant. However, the study was based on a developed economy with

environmental dynamics different from emerging economies like Kenya. The influence of profitability on the relationship between board diversity and FRQ was not tested.

Outa (2011) evaluated the influence of implementing International Financial Reporting Standards (IFRS) on the accounting quality of Kenyan NSE-listed firms. A comprehensive literature review and analysis of empirical investigations were conducted on implementing IFRS and their impact on FRQ. According to the literature review, the application of IFRS positively impacts FRQ. Moreover, Isidro and Raonic (2012) conducted a systematic literature review to examine institutional complexity, firm incentives, and the quality of accounting figures. From their findings, accounting quality improved due to a strong enforcement environment, globalized markets, and high economic development.

2.3.3 Board Diversity, Internal Controls, and Financial Reporting Quality.

Nalukenge et al. (2017) investigated internal controls of corporate governance and financial reporting in Ugandan microfinance institutions (MFIs). They discovered that strong internal controls and FRQ are closely linked to financial expertise and board independence. Similarly, Hunziker (2013) devised an internal control disclosure index to evaluate internal control disclosures in 91 non-financial Swiss listed companies and discovered that management ownership, block holder ownership, the board size, and the level of voluntary disclosure on internal controls was highly correlated with leverage leading to the enhanced reliability of financial reporting. The former study, however, focused on linking corporate governance to financial reporting, where internal control was also used as a dependent variable. In contrast, the latter research incorporated firm characteristics and did not explore the influence of internal controls.

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Doyle, Ge, and McVay (2007) used 705 companies listed on the New York StockExchange (NYSE) to explore the connection between accrual quality and internal control between 2002 and 2005 to study the association between accrual quality and internal control. Using regression analysis, the researchers discovered that ineffective disclosure of internal controls adversely affects the relationship between accrual quality and internal control. They further argued that large firms might have more structured financial reportingprocesses and procedures which enhance segregation of duties. The study did not show theeffect of board diversity as they concentrated on firm characteristics leading to their conclusion that large firms may have more structured financial reporting processes.

Mensah (2020) researched the impact of IFRS adoption on the FRQ of manufacturing companies registered on the Ghana Stock Exchange (GSE) before and after the introduction of IFRS. Correlation and regression analysis were performed using the Ordinary Least Squares (OLS) technique and a Fixed Effect Model (FEM). Data was gathered from 148 company-year observations in eleven manufacturing enterprises' audited annual reports from 2001 to 2006 for the pre-adoption period and 2007 to 2014 for the post-adoption period. The regression findings demonstrated a significant negative influence of IFRS disclosure on FRQ when earnings quality calculated using modified Jones discretionary accruals were used as a proxy for FRQ. Before and after adopting IFRS, the volume of earnings management operations decreased in the post-adoption period compared to the pre-adoption period, increasing accounting efficiency after adopting IFRS. Per the study findings, adopting IFRS improved the quality of financial reports issued by companies in Ghana's capital market. Even though the study linked IFRS adoption to FRQ, the focus was on earnings management, with little attention paid to the role of internal

controls. Furthermore, because the study was limited to the manufacturing industry, it may be challenging to extrapolate the findings to other businesses.

Widyaningsih (2016) reviewed the implementation of internal control mechanisms related to financial statement quality and financial transparency in primary schools in Bandung, Indonesia. The study processed data from 168 samples in primary schools in Bandung, Indonesia, as study analysis units, using the path analysis technique. According to the findings, implementing an internal control framework encompassing the control environment, risk assessment, control actions, information and communication, and monitoring significantly improves FRQ.

The study concluded that high-quality financial report information could be created by an excellent internal control system and thus promote the increased quality of the financial transparency of the schools. The study failed to show the interrelationship of the role of board diversity. Internal control was directly linked to FRQ. Similarly, the study focused on one sector, the education sector, which is not for profit. In the public sector, the findings may not be generalized to private entities which are for profit.

2.3.4 Board Diversity, Firm Profitability, Internal Controls, and Financial Reporting Quality**.**

Ballas, Garefalakis, Lemonakis, and Balla (2019) looked at how the International Financial Reporting Standards (IFRS) affected the quality of financial and narrative reporting in Greek banks' published statements from 2008 to 2011. The study focused on Greek financial institutions for a period that included the global financial crisis and the start of the Greek sovereign debt crisis, making conclusions on reporting efficiency due to the

deployment of IFRS and corporate governance standards. The research looked at the financial outcomes of 14 Greek commercial banks from 2008 to 2011.

Their findings discovered a significant link between board diversity and narrative reporting. In their study, diversity was measured not only in terms of the proportion of female board members but also in terms of the integration of international cultures. The data analysis revealed that the audit committee's independence influenced the tendency to provide helpful information in reports and assertions. The possibility of being audited by an outside audit company with experience in corporate social responsibility, health, safety, and sustainability positively influenced the decision to include data in the reports. Furthermore, the data revealed that the audit committee's knowledge (as evidenced by the inclusion of at least four SOX financial experts) influenced the substance of the reports produced and the amount of information they provided. The study was performed concerning commercial banks or the financial sector and may not apply to other industries. The results may not apply to other sectors, such as agriculture. It only examined the effect of board diversity and no other potential factors influencing the relationship, such as internal controls and firm profitability.

Further, many other previous studies supported the findings of Ballas et al. (2019). They noticed that the diversity of managers (mainly in the form of women's participation) could improve a company's overall performance (Carter, D'Souza, Simkins & Simpson, 2003; Adams & Ferreira, 2004; Bonn, 2004; Huse & Solberg, 2006) and that corporate disclosure was positively related to gender diversity (Ibrahim & Angelidis, 1994). With the introduction of a combination of male and female members and members from various

backgrounds, board diversity positively affects the decision to include additional details in the reports, improving the quantity and quality of the information provided to stakeholders.

Thiruvadi and Huang (2011) examined whether audit committee gender diversity significantly impacts a company's earnings management efforts. Using a sample of 320 firms from the S&P Small Cap 600 index (stock market index established by Standard & Poor's) of firms matched to firms in the same industry with comparable results, the researchers found that women's presence on audit committees restrains revenue control. Sun, Liu, and Lan (2011) found no link between the presence of women on audit committees and earnings management efforts. Srinidhi et al. (2011), on the other hand, looked into whether there is a link between women's presence on corporate boards and the quality of earnings reported. Using 2430 company year findings from listed companies in the U.S. between 2001 and 2007, the authors found that boards of female directors were associated with higher earnings performance. Though these study has managed to establish the association between board diversity and FRQ, they only focused on gender diversity, leaving the other core indicators. The study also failed to establish the joint contribution of other vital determinants such as internal controls and firm profitability.

In a study of the top 95 Malaysian companies, Kamalluarifin (2016) looked at corporate governance, firm characteristics, and their impact on corporate internet reporting. Their goal was to see how these factors influenced the amount of information shared on the internet. The outcomes showed that firm profitability had a statistically significant influence on Malaysia's level of internet disclosure, similar to the results of Eyenubo, Muhamed, and Ali (2017) but different from the findings of Aljifri et al. (2014) in the UAE.

This could indicate that a country's liberality may significantly affect the use of internet disclosure and, as a result, the quality of reporting. The United Arab Emirates is most likely a profoundly Muslim and conservative country. The former study examined a specific case of internet service, which may not be similar to listed firms.

Barako (2007) investigated the factors that influence voluntary disclosures in Kenyan companies' annual reports. They used yearly reports to obtain data examining factors related to voluntary disclosure. The study also used regression analysis using the longitudinal technique. Corporate governance attributes, ownership structure, and corporate characteristics influenced information disclosure.

Kinyua, Gakure, Gekara, and Orwa (2015) explored the impact of internal controls on NSE-listed firms' financial performance, focusing on the five elements of the internal control framework in Kenya. A survey model based on stratified sampling was used on a population of 62 firms. Data was gathered from both primary and secondary sources. A structured questionnaire was used to collect primary data, and secondary data acquired from audited accounts. To analyze the data in the study, descriptive and inferential statistics from the Statistical Package for the Social Sciences (SPSS) computer application were used. The research found a significant correlation at NSE, Kenya, between internal controls and listed companies' financial performance. The study only embraced correlation analysis and not regression analysis. Thus, the study may not be used to make policy or derive implications. In addition, the study relied on cross-sectional data, which may not be suitable for analyzing firms' behavior over time.

Omoro (2014) investigated the demographic diversity of senior executives, voluntary corporate disclosure, discretionary accounting options, and the quality of financial reporting of Kenyan state-owned commercial companies. The research used the ordinary least squares method and primary data collected from staff working at commercial State Corporation. From the findings, director age, functional background, tenure in Top Management Teams (TMT), and voluntary disclosure influenced FRQ, while gender and education were negatively associated with FRQ.

2.4   Summary of Literature Review and Gaps.

This chapter analyzed and examined different issues, raising contextual, methodological, theoretical, and conceptual research gaps. Board diversity, firm profitability, internal controls, and FRQ of NSE-listed firms in Kenya have not been extensively studied, thus giving rise to the contextual gap that this study focuses on. Furthermore,conceptual gaps arise since most studies on NSE-listed firms in Kenya have not captured the moderating and intervening role of firm profitability and internal controls, respectively, on FRQ of NSE-listed firms in Kenya. A major limitation is that previous studies generally dwelt on investigating the impact of board diversity indicators on FRQ. No study has explored the effects of the three variables (board diversity, firm profitability, internal controls) on financial reporting quality. This study examined all these four variables board diversity, firm profitability, internal controls, and FRQ.

Concerning research gaps, a number of them developed from the examination of the matters investigated in this chapter, such as th e lack of combination of the variables and their effect on FRQ. Most studies looked at the association of two or three variables,

yielding inconsistent results. There are that were carried on the relationship between board diversity and FRQ. Other studies researched the link between internal controls and financial reporting quality. Others studied the impact of gender on earnings quality, while others explored the effects of IFRS adoption on accounting quality. Lastly, other studies looked at board diversity, earnings quality, and internal controls without analyzing their impact on FRQ. A major limitation in the knowledge and the research gap is that the studies reviewed have not examined the ideas in the ways suggested in the present study. Again many of the studies reviewed were carried out in the most advanced nations of the world that are different from Kenya in terms of organizational efficiency, legal and regulatory environment. Theoretically, the influence of board diversity is inconclusive with the echelons theory propositions that seem to contradict that of social psychological theory.

The methodological gap is identified in the empirical studies' analysis. Most of the studies looked at only one or two data analysis methods. However, this research combined diagnostic tests, descriptive statistics, correlations, and regression analysis into one study. Some studies utilized alternative proxies for profitability, such as return on capital employed, while others used return on assets. Other research, unlike this one, used performance as their end variable rather than financial reporting quality. This study bridges methodological gaps, contextual, conceptual, and knowledge gaps by using five BD indicators (gender, age, board independence, qualification, and nationality) as well as three proxies (IFRS disclosure, qualitative features, and auditor type) to assess financial reporting quality. (A summary of the studies reviewed and their findings and research gaps are presented in Table 2.1 below.

Table 2.1: Summary of Literature Review and Gaps

Author (s)	The focus of the Study	Methodology	Findings	Knowledge Gaps	The focus of the Current Study
Barako (2007)	Through annual reports, factors related to voluntary disclosure were examined.	Used regression analysis using the longitudinal technique.	Corporate governance attributes, ownership structure, and corporate characteristics influence information disclosure.	The study failed to undertake necessary diagnostic tests to ascertain the validity of the estimates. Also, the study did not consider mandatory disclosure like IFRS Disclosures.	The current study used a multi-step regression analysis model and included board diversity, firm profitability, and internal controls to test for impact on FRQ (measured via mandatory measures).
Srinidhi, Gul, and Tsui (2011)	Examine the effect of female board members in the US	Used data collected for five years and also employed panel data estimation technique	Boards with female directors are associated with a higher quality of earnings.	The study only considered gender diversity. It also concentrated on earnings performance as the dependent variable and not FRQ. It was also carried out in developed markets with different dynamics.	Other diversity aspects, including education level (qualifications), nationality, addition to gender, were considered (gender was measured as the ratio of female board members to total members)
Outa (2011)	Examining the impact of IFRS adoption on FRQ in capital markets.	The study undertook a critical literature review and analysis of empirical studies on IFRS adoption and implications for FRQ	The literature reviewed indicated a positive effect of IFRS adoption on the impact on FRQ.	Regression models did not allow the use of linearity, multicollinearity, normality, and	Diagnostic tests such as multicollinearity, homoscedasticity, and normality were used in the investigation.

				heteroscedasticity to assess the regression model's robustness Studies reviewed did not consider firm profitability and internal controls effects on FRQ	
Isidro and Raonic (2012)	Firm incentives, institutional complexity, and the quality of harmonized accounting numbers	This was a systematic literature review.	Accounting quality improved in a strong enforcement environment; globalized markets; high economic development	The study did not consider board diversity and firm profitability. Instead, they concentrated on analyzing firm incentives and how it contributes to accounting quality.	The current study analyzed board diversity, firm profitability, internal controls, and FRQ in NSE-listed firms in Kenya.
Hunziker (2013)	Examine the extent of voluntary disclosure on internal controls.	The internal control disclosure index analyzed internal control elements disclosed in the annual reports.	Company-specific characteristics explained the variance in the degree of voluntary disclosure on control.	Yearly reports for one financial year to carry out analysis were used. A longitudinal study may be carried out for a longer period for more reliable results.	The study tested the effects of both board diversity effectiveness and internal control elements on FRQ.
Kim and Yang (2014)	The effect of director tenure on FRQ in Korea	Used performance-matched modified Jones model, earnings persistent model, and Earnings Response Coefficient (ERC) model.	Tenure of directors negatively affects discretionary accruals, while the persistence of earnings and ERC establish a positive	Effects of firm profitability and internal controls on FRQ were not considered.	The study considered the influence of firm profitability and internal controls on the association between board

			relationship with the board tenure.		diversity and FRQ for NSE-listed firms.
Omoro (2014)	Analyze the effect of top management team diversity, voluntary disclosure, and discretionary choices on FRQ of commercial state corporations in Kenya	Used ordinary least squares method and also primary data collected from staff working at commercial state corporation	Director age, functional background and tenure in Top Management Teams (TMT), and voluntary disclosure influence FRQ, gender, and education negatively associated with FRQ	The study reported mixed findings on the effect of TMT diversity on FRQ. The study only focused on commercial state corporations.	Study incorporated profitability and internal controls on the correlation between board diversity and FRQ for NSE-listed firms.
Ogoro and Simiyu (2015)	Investigates the relationship between audit committee characteristics and its effectiveness in reducing financial restatements in state corporations in Kenya.	Logistical regression model.	Multiple directorship and tenure significantly in reduce the number of financial statement restatements.	The study did not consider the effect of internal controls and firm profitability on FRQ.	The current study examined the influence of internal controls and firm profitability on the link between board diversity attributes and FRQ.
Wahid (2018)	Analyze the effect of gender diversity on financial manipulation	Used a simple linear regression model to establish the hypothesized relationship. Primary data was mainly used	Firms with gender-diverse boards report less financial misconduct and fraud.	Based in the US, which has a different regulatory framework than that of NSE in Kenya. The study only focused on one aspect of board diversity (gender)	The current study documents the combined effect of board diversity, firm profitability, and internal controls on FRQ for NSE-listed firms in Kenya.

2.5 Conceptual Framework

The relationship between board diversity, firm profitability, internal controls, and FRQ is depicted in Figure 2.1. The figure shows how board diversity, the study's independent variable, directly impacts FRQ, which is the outcome variable. The constructs used to measure FRQ in this study are IFRS disclosure, qualitative characteristics, and auditor type. Firm profitability is the moderating variable in the model, while internal controls are the intervening variable. A mediating variable is necessary to completely understand how two variables interact, causing one variable to have a mediating impact on the outcome variable. Moderating variable is essential when a researcher wishes to check if two variables have the same association across groups.

The figure also depicts the study's four hypotheses, the first of which was utilized to investigate the association between board diversity and FRQ. Given the board of directors' monitoring functions on FRQ, the goal was to see if board diversity attributes directly affected FRQ. Hypothesis two examined whether firm profitability moderated the link between BD and FRQ. The moderating effect on FRQ was investigated using ROA as a proxy for firm profitability. Using the Baron and Kenny (1986) model, the third hypothesis examined the ICs' intervening (mediation) influence on the relationship between BD and FRQ. Finally, the collective impact of BD, firm profitability, and internal controls on FRQ was investigated.
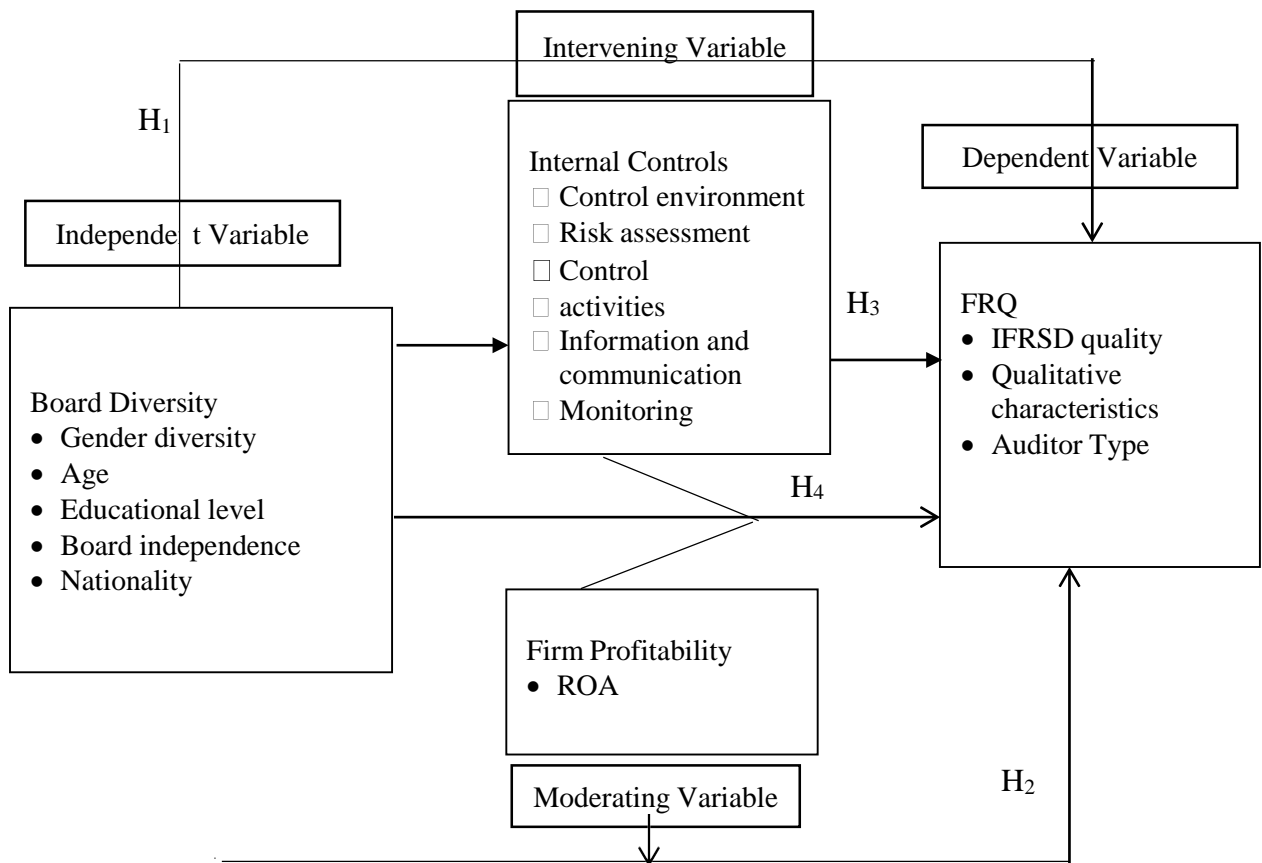
Figure 2.1: Conceptual Framework   Source: Researcher (2020)

2.6   Research Hypotheses

This research addressed a vital research question, which established the relationship among

board diversity, firm profitability, and internal controls on FRQ of NSE-listed firms in

Kenya. This question was guided by the four study objectives, which, together with the

reviewed literature, guided the development of the following null four hypotheses.

H_1:   The relationship between board diversity and FRQ of NSE-listed firms is not

significant.

H_2: Firm profitability does not significantly moderate the relationship between board

diversity and FRQ of NSE-listed firms.

H₃: Internal Controls do not significantly mediate the relationship between board

diversity and FRQ of NSE-listed firms.

H₄: The joint influence of board diversity, firm profitability, and internal controls on

the FRQ of NSE-listed firms is not significant.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research approaches applied to attain the study's objectives. The study philosophy, research design, target population, data collection procedures, operationalization of study variables, diagnostic tests, and data analysis processes are all part of the research methodology.

3.2 Research Philosophy

Research philosophy is a belief in gathering, evaluating, and utilizing data on a phenomenon. Social science research is guided by two main research philosophies, the phenomenological paradigm, and positivism. The phenomenological approach may be qualitative, humanistic, interpretive paradigm, or subjective, whereas; a positivist paradigm may be referred to as an objective, scientific, traditionalist research, or quantitative research paradigm (Blumberg, Cooper, & Schindler, 2005).

This study adopted a positivist research paradigm. This paradigm helps in understanding the link between BD and FRQ while using internal controls and firm profitability as mediating and moderating variables respectively. The justification for adopting this paradigm is that the study aims at testing hypothesis derived from existing theories through objective measurement of observable social realities. Additionally, positivist approach gives causal exposition of study variables and has been extensively applied in BD-FRQ related studies. Positivism suits this study since it is largely rooted on facts gathered through experience as well as direct observation and can be empirically measured using quantitative or statistical methods. Also, the researcher maintains a detached, distant, non-

interactive and neutral position from the phenomena under investigation thus implying objectivity (Creswell, 2014; Sekaran & Bougie, 2013).

3.3   Research Design

The framework of research is called research design, and its goal is to ensure that the research topic is effectively handled (Jeet & Kumar, 2015). Three broad forms of research designs exist casual, exploratory, and descriptive. Descriptive research describes a population concerning relevant variables; exploratory research aims to ascertain insights and ideas, whereas causal studies create causal relationships between important variables. The descriptive design employs three major methods: survey research to document the status quo, developmental research assessing improvement over time, and correlational research investigating associations between variables.

A correlational descriptive research design was adopted in this study. Descriptive studies seek in-depth answers to questions such as who, what, when, where, and how in groups, businesses, and specific individuals, and the idea is that the researcher observes and then explains what he or she sees (Sekaran & Bougie, 2016). In investigating the current state of events related to the current study, descriptive design responded to questions as set out in the questionnaires (Islamia, 2016). Descriptive designs are useful when the variable is studied in a totally natural and undisturbed setting. This study employed the correlation design, which allows examination of the degree of correlation between two or more variables as well as changes in a phenomenon over time (Frees, 2004; (Sekaran & Bougie, 2016).). Descriptive design can also be longitudinal, which means that data is collected at different times across time. Trend studies, which look at population characteristics over

time; cohort studies, which follow a sub-population through time; and panel studies, which follow the same sample over time, all being examples of data gathering (Kothari, 2011; Sekaran & Bougie, 2016). The correlational descriptive research produced a description of the relationship between BD, internal controls, firm profitability, and the FRQ of NSE listed companies. Ongore and Kusa (2013) used a similar study approach to explore determinants of financial performance of Kenyan commercial banks.

3.4   Population of the Study

Population is the totality of all elements that have a common set of traits in any field of study (Oladipo, Ikamari, Kiplang'at, & Barasa, 2015). This is consistent with Parahoo's (2006) definition of population, which defines it as the total number of objects chosen to be evaluated as a representative of the research, such as organizations, individuals, or items. The target population has all members with the same chances of being selected for the required final sample (Bryman & Bell, 2011). Kothari (2014) explains that the target population is the components on which conclusions arrive.

For this research, the population consisted of 66 NSE-listed firms per data obtained from the NSE website on December 31, 2018 (Appendix 11). Five NSE-listed firms were omitted from the study owing to non-availability of data for the period under review, leaving 61 NSE-listed companies, which formed the unit of analysis. These firms belong to 12 sectors of economy in Kenya. The choice of the NSE-listed companies was informed by their divergence in nature and by sectorial characteristics. Also, due to uniformity in reporting of NSE-listed companies, it is possible to make comparisons within the same industries as well as across the industries. Moreover, their financial data is readily available

since listed firms mandatorily publish their financial statements in compliance with the stipulated statutory requirements.

3.5   Data Collection

According to Burns and Grove (2010), data is an accurate, systematic collection of information related to research problems using questioning, observation, in-groups, descriptions, and single-subject study. The study relied on secondary data, primarily annual historical data on NSE-listed companies' performance over five years (2014-2018). The secondary data was sourced from NSE-listed firms' annual reports, financial statements, pamphlets, Capital Market Authority, and NSE website. External auditors review yearly reports and financial statements; hence they offer a fair perspective of the performance of NSE-listed firms. The data for each study variable was collected using data capture forms in Microsoft Excel Sheets. The information gathered was analyzed to determine the correlations among board diversity, firm profitability, internal controls, and FRQ. Each year in the research population represented an observation for each NSE-listed firm. The researcher was able to combine the study variables from each organization with relevant observations

Data on all the variables was collected with data capture forms (Appendix 11, 111, 1V, V, and Appendix V1). Secondary data capture form, appendix 11 captured data on NSE-listed firms, appendix 111 captured data on board diversity and firm profitability collected from 2014 to 2018. Likewise, to collect data on internal controls, secondary data capture Form-Appendix 1V based on COSO Internal Control-Integrated Framework (2013) was developed to evaluate the internal controls disclosures by the firms. Appendix 1V was also

used to collect data on auditor type. Appendix V based on the IFRSD checklist of 2014, was developed to collect data on IFRS Disclosure, and appendix V1 data capture form on qualitative characteristics defined by the financial reporting Conceptual Framework (CF) (IASB, 2010), was developed to evaluate FRQ by NSE-listed firms.

3.6   Diagnostic Tests

Diagnostic tests are pre estimation procedures in research for evaluating whether the assumptions of classical linear regression have been complied with (Porta, 2015). In principle, the nature of the dataset acquired (cross-sectional, time series or panel data) generally determines the sort of diagnostic tests to be performed. Since this study used panel data, six fundamental assumptions underlying regression analysis, namely: normality, linearity, homogeneity of variances, multicollinearity, unit root, and linearity were tested.

3.6.1   Normality Test

Normality is an asymmetric bell-shaped curve with the highest frequency scores in the middle and the lowest towards the ends (Pallent, 2005). The data has been disseminated normally due to the data layout around the hub. Non-normal data can lead to erroneous and misleading outcomes (Field, 2009). The normality test can be done statistically or graphically; however, statistical methods are preferred because graphs do not adequately show whether a distribution is close to normal or not (Field, 2009). The Shapiro–Wilk test suits small sample sizes (50 samples). However, it can be applied to more extensive samples, whereas the Kolmogorov–Smirnov test is better suited to larger samples (n >50).

As a result, the study used the Kolmogorov–Smirnov test to determine normality numerically.

3.6.2 Multicollinearity

Multicollinearity occurs when two or more predictors are tightly correlated, and the standard error of the coefficients increases. The coefficients of some or all of the independent variables can differ significantly if the standard error is increased. Multicollinearity, in other words, inflates the standard error, making certain variables statistically insignificant when they should be significant (Field, 2009).

Variance Inflation Factor (VIF) and tolerance indices were employed to test multicollinearity. There is multicollinearity if the VIF value is larger than ten and the tolerance score is less than 0.1, and the assumption is violated (Sheather, 2009). Table 4.10 shows the outcome of the multicollinearity test. The values of VIF are less than ten, an indication the problem of multicollinearity is not present. Similarly, tolerance values are more than 0.1.

3.6.3 Autocorrelation Tests

There should be no auto- or serial correlation of error components across data, which is a crucial assumption of the typical linear model. According to the null hypothesis, there is no serial correlations (Wooldridge, 2000). The standard errors of the coefficients are reduced as a result of the serial correlation, and R-squared is larger.

To ensure that the data did not cause an autocorrelation problem, the independent variables in the model were subjected to a Wooldridge test for autocorrelation. The Wooldridge test

null hypothesis is rejected if the regression gives p-values less than 0.05 (Wooldridge, 2000). A significant test statistic shows the presence of serial correlation.

3.6.4 Heteroscedasticity

Heteroscedasticity is when the residuals or error term variance varies across the data (Ghasemi & Zahediasl, 2012). Heteroscedasticity is a severe problem as it inflates the standard errors, thus raising the likelihood of a type II error, which is a lack of rejecting a false hypothesis about a coefficient.

For heteroscedasticity, the Breusch-Pagan test was utilized. In the case of homoscedastic data, the null hypothesis argues that the variance is constant (Field, 2009). The null hypothesis is rejected if the p-value is statistically significant (P<0.05) since the residuals are not distributed with equal variance (heteroscedasticity is present in the regression model).

3.6.5 Panel Data Unit-root Tests

The research variables were submitted to a panel unit root test using the statistical program STATA to determine data stationarity. A panel unit root test is performed to evaluate if a time series variable is stationary or non-stationary. Depending on the test, the null hypothesis is that panels have a unit root, whereas the alternative view is that panels are stationary. In time series analysis, unit roots might yield unexpected findings. The models estimated in the absence of a stationarity test result in incorrect outputs (Gujarati, 2012). The Augmented Dickey-Fuller unit root test was used to determine the data's stationarity in this study. At a typical statistical significance threshold of 5%, the test was compared to their corresponding p-values.

3.6.6   Linearity Tests

The linearity of the relationships between the independent and dependent variables was tested using the ANOVA linearity test. The linear and nonlinear components of the two variables were determined in this test. If the calculated F-value for the nonlinear components was less than 0.05, nonlinearity was considered significant.

3.7   Operationalization of Variables

Zikmund (2013) asserts that operationalization entails defining concepts to make them quantifiable by evaluation of their attributes, facets, or dimensions. In this study, there are four variables namely: BD (independent variable), firm profitability (moderating variable), internal controls (intervening variable) and FRQ (dependent variable). To measure internal controls and FRQ composite scores were computed. The use of composites in empirical studies offers several benefits. First, composites simplify complicated, multidimensional facts to enhance decision-making process. Second, composites are simpler to interpret than a collection of numerous distinct indicators. Third, composites allow for the addition of more information while maintaining the existing size restrictions. Fourth, composites condense a group of indicators' visual size without necessarily condensing the underlying information base. Finally, composites make it possible for researchers to compare intricate dimensions of a study in an efficient manner.

The summation of scores for all FRQ dimensions (IFRS disclosure, qualitative characteristics and auditor type) was computed to form a composite for FRQ score. The composite index for internal controls was computed as a summation of scores for internal control indicators (control environment, risk assessment, control activities, information and

communication, and monitoring). In contrast, board diversity was measured using separate individual indicators (gender diversity, age, educational level, board independence, and nationality) by computing a five-year average scores. These were consistent with indicators used in previous studies (Wahid, 2018; Omoro, 2014). Moreover, firm profitability was measured using return on assets (ROA). One of the profitability measures that calculates income in relation to total assets is return on assets. The ROA ratio, which is stated as a percentage, measures how well a company generates income from its assets. Several empirical studies such as Ssendagire (2018), Dalyeen (2017), and Meena and Reddy (2016) have used ROA as their measure of profitability. According to Nyabwanga, Ojera, Otieno and Nyakundi (2013), ROA should be positive and the ideal range is between 10% and 20%. A higher return on assets (ROA) indicates that a company is doing well in its capital investment.

3.7.1 Operationalization of Board Diversity

Board diversity was the independent variable. The aspects of board diversity studied comprise educational level, age diversity, gender diversity, board independence, and Foreign Board Members (FBM). The operationalization was based on the definition of board diversity by Omoro (2014) and Wahid (2018) (see Table 3.1 below).

Table 3.1: Operationalization and Measurement of Independent Variable

Variable	Operational Indicators	Operational Definition	Measurement	Study Using Comparable Measures	Data Capture Source
Board diversity	Educational level	The percentage of directors who have relevant training in finance or accounting, master's degree, or Ph.D. accounting /finance to the total number of directors.	Ratio scale	Omoro (2014) Wahid (2018)	Appendix III
	Age diversity	Average directors age (years)			
	Gender diversity	The percentage of women on a board to total board members			
	Board independence	The percentage of non-executive directors to total board members			
	Foreign Board Members (FBM)	The ratio of foreign directors to total board members			

3.7.2 Operationalization of Firm Profitability

Firm profitability is the moderating variable in this research. Firm profitability was operationalized based on Tangen's (2003) and Fathi's (2013) suggestions. The net earnings to total assets ratio was used to determine a company's profitability.

Table 3.2: Operationalization and Measurement of Moderating Variable

Variable	Operational Indicators	Operational Definition	Measurement	Study Using Comparable Measures	Data Capture Source
Firm Profitability	Return on Assets	Net Profit/Total Assets	Ratio scale	Tangen (2003), Fathi (2013)	Appendix III

3.7.3   Operationalization of Internal Controls

Internal controls were operationalized according to the definition of COSO (1992) and IASB (2012) for internal controls. The internal control framework includes control environment, control activities, risk assessment, information and communication, and monitoring, according to the COSO (2013) internal control-integrated framework. This variable was used in this study as the intervening or mediating variable.

Table 3.3: Operationalization and Measurement of Intervening Variable

Variable	Operational Indicators	Operational Definition	Measurement	Study Using Comparable Measures	Data Capture Source
Internal controls	Control environment	Information on integrity and ethical values.	Composite index	Adopted from COSO (2013) Internal Control-Integrated Framework	Appendix III
	Control activities	Information on policies and procedures.			
	Risk assessment	Information on risk identification and analysis.			
	Information and communication	Information on effective communication.			
	Monitoring	Statement on monitoring and reporting of deficiencies.			
		(Scored I for disclosure; 0 for non-disclosure).			

3.7.4   Operationalization of Financial Reporting Quality

The FRQ of NSE-listed firms is based on specific key FRQ indicators adopted from Beest, Braam, and Boelens (2009). As shown in Table 3.4, the critical FRQ indicators are IFRS or IAS disclosure, Qualitative Characteristics (QX), and Auditor Type.

IFRS or IAS disclosure comprised preparing and presenting financial statements disclosures, inventories, accounting policy disclosures, events after the reporting period, property plant and equipment disclosure, and lastly, disclosure on the statement of cash flows. On the other hand, qualitative characteristics were also used as an indicator of FRQ. Relevance, faithful depiction, understandability, comparison, and timeliness were all

factors of qualitative characteristics. The auditor type was the third criterion. The leading four audit firms (PricewaterhouseCoopers, Deloitte and Touche, KPMG, and Ernest & Young) were grouped together. FRQ was computed as a composite value of the IFRSD, qualitative characteristics, and auditor type. Table 3.4 presents the operational definition and measurement.

Table 3.4: Operationalization and Measurement of Dependent Variable

Variable	Operational Indicators	Operational Definition	Measurement	Study Using Comparable Measures	Data Capture Source
Financial Reporting Quality	IFRS or IAS Disclosure	2014 IFRS/IAS disclosure checklist (1 for disclosure; 0 otherwise)	Composite indexes	Adopted from IFRS checklist, 2014	Appendix V
	Qualitative Characteristics (QX)	Relevance, faithful representation, understandability, comparability (score of 1 for disclosure, 0 otherwise) Timeliness (Score of 1 for auditor signing the report within 90 days after fiscal year-end, 0 otherwise)		Beest, Braam, and Boelens, (2009)	Appendix VI
	Auditor Type	The auditor type is 1 if the auditor is either Pricewaterhouse-Coopers, Deloitte and Touche, KPMG, and Ernest & Young; 0 otherwise)			Appendix IV

3.8   Data Analysis

Two approaches to data analysis exist, namely qualitative and quantitative. Crewell (2014) states that quantitative data analysis adopts a positivism philosophy, generating highly detailed and accurate data using inferential and descriptive statistics. This study, however,

employed a quantitative approach as outlined in the research design. In this study, the collected data was edited for correctness, uniformity, consistency, and completeness, after which it was coded. Correlation and panel regression data analysis techniques were applied.

The linear regression equation (3.1) was used to model board diversity's effect on FRQ.

$$FRQ=\beta_0+\beta_1BQ_{it}+\beta_2Age_{it}+\beta_3BG_{it}+\beta_4IND_{it}+\beta_{5F}FBM_{it}+\varepsilon_{it}..(3.1)$$

Where FRQ was financial reporting quality, whereas the board diversity (BD) indicators include; BQ = qualification of the board members, Age = average age of board members, BG = gender of board members, BIND = board independence, and FBM= Nationality of board members (foreign board members). At the same time, β_0 is the intercept, β_{1-5} is the slope, and ε is the error term. Equation 3.1 related to objective one, which determined the link between board diversity and FRQ of Kenyan NSE-listed firms.

Following the approach suggested by Baron and Kenny (1986), the moderating influence of company profitability on the link between board diversity and FRQ was examined using the equation (3.2-3.4). Equation 3.2-3.4 addressed objective two, which was to determine the impact of firm profitability on the link between board diversity and FRQ of Kenyan NSE-listed firms.

$$FRQ=\beta_0+\beta_1BD_{it}+\varepsilon_{it}..(3.2)$$

$$FRQ=\beta_0+\beta_1BD_{it}+\beta_2FP_{it}+ +\varepsilon_{it}..(3.3)$$

$$FRQ=\beta_0+\beta_1BD_{it}+\beta_2FP_{it}+\beta_3(BD*FP)r_{it}+ +\varepsilon_{it}..(3.4)$$

Where FP is the moderating variable, BD is Board Diversity indicators (dimensions). In equation 3.2, FRQ was regressed on board diversity indicators. Equation 3.3, FRQ was regressed on board diversity indicators and firm profitability (moderator). In equation 3.4, FRQ was regressed on board diversity indicators, FP, and the corresponding interaction terms.

The internal controls' intervening influence on the association between board diversity and FRQ was determined using Barony and Kenny's (1986) technique for assessing mediation effects, as stated below;

Step I: $FRQ = \beta_0 + \beta_1 BD_{it} + \varepsilon_{it}$ .... (3.5)

Step II: $ICs = \beta_0 + \beta_1 BD_{it} + \varepsilon_{it}$ .... (3.6)

Step III: $FRQ = \beta_0 + \beta_1 ICs_{it} + \varepsilon_{it}$ .... (3.7)

Step IV: $FRQ = \beta_0 + \beta_1 BD_{it} + \beta_2 IC_{it} + \varepsilon_{it}$ .... (3.8)

Where IC is internal controls (mediator), BD=Board Diversity indicators (dimensions), and FRQ is financial reporting quality (dependent variable).

The study's fourth objective determined the combined effect of Board diversity indicators, Internal controls, and Firm profitability on the FRQ of firms listed at NSE in Kenya. The joint influence of board diversity, firm profitability, and internal controls on the FRQ of firms listed on the NSE was studied using the prediction Equation (3.9).

$FRQ = \beta_0 + \beta_1 BQ_{it} + \beta_2 Age_{it} + \beta_3 BG_{it} + \beta_4 BIND_{it} + \beta_5 FBM_{it} + \beta_6 FP_{it} + \beta_7 ICs_{it} + \varepsilon_{it}$ ....(3.9)

Where

      BQ is Board Qualifications

      BIND is Board Independence

BG is Board Gender

Age is the Age of Board Members

FBM is the Number of foreign Board Members

FP is Firm profitability

IC is Internal Controls

Table 3.5 summarizes the study objectives and the corresponding hypotheses, the suitable

analytical models, and the interpretations used.

Table 3.5: Summary of Objectives, Hypotheses, and Analytical Models

Objectives	Hypotheses	Analytical Model	Interpretation
Determine the relationship between board diversity and FRQ of listed firms at NSE in Kenya.	The relationship between board diversity and FRQ of NSE-listed firms is insignificant.	Panel regression analysis: $FRQ = \beta_0 + \beta_1 BQ_{it} + \beta_2 Age_{it} + \beta_3 BG_{it} + \beta_4 BIND_{it} + \beta_5 FBM_{it} + \varepsilon_{it}$ Where BQ=Board qualifications, BIND= Board Independence, FBM=Number of foreign Board Members, and $\varepsilon_{it=\text{Error term}}$	There is a relationship if the F-test is statistically significant ($p<0.05$).
Establish the moderating effect of firm profitability on the link between board diversity and the FRQ of the NSE-listed firms in Kenya.	The moderating effect of firm profitability on the link between board diversity and FRQ of NSE-listed firms is insignificant.	Steps as suggested by Barony and Kenny (1986). Hierarchical regression analysis is as follows: Model 1: $FRQ = \beta_0 + \beta_1 BD_{it} + \varepsilon_{it}$ Model 2: $FRQ = \beta_0 + \beta_1 BD_{it} + \beta_2 FP_{it} + \varepsilon_{it}$ Model 3: $FRQ = \beta_0 + \beta_1 BD_{it} + \beta_2 FP_{it} + \beta_3 (BD*FP)r_{it} + \varepsilon_{it}$	Baron and Kenny's (1986) approach: Relationship between FRQ and BD should be statistically significant ($p<0.05$). Determine if the moderator variable affects the strength of the BD-FRQ causal connection. The F-test should be statistically significant. Determine the significance statistics of the interaction term.

Objectives	Hypotheses	Analytical Model	Interpretation
			The moderating effect occurs if the R-squared value is significant, Relationship between FRQ and BD is significant, the interaction term is statistically significant ($p<0.05$).
Evaluate the intervening influence of internal controls on the relationship between board diversity and the FRQ of the NSE-listed firms in Kenya.	The intervening effect of Internal Controls on the link between board diversity and FRQ of NSE-listed firms is insignificant.	Baron and Kenny (1986) approach Step I: $FRQ = \beta_0 + \beta_1 BD_{it} + \varepsilon_{it}$ Step II: $ICs = \beta_0 + \beta_1 BD_{it} + \varepsilon_{it}$ Step III: $FRQ = \beta_0 + \beta_1 ICs + \varepsilon_{it}$ Step IV: $FRQ = \beta_0 + \beta_1 BD_{it} + \beta_2 ICs_{it} + \varepsilon_{it}$ Where BD = Board Diversity Indicators FRQ= Financial Reporting Quality and IC = Internal Controls ε_{it} = Error Term	Baron and Kenny's (1986) approach – is a four-step process in which several regression analyses tests are conducted, and the significance of the coefficients is examined at each step. Determine whether the effect of the independent variable on the dependent variable can best be explained using the mediator variable. Determine the Significance of the Wald Chi-Square test; if Wald chi2 (p)<0.05, the Model is statistically significant.
Analyze the joint impact of board diversity, firm profitability, and internal controls on FRQ of listed firms at NSE in Kenya.	The joint impact of board diversity, firm profitability, and internal controls on the FRQ of NSE-listed firms is not significant.	Regression analysis: $FRQ=\beta_0+\beta_1 BQ_{it}+\beta_2 Age_{it}+\beta_3 BG_{it}+\beta_4 BIND_{it}+\beta_5 FBM_{it}+\beta_6 FP_{it}+\beta_7 ICs_{it}+\varepsilon_{it}$	A relationship exists if Model regression coefficients are statistically significant, i.e., if the p-value is $P<0.05$. Test of significance for R^2 using the F-statistic (F-Test) is statistically significant ($p<0.05$)

Source: Researcher (2021)

3.9   Ethical Issues

The ethical imperative of secrecy requires researchers to implement security procedures to protect entrusted information from unauthorized access. Secondary data was employed, and instead of using the actual names of the companies whose data was used in this study, codes were used to meet this criterion. Even though Appendix 11 contains NSE-listed firms whose data was used, codes were employed, making it impossible for an unauthorized user to link data to a specific firm. Accordingly, the information has been kept private, anonymous, and confidential to the greatest extent possible.

CHAPTER FOUR: DESCRIPTIVE DATA ANALYSES AND DIAGNOSTIC TESTS

4.1   Introduction

Descriptive statistics describe the fundamental characteristics of data in a study (Field, 2009). Descriptive statistics help to summarize data in a meaningful way, allowing researchers to organize, simplify, and summarize data. The descriptive statistics for the independent, dependent, moderating, and intervening variables are reported in this section. These include counts, means, and standard deviations.

The data were entered into an excel spreadsheet for easier grouping into panels. The study's criterion variable was Financial Reporting Quality (FRQ). The predictor variable was board diversity (measured by board qualifications, the average age of directors, board gender, board independence, and foreign board members). The moderating variable was firm profitability as measured by ROA in this study. Internal controls were the mediating variable (measured by control environment, risk assessment, control activities, information and communication, and monitoring).

Panel data regression diagnostic tests, namely; multicollinearity, normality, linearity, serial correlation test, panel-data unit-root tests, and heteroskedasticity test, were performed to guarantee that the data meets the linear regression assumptions. If any assumptions of the basic requirements for linear regression were violated, the necessary corrective measures were taken. The statistical software SPSS and STATA were used to analyze the data.

4.2 The Study Response Rate

The study population comprised 66 firms listed at NSE as of 31st December 2018. Five newly listed firms after 2014 were excluded from the population owing to missing annual reports for 2014 to 2018 that could not be obtained. The data collection instrument was subjected to 66 firms, and complete information was obtained from only 61 firms.

According to the above, 61 of the 66 NSE-listed firms submitted data for the five years under investigation, indicating a 92 percent response rate representing 305 data points. This response rate is deemed enough for concluding the study. Baruch and Holtom (2008) state that response rate is a fundamental criterion for determining trustworthiness. On the other hand, Malhotra and Grover (1998) believe that less than 20% is undesirable. De Vaus (2013) further suggests that a reasonable response rate range might be between 30% and 70% in social science. As a result of the preceding data, the study response rate of 92 % is deemed satisfactory for this study. However, despite significant research on response rates, it's worth noting that there is no golden rule or rule of thumb for determining what constitutes an appropriate response rate (Cummings, Savitz, & Konrad, 2001).

4.3 Descriptive Statistics of Study Variables

This section describes the independent, dependent, moderating, and intervening variables. Counts, mean, standard deviation, maximum, minimum, kurtosis, and skewness are some descriptive statistics used. The mean calculates central tendency, which identifies the central position within a dataset. It provides a concise picture of the studied data (Field, 2009). The standard deviation measures dispersion of a dataset relative to its mean.

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It indicates how much variability or spread there is in a sample. Low standard deviation means data are clustered around the mean, and a high standard deviation indicates data are more spread out.

The data spans five years, from 2014 to 2018, and includes 61 NSE-listed companies. Table 4.1 shows descriptive statistics for board diversity based on average board age, board qualifications, board independence, board gender, and foreign board members. The subsequent tables below present the descriptive statistical analysis for the other research variables.

Table 4.1: Descriptive Statistics for Board Diversity

Board Diversity	N	Min.	Max.	Mean	SD	CV	SK	KU
Age	305	45.92	74.00	59.44	4.39	.07	.07	3.63
BQ	305	.10	.92	.53	.15	.29	.15	2.92
BG	305	.00	.71	.23	.15	.62	.62	3.56
BIND	305	.11	.93	.58	.18	.31	-.16	2.60
FBM	305	.00	1.00	.32	.20	.65	.69	3.21

N (the number of observations), SD (standard deviation), CV (coefficient of variation), SK (skewness), KU(kurtosis)

Source: Author 2021

Table 4.1 shows the descriptive statistics for board diversity (age, board qualification, board independence, and foreign board members), including; minimum, maximum, mean, standard deviation, skewness, and kurtosis. Age has an average score of 59.44, with a minimum and maximum age of 45.92 and 74, respectively, indicating that the majority of board members were between the ages of 59 and 74, and a standard deviation of 4.39 with a coefficient of variation of.07 which is low suggesting that the leadership of listed firms

at NSE contains board members with a long period of experience in the industry. Age diversity data is skewed to the right (skewness=.07) and is peaked (kurtosis = 3.63).

On average, 53 percent of board members held a higher degree, such as a master's or doctorate in accounting/finance or a Certified Public Accountant (CPA) certificate, with a lowest and highest of 10 and 92 percent, correspondingly, and a standard deviation of 15% with a coefficient of variation of 29 percent coefficient of variation which is low suggesting low clustering from the mean which indicates that the literacy and expertise level of board members of the NSE listed firm was considerably favourable. Dataset for board qualification is skewed to the right (SK=.15) and is peaked (KU=2.92).

On gender diversity, the results indicate that most of the boards had at least 23 percent representation made of women on average, implying that the majority are men. However, it was discovered that certain companies did not have any female representation throughout the period. This means that most firms had not adhered to a third gender rule required by the Kenyan constitution. Some companies had a maximum of 71 percent of women representation on their boards with a standard deviation of 15 percent and a coefficient of variation of 62 percent. Similarly, the findings indicated that independent directors were 58 percent on average, with a minimum and maximum of 11 and 93 percent, respectively, and a standard deviation of 18 percent and a coefficient of variation of 31%. Board independence data is negatively skewed (-.16) and is peaked as indicated by a kurtosis of 2.60.

The last board diversity indicator was foreign board members (FBM), with 32 percent representation on average. Foreign board members represented other firms 100 percent,

forming the maximum number of board members in those firms. FBM data has a standard

deviation of 20% and a coefficient of variation of 65%, which is high and is skewed to the

right (SK=.69) and is peaked (KU=3.21). Like gender diversity, some firms did not have

any foreign board members. This means that Kenyan nationals purely owned them.

Table 4.2: Descriptive Statistics for International Financial Reporting Standards. Disclosures

IFRS Indicators	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
						Statistic	SE	Statistic	SE
Preparation and Presentation of Financial Statements Disclosures IAS 1	305	1	6	5.32	.919	-1.732	.140	3.807	.278
Inventories AIS 2	305	0	3	2.60	.610	-1.350	.140	1.163	.278
Accounting Policy Disclosures AIS 8	305	0	1	.89	.319	-2.429	.140	3.928	.278
Events after the Reporting Period AIS 10	305	0	1	.87	.338	-2.196	.140	2.842	.278
Property Plant & Equipment Disclosure IAS 16	305	0	5	4.47	.679	-1.604	.140	5.952	.278
Statement of Cash flows AIS 7	305	1	5	4.43	.767	-1.533	.140	3.269	.278
Valid N (list-wise)	305								

Table 4.2 shows the descriptive statistics for IFRS Disclosure measured by Preparation

and Presentation of Financial Statements IAS 1, Inventories AIS 2, Accounting Policy

AIS 8, Events After Balance Sheet Events AIS 10, Property, Plant, and Equipment AIS

16, and Statement of Cash Flows AIS 7 disclosures.

IAS 1 (the preparation and presentation of financial statements) has a mean of 5.32 with minimum disclosure compliance of 1 and maximum disclosure compliance of 6. The standard deviation of the distribution is 0.919. This indicates most of the companies complied with the AIS 1 disclosure requirements studied to improve the financial reporting quality. Few of the companies exhibit lower levels of compliance with the disclosure requirements for AIS1. Compliance with the preparation and presentation of financial statements AIS 1 is negatively skewed -1.72 (SE=.140) and is peaked as indicated by a kurtosis of 3.807(SE=.278).

Inventories AIS 2 has a mean disclosure of 2.60 with a minimum disclosure compliance of 0 and a maximum disclosure compliance of 3. The standard deviation of the distribution is 0.610. This implies that most companies complied with the AIS 2 disclosure requirements to enhance financial reporting quality. A minimum of 0 indicates that all companies complied with IAS 2 disclosure requirements. AIS 2 compliance requirement is negatively skewed -1.35(SE=0.140) and is peaked as noted in a kurtosis of 1.163(SE=0.278). Accounting policy disclosure 1AS 8 has a mean of .89 with a minimum disclosure compliance of 0 and a maximum disclosure compliance of 1. The standard deviation of the distribution is 0.319. This implies that most companies disclosed the accounting policies applied in preparing financial statements hence improving the quality of financial reporting. Compliance with accounting policy disclosure is negatively skewed at -1.429 (SE=.140) and is peaked as indicated by a kurtosis of 3.928(SE=.278).

On average, disclosure of events after the reporting period, AIS 10 is 87 percent, with a minimum and a maximum of 0 and 1, respectively, and a standard deviation of the

distribution is 0.338. This implies that most companies complied with the disclosure requirement for AIS10 leading to improved financial reporting quality. Compliance with AIS 10 is negatively skewed -2.196 (SE=.140) and is peaked as indicated by a kurtosis of 2.842(.278). Property Plant and Equipment Disclosure IAS 16 has an average of 4.47 with a minimum and a maximum of 0 and 5, and a standard deviation of the distribution is .679. This implies that on average most of the companies complied with the disclosure requirement for property plant and equipment AIS 16 to improve financial reporting quality. Compliance with property plant and equipment AIS 16 disclosure requirement is negatively skewed-1.604(SE=.140) and is peaked noted in a kurtosis of 5.952 (se=.278).

Statements of cash flows AIS 7 disclosure has an average of 4.43 with a minimum and maximum of 1 and 5 correspondingly, with a standard deviation of .767. This implies that on average most companies complied with the disclosure requirement for AIS 7 leading to improved financial reporting quality. Compliance with AIS 7 disclosure requirement is negatively skewed -1.533(.140) and is peaked as indicated by a kurtosis of 3.269(.278).1.533(.140) and is peaked as indicated by a kurtosis of 3.269(.278).

Table 4.3: Descriptive Statistics for Qualitative Characteristics

QX Indicators	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
						Statistic	SE	Statistic	SE
Relevance	305	9	13	12.08	1.124	-1.05	.140	.117	.278
Faithful Representation	305	3	7	6.66	.576	-1.88	.140	5.25	.278
Understandability	305	3	6	5.63	.631	-1.72	.140	2.71	.278
Comparability	305	3	6	5.63	.588	-1.54	.140	2.31	.278
Timeliness	305	0	1	.944	.230	-3.87	.140	16.00	..278

Table 4.3 shows the descriptive statistics for qualitative characteristics measured by relevance, faithful representation, understandability, comparability, and timeliness. The descriptive statistics include mean, minimum, maximum, standard deviation, skewness, and kurtosis. Relevance has a mean of 12.08 with a minimum of 9, a maximum of 13, and a standard deviation of 1.124. This implies that most of the companies' financial statements had disclosed the 13 items under disclosure (Appendix V1). Compliance with the disclosure of the 13 items under relevance is negatively skewed -1. 05(.140) and is peaked with a kurtosis of 5.25(.278).

Faithful representation has a mean of 6.66 with a minimum of 3, a maximum of 7, and a standard deviation of .576. This implies that most companies' annual reports disclosed the seven items under faithful representation leading to enhance financial reporting quality. Compliance with the disclosure requirements under faithful representation is negatively skewed -1.88(.140) and is peaked with kurtosis of 5.25(.278). Understandability has a mean of 5.63 with a minimum of 3 and a maximum of 6. The standard deviation of the distribution is .631. This implies that most companies' financial statements disclosed the six items under understandability. Compliance with the six items under understandability is negatively skewed -1.72(.140) and is peaked as indicated with kurtosis of 2.71(.278).

Comparability has a mean of 5.63 with a minimum of 3 and a maximum of 6. The standard deviation of the distribution is .588. This implies that most companies' annual reports disclosed the six items under understandability, improving financial reporting quality. Compliance with the six items under understandability is negatively skewed -1.54(.140) and peaked with a kurtosis of 2.31(.278). Timeliness reporting has a mean of .944, a

minimum of 0, and a maximum of 1 with a standard deviation of 0.230. Compliance with timeliness reporting is negatively skewed (-2.997 (.306) and is peaked as evidenced by a kurtosis of 9.55 (.604). The findings reveal that most NSE-listed companies submitted their annual reports and financial statements on time, implying they followed the financial reporting timeliness recommendations outlined in the relevant regulatory framework.

Table 4.4: Descriptive Statistics for Internal Controls

Internal Controls indicators	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
						Statistic	SE	Statistic	SE
Control Environment	305	1	4	3.67	.548	-1.56	.140	2.19	.278
Risk Assessment	305	0	4	3.68	.570	-2.43	.140	10.17	.278
Control Activities	305	1	4	3.65	.566	-1.59	.140	2.71	.278
Information and Communication	305	1	4	3.63	.559	-1.45	.140	2.396	.278
Monitoring	305	1	4	3.68	.545	-1.75	.140	3.487	.278

Table 4.4 shows the descriptive statistics for internal controls based on the control environment, risk assessment, control actions, information and communication, and monitoring (Appendix 1V). The control environment had a mean of 3.67, a minimum of 1, and a maximum of 4, with a standard deviation of .548, indicating that most NSE-listed businesses met the four requirements in a controlled environment. Compliance with the control environment items is negatively skewed at -1.56 (SE=.140) and peaked at 2.19 (SE=.278), as indicated by the kurtosis.

A risk assessment had a mean of 3.68, a minimum of 0, and a maximum of 4, with a standard deviation of .570, indicating most NSE-listed companies complied with the risk

assessment requirements of the COSO framework. Compliance with the risk assessment is negatively skewed -2.43 (.140) and is peaked, as evidenced by a kurtosis of 10.7 (.278).

Control activities had a mean of 3.65, a minimum of 1, and a maximum of 4, with a standard deviation of .566, denoting implies that most NSE-listed companies have controls measures in place to ensure proper reliability of financial reporting. Compliance with control activities is negatively skewed at -1.59 (SE=.140) and is peaked as indicated with a kurtosis of 2.71(SE=.278).

Information and communication had a mean of 3.63, a minimum of 1, and a maximum of 4, with a standard deviation of.559. This implies that most NSE-listed companies had put channels for internal information communication to enhance financial reporting quality. Compliance with information and communication requirements is negatively skewed -1.45 (SE=.140) and is peaked as indicated with a kurtosis of 2.96 (SE=.278). Monitoring has a mean of 3.68 with a minimum of 1 and a maximum of 4. The standard deviation of the distribution is .545. This implies that most NSE-listed companies have systems to evaluate internal controls. Compliance with monitoring items is negatively skewed -1.75 (.140) and is peaked, as evidenced by a kurtosis of 3.487 (.278).

4.4   Panel Data Diagnostic Tests

Several statistical assumptions were evaluated before performing the inferential statistics to ensure the suitability of data for further analysis. Normality test, linearity test, serial correlation test, heteroscedasticity test, multicollinearity test, and panel unit root test were among the tests performed. If any of these fundamental assumptions were violated, corrective actions were undertaken to make the data suitable for further analysis.

4.4.1 Tests of Normality

By definition, parametric statistics assume that the data under investigation is normally distributed, which explains why the mean is used to measure central tendency (Zikmund, 2010). For instance, many statistical procedures, correlation, regression, and t-tests, are based on the assumption that the data is distributed normally (Ghasemi & Zahediasi, 2012). However, data sets can be skewed, necessitating testing data for normality assumptions. It is impossible to draw precise and reliable conclusions without using normality testing (Ghasemi & Zahediasi, 2012).

The normality of data can be tested using a variety of methods. The most commonly used methods include the Shapiro–Wilk test, Kolmogorov–Smirnov test, skewness, kurtosis, histogram, P–P Plot, box plot, Q–Q Plot, mean and standard deviation. The most extensively used normality tests are the Kolmogorov–Smirnov test and the Shapiro–Wilk test (Razali & Wah, 2011). The Shapiro–Wilk test is better for small sample sizes (n <50 samples), while it can also be used on more extensive samples selections, whereas the Kolmogorov–Smirnov test is better for n>50 samples. As a result, we used the Kolmogorov–Smirnov test as our numerical method of determining normality. For both of the above tests, the null hypothesis says that the data are obtained from a normally distributed population. The null hypothesis is rejected when P-value is less than 0.05, and the data are said to be not normally distributed. If any violation of the assumption of normality was detected, necessary correction measures were applied.

Table 4.5: Kolmogorov–Smirnov test for Normality

Variable	Kolmogorov-Smirnov		
	Statistic	df	Sig.
BQ	.133	305	.000
Age	.073	305	.001
BG	.179	305	.000
BIND	.156	305	.000
FBM	.197	305	.000
Internal Controls	.211	305	.000
QX	.186	305	.000
IFRS	.191	305	.000
Firm Profitability	.450	305	.000

Where

BQ is Board Qualifications measured by the percentage of board members with a higher degree such as master's or Ph.D. in accounting /finance or CPA / total number of board members.

Age is the average age of directors.

BG is Board gender measured by the number of female board members / total number of board members.

BIND is Board Independence measured by the number of independent non-executive board directors/ total number of board numbers.

FBM is the number of foreign Board members/ total number of board members

QX is Qualitative characteristics.

IFRS is International Financial Reporting Standards Disclosure.

Normality tests for Age, Firm Profitability, Internal controls, IFRS, QC, BQ, BIND, BG, and FBM indicated highly significant values ($p<0.05$), indicating that the data does not fit a normal distribution.

4.4.2 Data Transformation

Data transformation involves performing operations on the scores of the dataset, and as a result, the dataset is transformed into a new set of scores for analysis (Field, 2009). To address non-normality data were transformed using an appropriate function, forcing them to fit a normal distribution. As shown below, the scores did not show extreme departures from the assumption of normality.

Table 4.6: Kolmogorov–Smirnov test for Normality of Study Variables after Data Transformation

Variable	Kolmogorov-Smirnov		
	Statistic	df	Sig.
BQ	.004	305	.093
Age	.013	305	.065
BG	.016	305	.081
BIND	.009	305	.125
FBM	.003	305	.153
IC	0.01	305	.165

The statistic is positive and less than or equal to one if the data is normally distributed. Furthermore, if the p-value was more than 0.05, the data was drawn from a normally distributed population. Table 4.6 shows that the statistic is positive and less than one, also the p-value is greater than 0.05 indicating that the data was drawn from a normally distributed population.

Normal histograms and the Quantile-Quantile plot (Q-Q) double-check normality assumptions. Figures 4.1(a), 4.1(b), 4.1(c), 4.1(d), and 4.1(e), show Quantile-Quantile (Q-Q) plots, whereas Figures 4.2(a), 4.2(b), 4.2(c), 4.2(d), 4.2(e), and 4.2(f) show normal histograms.
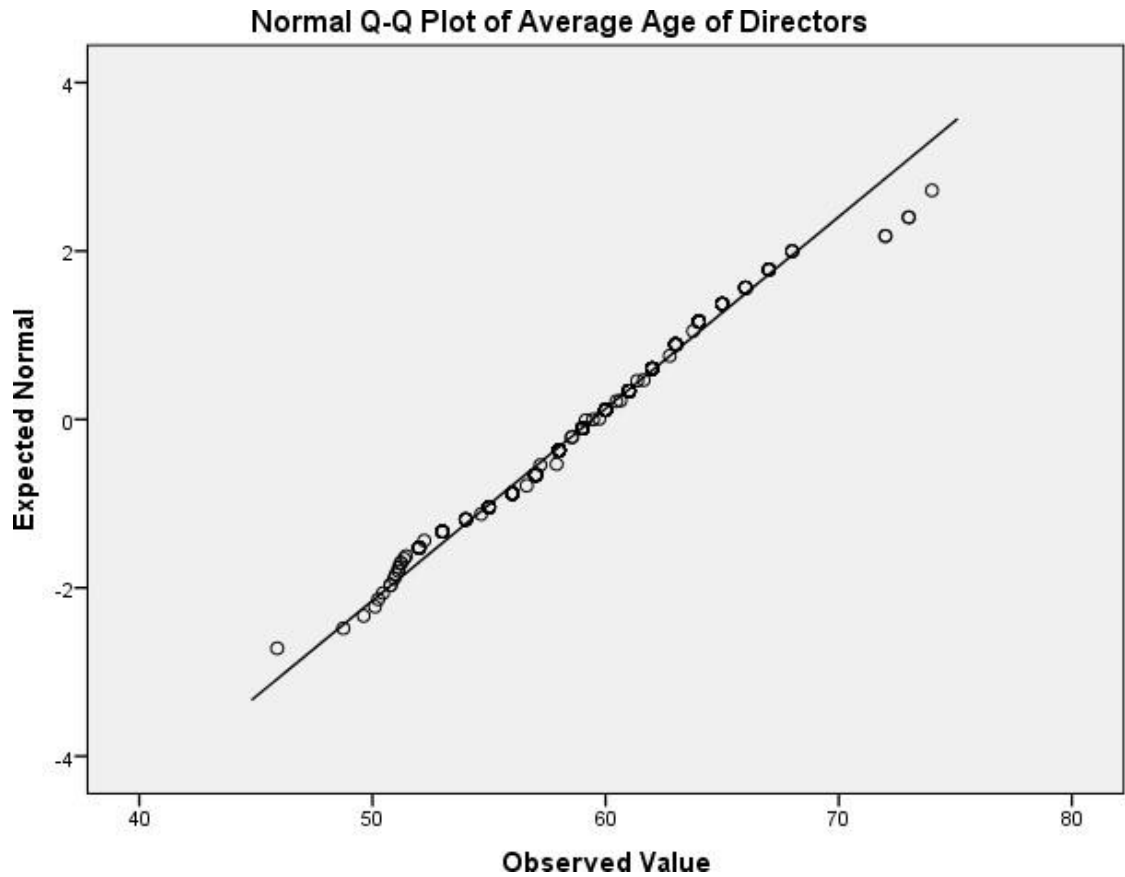
Figure 4.1 (a): Normal Quantile-Quantile Plot for the age of directors.

Figure 4.1 (a) is a normal Q–Q plot depicting the relationship between observed and expected mean values of the age of directors is shown above. The points in the middle of the graph fall along a line, but they curve off slightly in the extremities. This indicates that

the dataset is approximately normal. The dataset does not have to be perfectly normal.

Normal Q-Q Plot of Number of Female Board Members
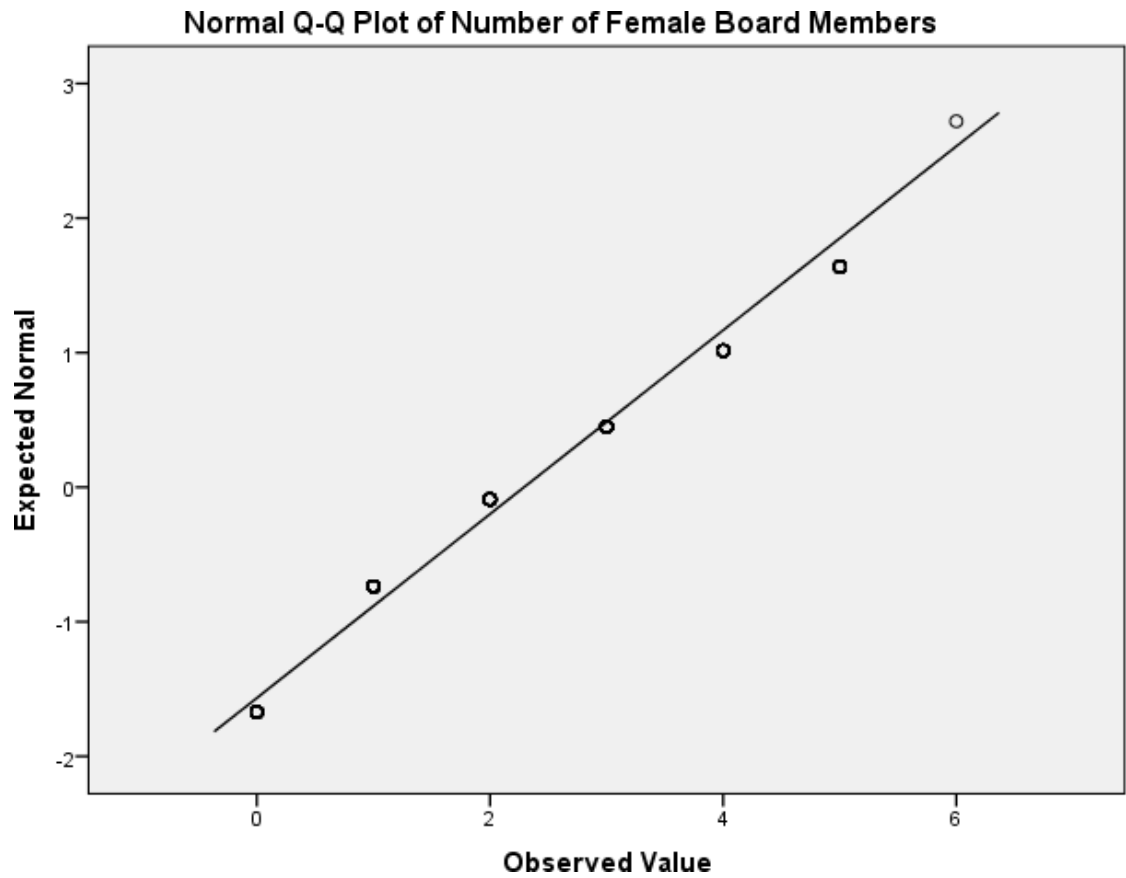
Figure 4.1 (b): Normal Quantile-Quantile Plot for Board Gender.

Figure 4.1 (b) is a normal Q–Q Plot showing a correlation between observed and expected values of the board gender is shown above. The points fall along a line in the middle of the graph, indicating that the data for board gender was normally distributed.

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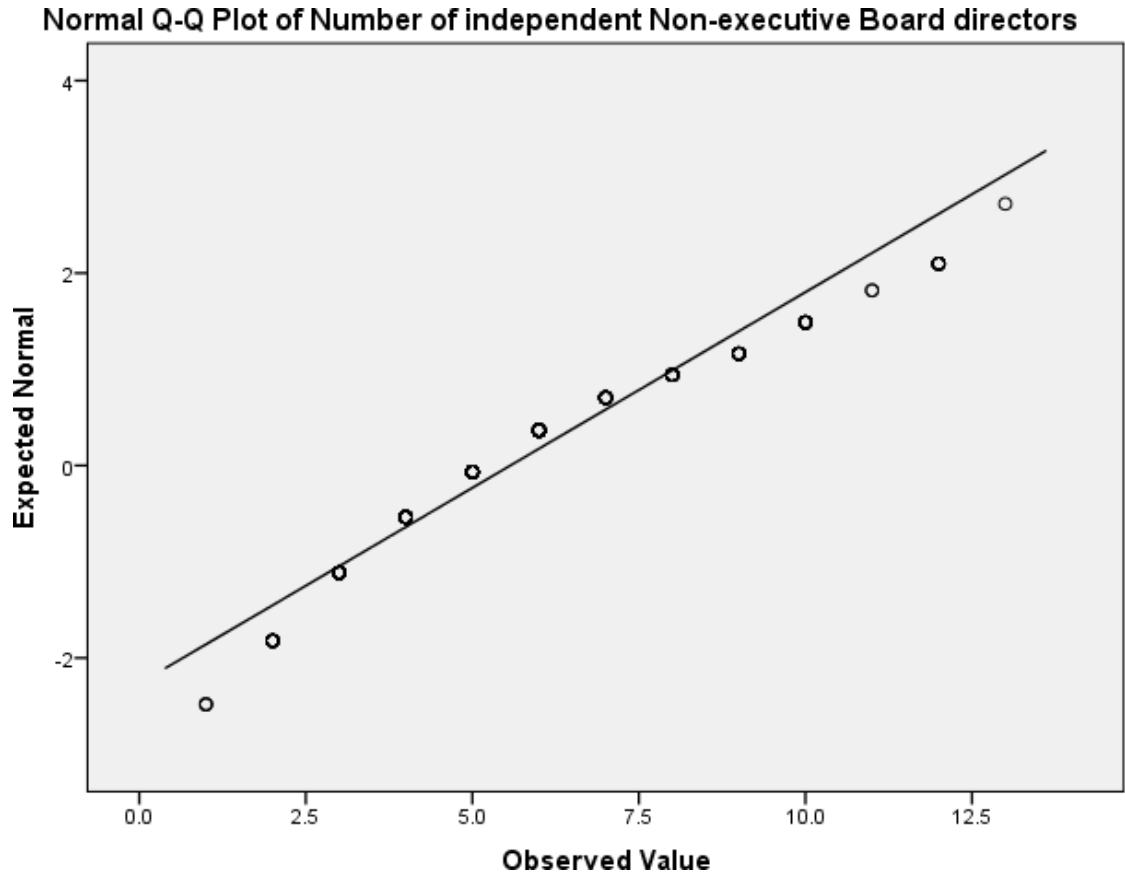
Figure 4.1 (c): Normal Quantile-Quantile Plot for Non-Executive Board director.

Figure 4.1 (c) is a normal Q–Q Plot showing a correlation between observed and expected values of the non-executive board directors. The points fall along a line in the middle of the graph, which implies that the data for non-executive directors was normally distributed.

Normal Q-Q Plot of Number of independent Non-executive Board directors
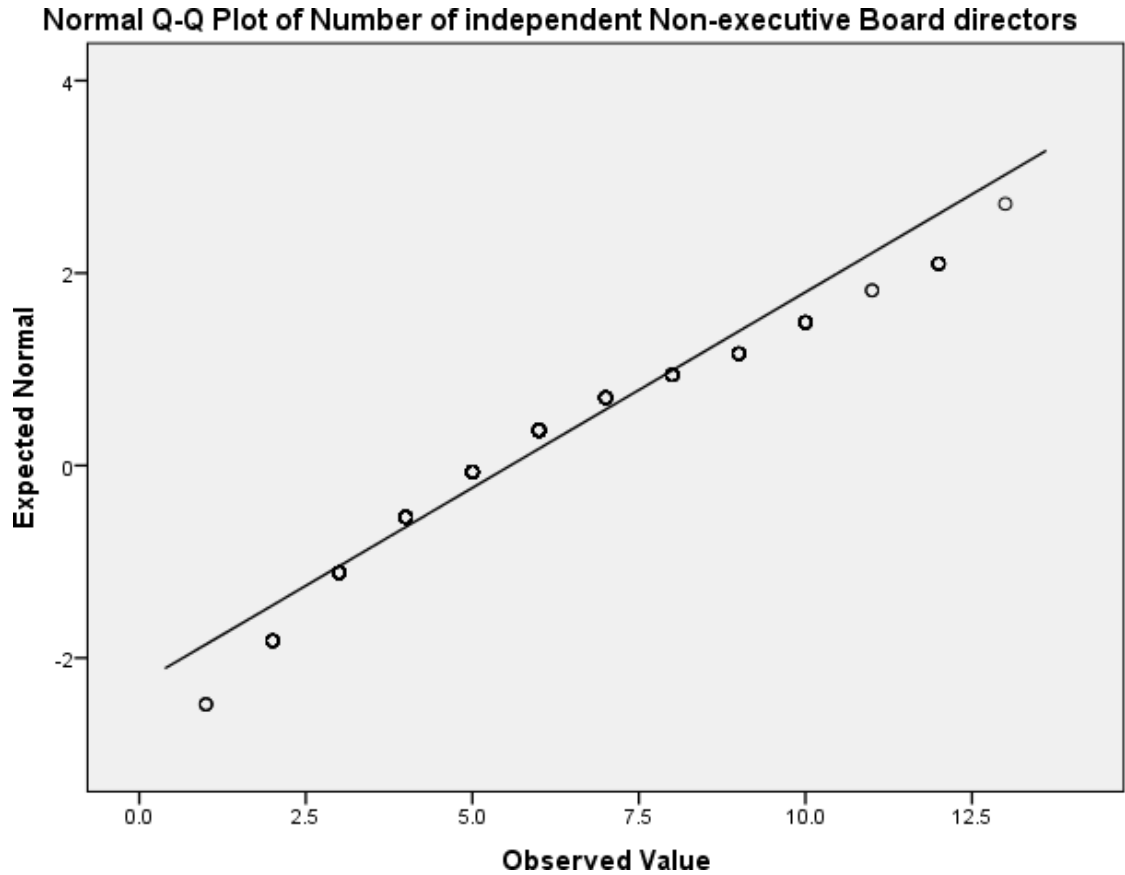
Figure 4.1 (d): Normal Quantile-Quantile Plot for Board Independence.

Figure 4.1 (d) is a normal Q–Q Plot showing a correlation between observed and expected values of the board independence. The points fall along a line in the middle of the graph, implying that the board independence data were approximately normally distributed.
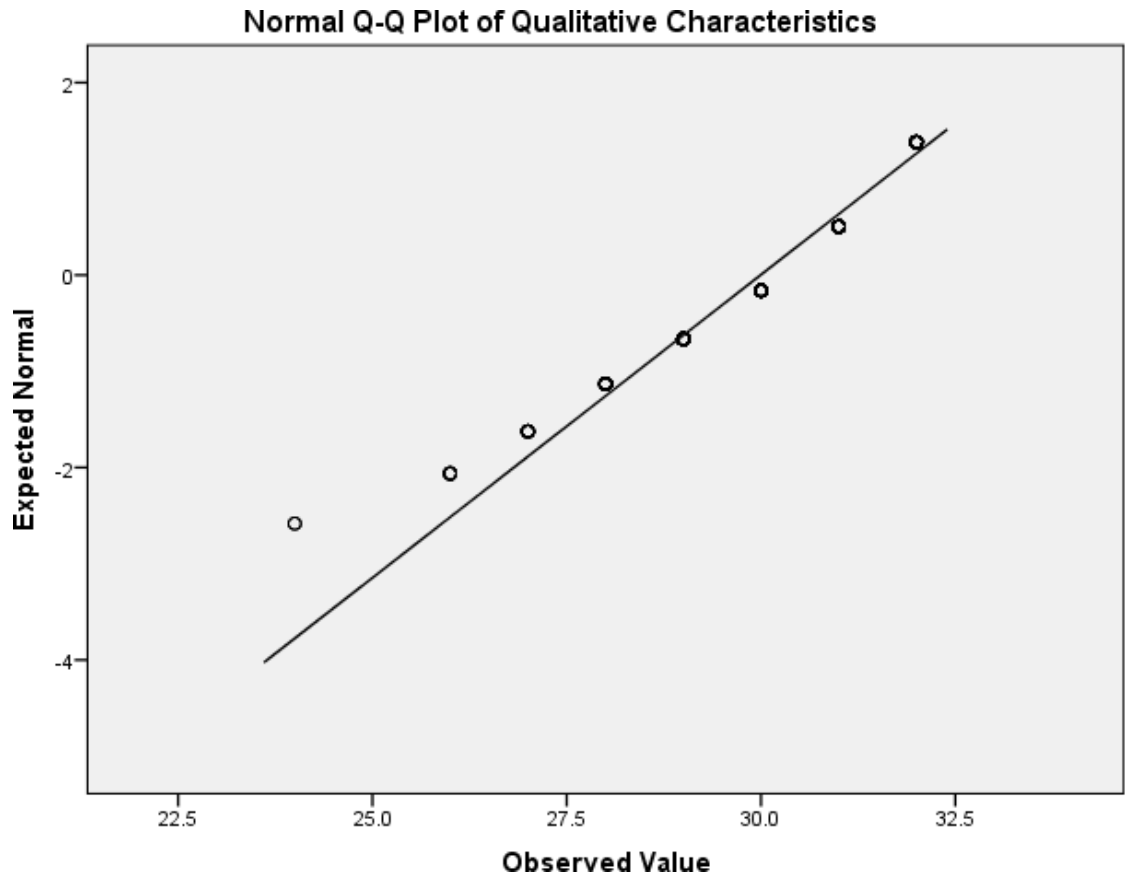
Figure 4.1 (e): Normal Quantile-Quantile Plot for Qualitative Characteristics.

Figure 4.1 (e) is a normal Q–Q Plot showing a correlation between observed and expected values of the qualitative characteristics. The points fall along a line in the middle of the graph, implying that the qualitative characteristics data were normally distributed.

Figure 4.1 (f): Normal Quantile-Quantile Plot for Board Qualifications.

Figure 4.1 (f) is a normal Q–Q Plot showing a correlation between observed and expected values of the board qualification. The points fall along a line in the middle of the graph with a few extremities at the lower left, and upper right ends. For Q-Q Plots, this is not enough evidence to conclude that the data for qualitative characteristics are not normally distributed.
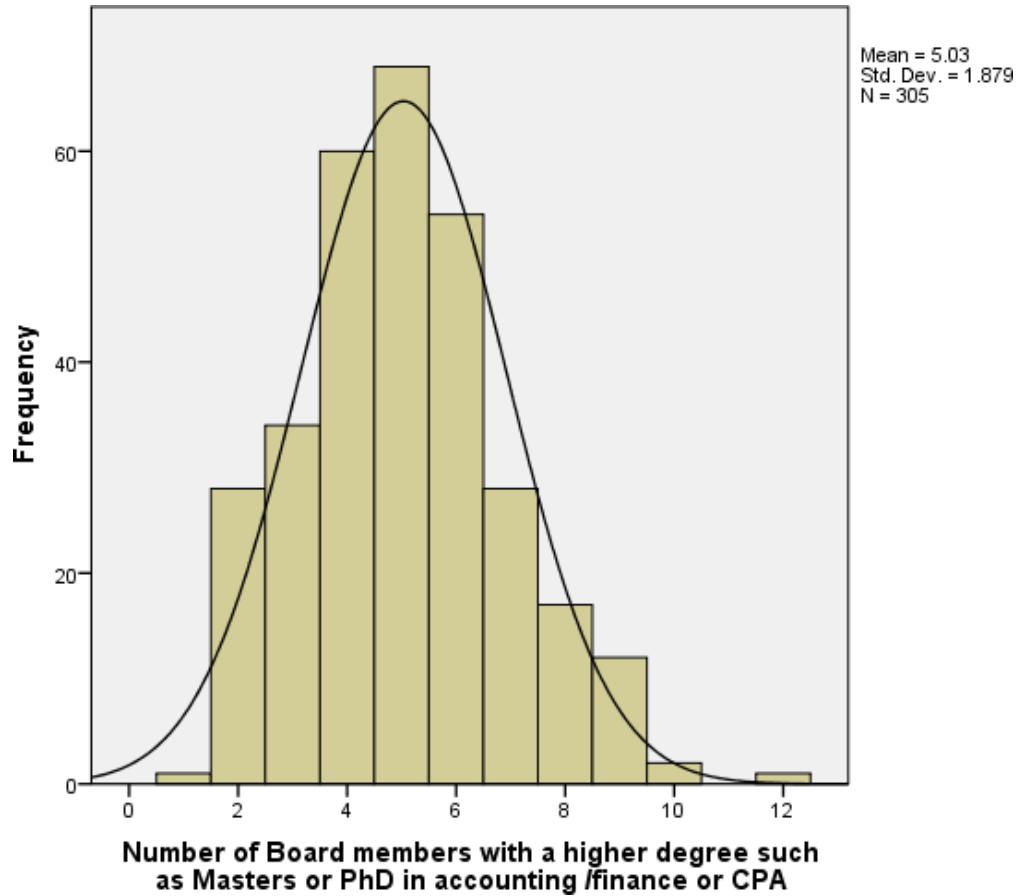
Figure 4.2 (a): Histogram of Board Qualifications.

The term "normality" refers to a bell-shaped curve with the highest point frequencies in the center and the lowest point frequencies at the extreme ends (Pallant, 2007). The data is arranged around the hub to be normally dispersed. Non-normal data can cause errors and outcomes to be distorted (Field, 2009). The board qualifications were approximately normally distributed, with the highest frequency scores in the center and the lowest frequency values at the extreme ends.
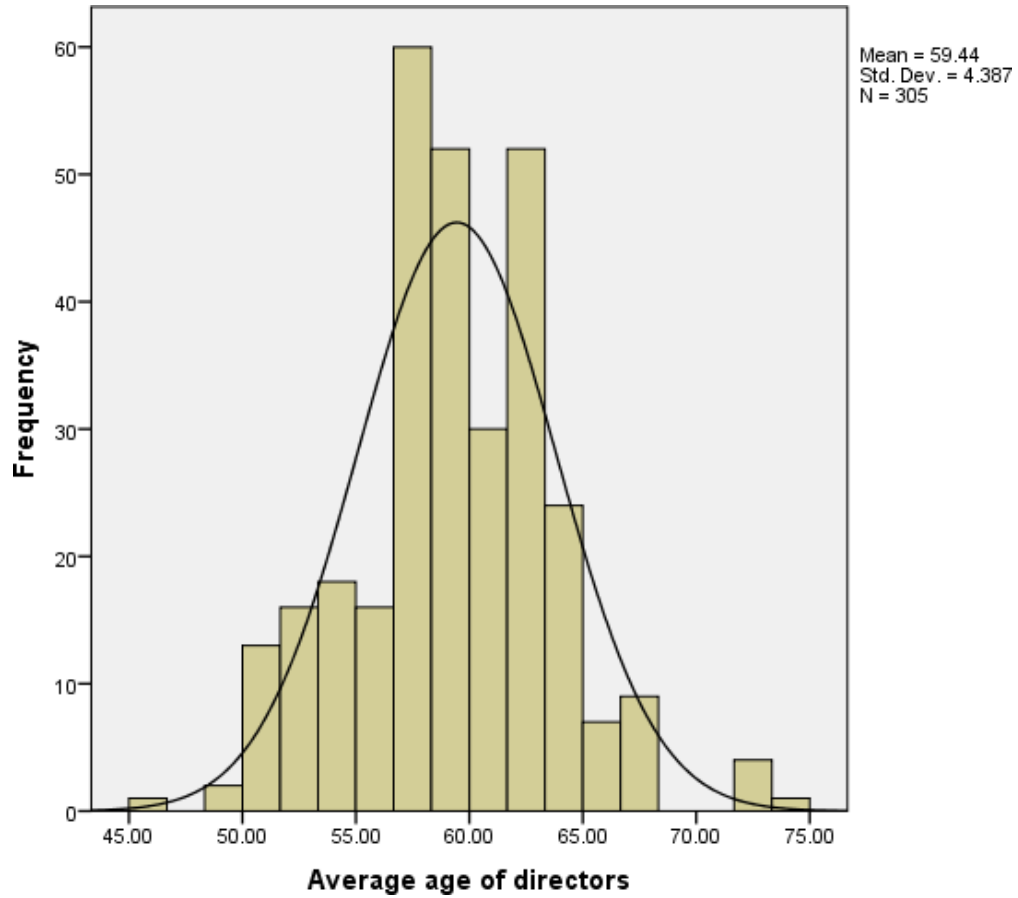
Figure 4.2 (b): Histogram of Age of Directors.

Figure 4.2 (b) depicts an overlapping curve with the majority of the data falling below the normal curve, the highest point in the center, and the lowest point at the ends, implying that the average age of the directors is approximately normally distributed.
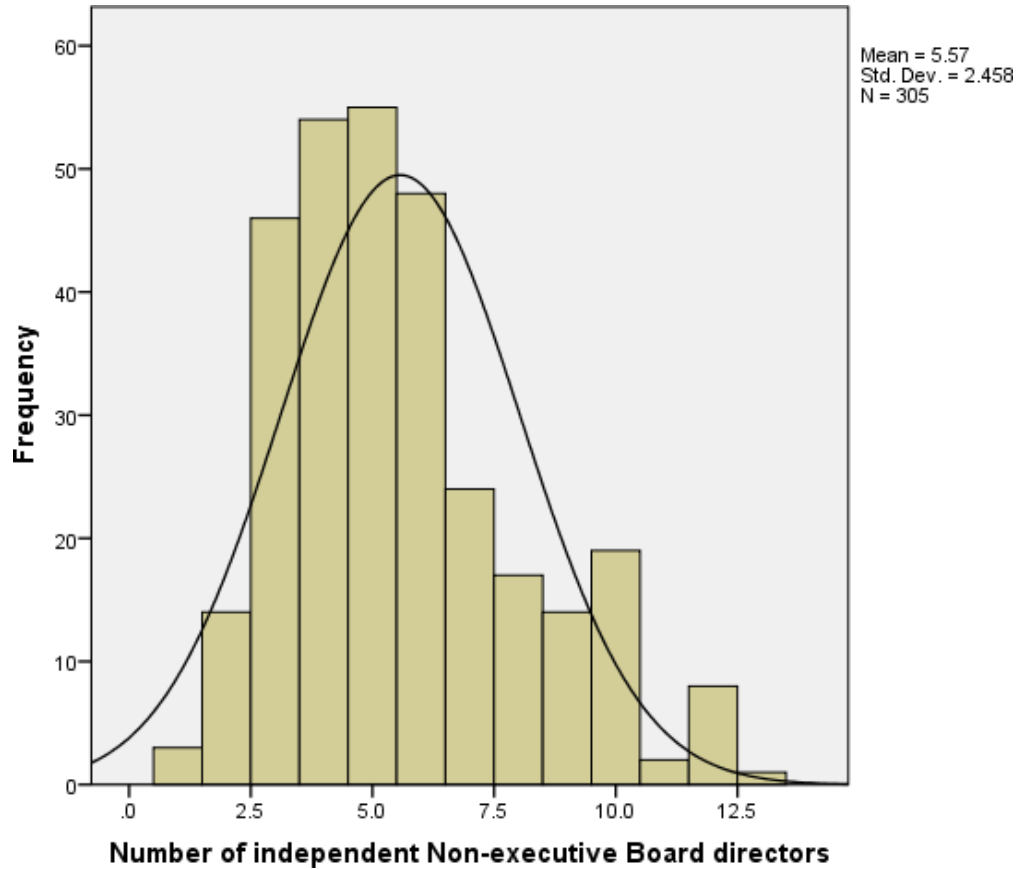
Figure 4.2 (c): Histogram of Board Independence.

Figure 4.2 (c) depicts an overlapping curve with most of the data below the bell curve, the greatest score in the center, and the lowest scores at the ends, suggesting that board independence is approximately normally distributed.
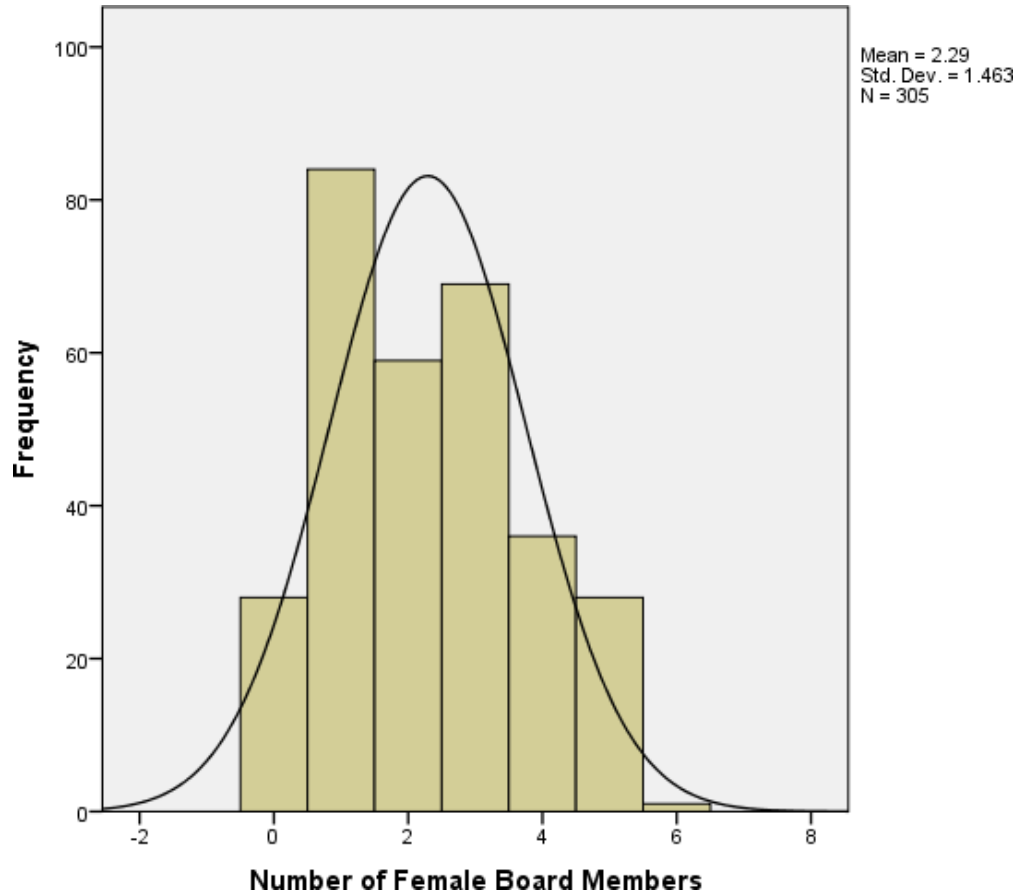
Figure 4.2 (d): Histogram of Female Board Members.

Figure 4.2 (d) shows an overlapping curve with the majority of the data under the bell curve, the highest scores in the middle, and the low scores at the low right end, suggesting that the proportion of female board members is approximately normally distributed.
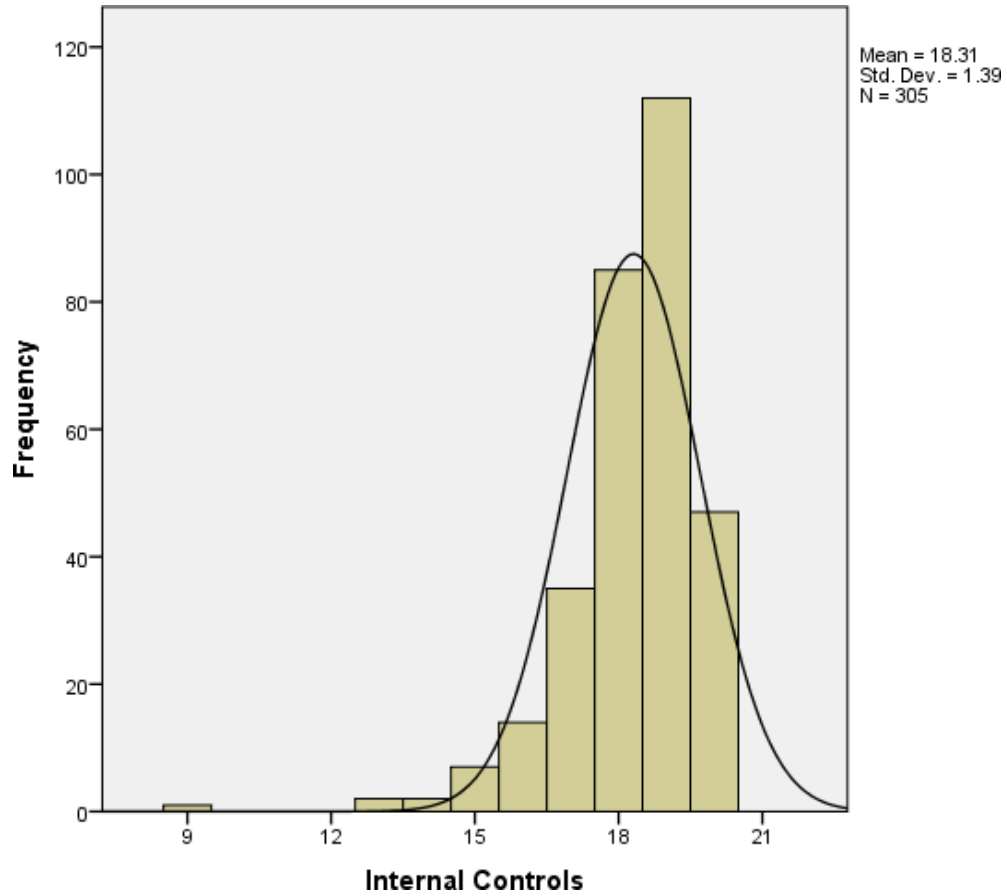
Figure 4.2 (e): Histogram of Internal Controls.

Figure 4.2 (e) shows an overlapping curve with the majority of the data under the bell

curve, the highest scores in the middle, and the low scores at the left low end, suggesting

that data for internal controls are approximately normally distributed.
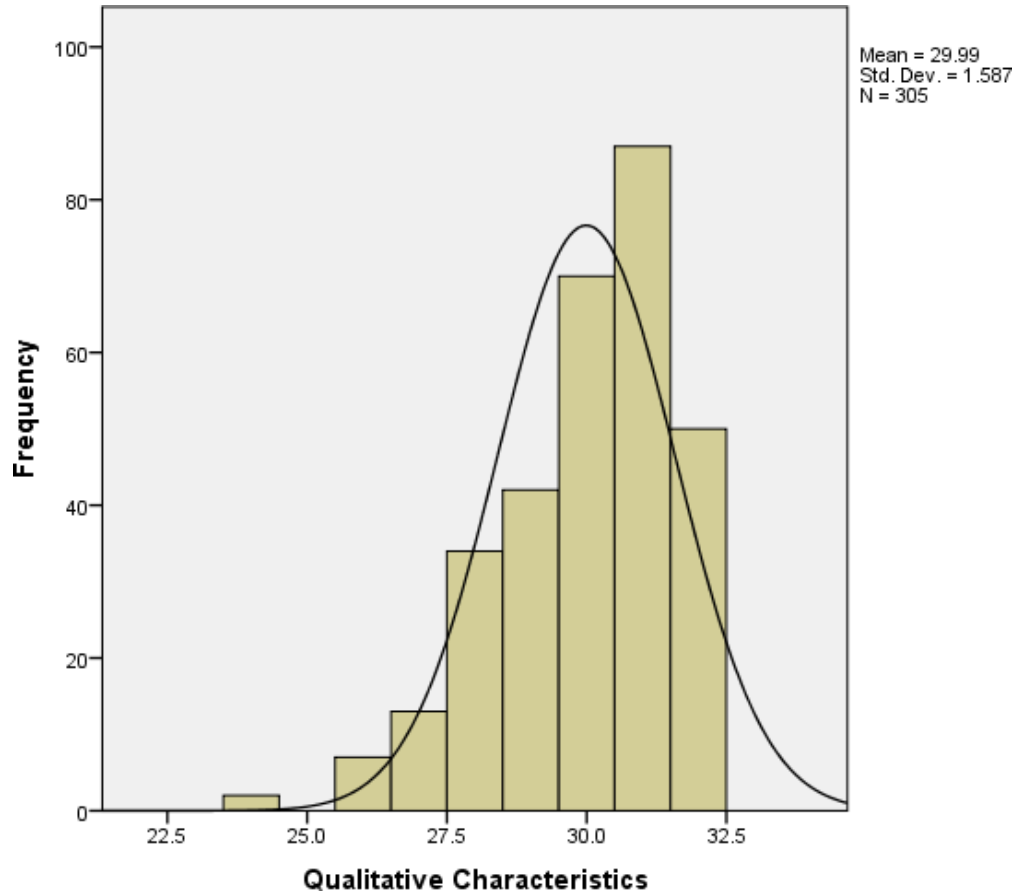
Figure 4.2 (f): Histogram of Qualitative Characteristics.

Figure 4.2 (f) shows an overlapping curve with the majority of the data under the bell curve, the highest scores in the middle, and the low scores at the left low end, suggesting that data for qualitative characteristics are approximately normally distributed.
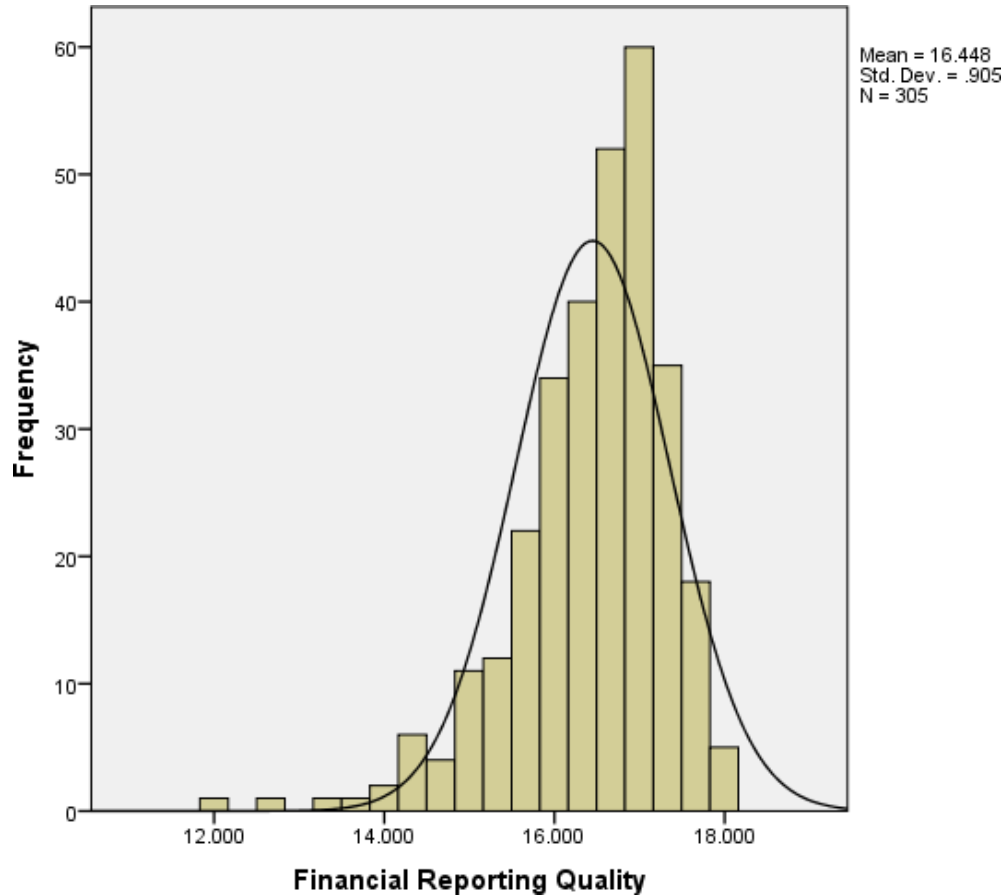
Figure 4.2 (g): Histogram of Financial Reporting Quality.

Figure 4.2 (g) shows an overlapping curve with the majority of the data under the bell curve, the highest scores in the middle, and the low scores at the left low end, suggesting that the data for financial reporting quality is approximately normally distributed.

4.4.3 Tests of Linearity

The ANOVA linearity test was utilized to investigate the correlations between the independent and dependent variables. The linear and nonlinear components of the two variables were found using this test. If the determined F-value for the nonlinear components was less than 0.05, nonlinearity was significant. Table 4.7 below shows tests for the linear, nonlinear, and combined relationship between the dependent variable

(FRQ) and BQ, BG, and Age. The linearity test between FRQ and Board Qualifications

(BQ) has a significant value (p<0.05), indicating that the two variables have a linear

relationship.

Table 4.7: Test of Linearity (Dependent Variable: Financial Reporting Quality)

Variables			Sum of Squares	df	Mean Square	F	Sig.
Financial Reporting Quality * Board Gender	Between Groups	(Combined)	43.339	33	1.313	1.733	.010
		Linearity	2.239	1	2.239	2.953	.047
		Deviation from Linearity	41.100	32	1.284	1.694	.054
	Within Groups		205.426	271	.758		
	Total		248.765	304			
Financial Reporting Quality * Board Qualification	Between Groups	(Combined)	44.305	42	1.055	1.352	.083
		Linearity	2.362	1	2.362	3.027	.043
		Deviation from Linearity	41.942	41	1.023	1.311	.109
	Within Groups		204.460	262	.780		
	Total		248.765	304			
Financial Reporting Quality * Average Age of Directors	Between Groups	(Combined)	41.677	49	.851	1.047	.397
		Linearity	1.567	1	1.567	1.929	.166
		Deviation from Linearity	40.110	48	.836	1.029	.429
	Within Groups		207.088	255	.812		
	Total		248.765	305			

There is no linear relationship between FRQ and Age, but the deviation from linearity has

a p-value greater than 0.05, an indication that the nonlinearity was insignificant.

The linearity test Table 4.8 shows a significant value for the relationship between FRQ and

internal controls (p<0.05), an indication that a linear relationship exists between the

dependent variable and internal controls (IC). The test for deviation from linearity has a

non-significant value (p>0.05). The linearity test between FRQ and Board Independence

(BIND) has a non-significant value (p>0.05). Still, the deviation from linearity between

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FRQ and Board Independence (BIND) is insignificant (P> 0.05), an indication that nonlinearity is insignificant.

The linearity test between FRQ and Foreign Board Members (FBM) has a non-significant value (p>0.05), an indication that there is no linear relationship between the dependent variable and FBM but the deviation from linearity has a p-value greater than 0.05, an indication that nonlinearity is insignificant The linearity test between FRQ and Firm Profitability (ROA) has a non-significant value (p>0.05), a sign that there is no linear relationship between the dependent variable and ROA. Likewise, the deviation from linearity between the dependent variable and ROA has a non-significant value (p>0.05), indicating that the nonlinearity between FRQ and ROA is insignificant.

Table 4.8: Test of Linearity (Dependent Variable: Financial Reporting Quality).

			Sum of Squares	df	Mean Square	F	Sig.
Financial Reporting Quality * Board Independence	Between Groups	(Combined)	38.644	43	.899	1.116	.297
		Linearity	2.217	1	2.217	2.754	.098
		Deviation from Linearity	36.427	42	.867	1.077	.354
	Within Groups		210.121	261	.805		
	Total		248.765	304			
Financial Reporting Quality * Number of Foreign Board members	Between Groups	(Combined)	45.346	41	1.106	1.430	.052
		Linearity	2.158	1	2.158	2.791	.096
		Deviation from Linearity	43.188	40	1.080	1.396	.066
	Within Groups		203.418	263	.773		
	Total		248.765	304			
Financial Reporting Quality * Firm Profitability (ROA)	Between Groups	(Combined)	143.742	174	.826	1.023	.449
		Linearity	.210	1	.210	.260	.611
		Deviation from Linearity	143.532	173	.830	1.027	.439
	Within Groups		105.022	130	.808		

			Sum of Squares	df	Mean Square	F	Sig.
		Total	248.765	304			
Financial Reporting Quality * Internal Controls	Between Groups	(Combined)	8.955	8	1.119	1.382	.204
		Linearity	3.668	1	3.668	4.527	.034
		Deviation from Linearity	5.288	7	.755	.932	.482
	Within Groups		239.810	296	.810		
	Total		248.765	304			

4.4.4 Serial Correlation Test

Serial correlation, also known as autocorrelation, makes the standard errors of coefficients appear to be less than in linear panel data models, resulting in higher R-squared and erroneous hypothesis testing (Wooldridge, 2000). The Wooldridge test was used to determine whether or not there was autocorrelation in panel data. There is no serial association, according to the null hypothesis. A significant test statistic shows the presence of serial correlation. The study fails to reject the null hypothesis and indicates that autocorrelation is not a problem based on the Wooldridge test results.

Table 4.9: Wooldridge test for autocorrelation

Test Statistic	Prob>F
F(1, 60) = 1.493	0.2265

Null Hypothesis: There is no serial correlation

4.4.5 Heteroskedasticity Test

The residual variance from the model must be constant and unrelated to the independent variable in linear regression models calculated using the Ordinary Least Squares (OLS) method(s). Homoskedasticity refers to constant variance, whereas heteroscedasticity refers to non-constant variance (Field, 2009). The study used the Breusch-Pagan/Cook-Weisberg test to check if the variation was heteroskedastic. The null hypothesis implies constant

variance, indicating that the data is homoscedastic (Field, 2009). Table 4.11 reveals that the null hypothesis was rejected since the p-value was 0.0001, which was statistically significant (p<0.05). As a result, the dataset had heteroskedastic variances.

Table 4.10: Breusch-Pagan test

chi2(1)	p-value
16.23	0.0001

The null hypothesis is homoscedasticity (or constant variance).

Due to the presence of heteroscedasticity, the Huber-White technique was used to run regression analysis with robust standard errors as a corrective step.

4.4.6 Multicollinearity Test

Multicollinearity occurs when the independent variables in a regression model are significantly linked. Multicollinearity was assessed using the VIF and tolerance indices. When the VIF value is higher than ten and the tolerance score is less than 0.2, multicollinearity is present, and the assumption is broken (Sheather, 2009). The outcome of the multicollinearity test is presented in Table 4.12. The VIF values are less than 10, indicating no problem with multicollinearity.

Table 4:11 Multicollinearity Test Outcomes (Mean-Variance Inflation Factor=1.11).

Variable	VIF	1/VIF
AT	1.2	0.830919
BIND	1.18	0.849804
BG	1.15	0.870276
BQ	1.15	0.872658
FBM	1.14	0.876263
Age	1.12	0.890894
BS	1.06	0.944322
IC	1.02	0.977082
ROA	1.01	0.994124
Mean VIF	1.11	

Dependent Variable: Financial Reporting Quality

4.4.7   Panel Data Unit-Root Tests

The research variables were subjected to a panel data unit-root test using STATA statistical software to establish if the data was stationary. The unit root test was Augmented Dickey-Fuller. At a standard statistical significance level of 5%, the test was compared to their corresponding p-values. In this test, the null hypothesis is that every panel has a unit root, and the alternative hypothesis is that at least one panel is stationary. According to Choi's (2001) simulation results, the inverse normal Z statistic provides the optimum balance of size and power, and he advises utilizing it in applications.

As demonstrated in Table 4.13, the inverse normal Z statistic strongly rejects the null hypothesis, which stipulates that all panels possess unit roots. This test concludes that the data is stationary at a 5% level of statistical significance for the FRQ, Age, BG, BIND, BQ, BS, FBM, Firm Profitability, and Internal Controls study variables. The p-values all fall below 0.05.

Table 4.12: Unit Root Tests (Augmented Dickey-Fuller tests)

Variables	Inverse normal Z statistic	P-value
FRQ	-6.1879	0.0000
Age	-4.5176	0.0000
BG	0.6255	0.0000
BIND	3.6346	0.0000
BQ	0.7505	0.0000
BS	2.7578	0.0000
FBM	3.2434	0.0000
Firm Profitability	-10.4778	0.0000

Internal Controls	0.7844	0.0000

4.5   Correlation Analysis

This section uses Pearson's product-moment correlation coefficient to do a correlation analysis of the research variables. A two-variable linear correlation's strength is measured using the Pearson product-moment correlation coefficient (r). +1 and -1 are the values of Pearson's correlation coefficient (r). There is no association between the two variables if the value is 0. A number greater than zero indicates a positive relationship; that is, as the value of one variable grows, the value of the other rises as well. A negative relationship is shown by a value less than 0; that is, as the value of one variable increases, the value of the other variable decreases. (Cooper & Schindler, 2003). In keeping with other studies such as Muia (2012), Kidombo (2007), Magutu (2013), and Iraya (2015), correlation data are provided at a significance level of 0.05 and 0.01.

4.5.1 Correlation between Board Diversity and Financial Reporting Quality

The strength of the association between FRQ and board diversity, as measured by the average age of directors, FBM, board qualification (BQ), board independence (BIND), and board gender (BG), was determined using Pearson product-moment correlation. FRQ and foreign board members have a statistically significant positive connection ($r = 0.104$, $p< 0.05$), as shown in the correlation matrix (Table 4.14). This means that foreign board members improve the financial reporting quality of Kenya's Nairobi Securities Exchange companies. Financial reporting quality (FRQ) and board qualifications have a statistically significant positive correlation ($r =.117$, $p<0.05$). This indicates that Board members possess a higher degree, such as a Master's or Ph. D in accounting, finance, or CPA positively affects the financial reporting quality of companies listed at NSE in Kenya.

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According to the research results, there is a very weak negative association between FRQ and the BIND that is statistically insignificant (r = -0.028, p > 0.05). Furthermore, the correlation between FRQ and BG (r =.111, p > 0.05) is statistically insignificant. Board age and FRQ have a statistically insignificant association (r=0.80, p>0.05).

Table 4.14: Correlations between Board Diversity and Financial Reporting Quality

Variables	1	2	3	4	5	6
1. FRQ	1	.080	$.117^{*}$	.111	-.028	.104*
2. Age		1	-.026	-.076	-.084	$.195^{**}$
3. BQ			1	$.354^{**}$	$.410^{**}$	$.260^{**}$
4. BG				1	$.160^{**}$	$.260^{**}$
5. BIND					1	$.221^{**}$
6. FBM					.	1

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Where;

FRQ is Financial Reporting Quality

BQ is Board Qualifications measured by the percentage of board members with a higher degree such as master's or Ph.D. in accounting /finance or CPA / total number of board members.

Age is the average age of directors.

BG is Board gender measured by the number of female board members / total number of board members.

BIND is Board Independence measured by the number of independent non-executive board directors/ total number of board numbers.

FBM is the number of foreign Board members/ total number of board members

4.5.2 Correlation between Firm Profitability, Internal Controls, and Financial Reporting Quality.

Pearson product-moment correlation has also investigated the relationship between firm profitability, internal controls, and FRQ. Thus according to Table 4.15, there was a statistically insignificant positive relationship between FRQ and firm profitability ($r = 0.0380$, $p > 0.05$). On the other hand, there is a statistically significant positive relationship between FRQ and internal controls ($r = 0.121$, $p < 0.05$).

Table 4.15: Correlation between Firm Profitability and Internal Controls and Financial Reporting Quality.

Variables	Financial Reporting Quality	Firm Profitability	Internal Controls
Financial Reporting Quality	1	.038	.121[*]
Firm Profitability		1	.060
Internal Controls			1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

According to Cooper and Schindler (2003), the correlation between firm profitability and internal controls is less than 0.8, proving that multicollinearity is not an issue.

Table 4.16 Correlation among Board Diversity, Firm Profitability, Internal Controls, and Financial Reporting Quality.

Variables		1	2	3	4	5	6	7	8
1.	FRQ	1	.080	.117[*]	.111	-.028	.104*	.011	.122[*]
2.	Age		1	-.026	-.076	-.084	.195[**]	-.009	.004
3.	BQ			1	.354[**]	.410[**]	.260[**]	.002	.136[*]
4.	BG				1	.160[**]	.260[**]	-.076	.034
5.	BIND					1	.221[**]	.028	.097
6.	FBM						1	.074	.075
7.	FP							1	.057

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The correlation between board diversity (as measured by age, board qualification, board gender, board independence, and foreign board members), firm profitability, internal controls, and financial reporting quality was investigated. Per Table 4.16, FRQ and board qualification (r=.117, P < 0.05), FRQ and FBM (r=.104, P < 0.05), and FRQ and internal controls (r=.240, P<0.01) all had positive and statistically significant correlations. FRQ and age (r=.080, p>.05), FRQ and board gender (r=.111, p>.05), and FRQ and firm profitability (r=.011, p>.05) all had positive but statistically insignificant correlations. The FRQ and board independence had a negative and statistically insignificant correlation (r=-.028, P>.05). The implication is that only board qualification, FBM, and internal controls positively correlate with FRQ.

The correlation between the independent variables was utilized to test for multicollinearity. The findings suggest a link between age and FBM (r=.195, p<.05), board qualification and board independence (r=.354, p<.01), board qualification and board independence (r=.410, p<.01), board qualification and FBM (r=.260, p<.01), board qualification and internal controls (r=.260, P<.01), board gender and board independence (r=.160, p<.01), board gender and FBM (r=.260, p<.01), board independence and FBM (r=.221, p<.01), board independence and internal controls (r=.222, p<.01). Multicollinearity occurs when the coefficient of correlation between two independent variables exceeds 0.8, according to Cooper and Schindler (2003). None of the above correlations are greater than 0.8, so the data is assumed to be free of multicollinearity; hence further analysis was performed.

4.6   Chapter Summary

Descriptive statistics for the research variables and statistical assumptions such as linearity, normality, multicollinearity, serial correlation, heteroscedasticity, and panel unit root are presented in this chapter. Also, results of correlation analyses using Pearson Product-Moment correlations are presented. The response rate was 92% calculated from 61 NSE-listed firms (which had complete data for the five years under investigation) out of 66 targeted firms. Descriptive statistics Mean, minimum, maximum, standard deviation, skewness, and kurtosis are descriptive statistics computed. The standard deviation was calculated to account for the closeness of the data to the mean. According to Mugenda and Mugenda (2003), descriptive statistics reflect the fundamental properties of data collected on variables and motivate additional data analysis.

Diagnostic procedures, such as normality tests utilizing the Kolmogorov-Smirnov test following data transformation, were used to determine parametric data. Table 4.7 also shows the Kolmogorov-Smirnov normality test following data transformation, with P-values greater than 0.05 for all variables, indicating that the research variables upheld normality. The ANOVA test of linearity test confirmed that the dependent variable (FRQ) had a linear relationship with BG, BQ, and ICs but had a non-linear relationship with board age, board independence, FBM, and firm profitability, Checks for normality assumptions using normal histograms and Q-Q plots were done. The plotted points fell along the line of best fit, showing normality distribution. As a result, the normal distribution fitted all of the variables well. Similarly, the normal histograms revealed a bell-shaped curve with the highest point frequencies in the center and the lowest point frequency at the extreme ends, reflecting normally distributed data. The Wooldridge test was used to evaluate the

existence of autocorrelation in panel data, and the results showed no problem with autocorrelation, as was evidenced by a P> .05. The results of the heteroscedasticity test had a statistically significant p<.05, indicating that the dataset has heteroskedastic variances. Likewise, the multicollinearity test yielded VIF values less than ten and tolerance values more than 0.2, showing that multicollinearity is not a concern. Finally, the panel data unit–root tests findings were statistically significant, with P-values below 0.05, suggesting that all variables were stationary.

The correlation analysis shows that FRQ and board qualification (r=.117, p<.05), FRQ and FBM (r =.104, p<05), and FRQ and internal controls (r=.240, P<0.01) have statistically significant positive correlations. FRQ and age (r=.080, p>.05), FRQ and board gender (r=.111, p>.05), and FRQ and firm profitability (r=.011, p>.05) all had positive but statistically insignificant correlations. The FRQ and board independence had a negative and statistically insignificant correlation (r=-.028, P>.05). The correlation matrix can also be used to check for multicollinearity, leading to poor regression models. The data was presumed to be free of multicollinearity since all statistics were less than 8; hence further analysis was undertaken.

CHAPTER FIVE: HYPOTHESIS TESTS AND DISCUSSIONS

5.1   Introduction

Following the execution of panel data diagnostic tests and the completion of the required corrective processes to remedy any detected violations of the assumptions of classical linear regression (Porta, 2015), the study moved on to hypotheses tests. This research investigated the diversity of the boards of directors of NSE-listed firms in Kenya concerning gender, age, educational qualifications, and independence to ascertain whether a relationship exists among board diversity and the FRQ.

Panel data regression analyses were employed to test the hypothesized associations. The study's primary goal determined the connection amid board diversity and the FRQ of Kenyan NSE-listed firms. The panel dataset spans the years 2014 to 2018, and it includes 61 firms listed on the Nairobi Stock Exchange (NSE).

5.2   Panel Data Regression Analysis

In panel data analysis, several estimation methods exist. The most common panel data models are random effects, fixed effects, and pooled OLS models (Green, 2008). The pooled OLS model does not use panel data.

The Hausman specification test evaluated if the study dataset required a fixed or random-effect model (Green, 2008). This entailed estimating both models at a 5% confidence level in a particular order. According to Hausman's test results, the null hypothesis is accepted or rejected. According to the null hypothesis (Ho) (Green, 2008), random effects are favored above fixed effects as a model.

Table 5.1: Hausman Specification Test Criterion

p-value	Preferred Model
p>0.05	RE Model
P<0.05	FE Model

5.3   Relationship between Board Diversity and Financial Reporting Quality.

The study's first goal looked into the association among board diversity and the FRQ of Kenyan NSE-listed companies. Board diversity indicators comprised gender diversity, age, educational level, board independence, and Board Nationality, while FRQ was computed as a composite index of IFRSD, qualitative characteristics, and auditor type. The data for the indicators came from each company's publicly available audited financial statements and annual reports. The following hypothesis was tested,

H1: The relationship between board diversity and the FRQ of Kenyan NSE-listed companies is not significant.

The Hausman test was done to see if fixed or random effects should be utilized, with the null hypothesis being that random effects should be preferred over fixed effects (Green, 2008). The p-value for the Hausman test in Table 5.2 is less than 0.05, indicating that the fixed-effects model should be used.

Table 5.2: Hausman Specification Test

chi2(5)	P-Value
20.75	0.0009

HO: Random effects is the suitable model.

The study examined the effect of board diversity measured by Board Gender (BG), Average Age of Directors (Age), Board Nationality (FBM), Board Independence (BIND), and Board Qualifications (BQ) on the FRQ of NSE-listed firms in Kenya. Hausman specification test indicated that the FE model was suitable.

The study findings show that the average Age of directors (Age) has a statistically significant influence on financial reporting quality ($\beta = 0.855$, $p<0.05$) of Kenyan NSE-listed companies (see Table 5.3). Similarly, board gender (BG) significantly predicts FRQ of NSE-listed firms in Kenya ($\beta = 1.241$, $p<0.05$), suggesting that for every unit rise in BG, the quality of financial reporting improves by 1.241 units. BIND ($\beta = -1.692$, $p<0.05$) is also a significant predictor of FRQ.

Table 5.3: Fixed Effects (Within) Regression Results of Board Diversity and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
Age	0.855*	0.381	0.026
FBM	0.395	0.436	0.366
BQ	0.870	0.548	0.113
BG	1.241*	0.522	0.018
BIND	-1.692*	0.512	0.001
_cons	-2.076	2.916	0.477
Model Summary			
R-squared	0.110		
F(5,238)	5.86		
Prob > F	0.0000		
Observations	305		
Number of FIRM_ID	61		

p<0.05*

Board nationality ($\beta = 0.395$, $p > 0.05$) and Board Qualifications ($\beta = 0.870$, $p > 0.05$) are insignificant predictors of FRQ. As Table 5.3 above shows that the explanatory power was low (R-squared (R^2) value is 0.110) implying that board diversity indicators accounted for 11 percent of the variance in FRQ (dependent variable), whereas 89 was explained by other variables. The linear regression analysis model of;

$$FRQ_{it} = \beta_0 + \beta_1 BQ_{it} + \beta_2 Age_{it} + \beta_3 BG_{it} + \beta_4 BIND_{it} + \beta_5 FBM_{it} + \varepsilon_{it} \ldots. (3.1)$$

Where BQ= Board qualifications, Age=Age of Board Members, BG=Board Gender, **B**IND=Board independence, and FBM=Number of Foreign Board members, and ε_{it} is the error term, was therefore presented as follow;

$$FRQ_{it} = -2.076 + 0.855Age_{it} + 1.241BG_{it} - 1.692BIND_{it} + \varepsilon_i$$

Therefore, if age is increased by one unit, FRQ will increase by 0.855 units, likewise if BG is enhanced by one unit FRQ will increase by 1.241 units, but if board independence is increased by one unit, FRQ would reduce by 1.692 units. Also, the overall model was statistically significant because the F-test statistic was statistically significant ($F_{(5,238)} = 5.86$, $p < 0.05$). This indicated that hypothesis one (H1), which was there is no significant relationship between board diversity and financial reporting quality of NSE-listed firms was rejected.

5.4 Board Diversity, Firm Profitability, and Financial Reporting Quality.

The second objective of the study determined how firm profitability influenced the association amid board diversity and FRQ of NSE-listed firms. The hypothesis that follows was put to the test:

H02: Firm profitability insignificantly moderates the association amid board diversity and the FRQ of NSE-listed firms.

The following are Baron and Kenny's (1986) steps for testing the moderating influence: Step 1 (Model 1) estimates the relationship among the dependent and independent variables. The model should be statistically significant.

Step 2 (Model 2): Using panel regression analysis and the Hausman test, the association among the criterion, the moderator, and the predictor variables is estimated. The model should be statistically significant.

Step 3 (Model 3) Multiply the centered predictor and the centered moderator to calculate the interaction term. Estimate the association between the dependent variable, the independent variable, the moderator, and the interaction term to see if the moderator variable modifies the strength of the correlation between the independent variable and dependent variable. The interaction term should be statistically significant if there is a moderating effect. The testing approach of Baron and Kenny (1986) assumes a statistical significance in the association among the predictor variable and the criterion variable.

In step 1 (Model 1), regression analysis estimated the relationship between FRQ and each of the board diversity indicators (Age, BQ, BG, FBM, and BIND).

Table 5.4: Fixed Effects (Within) Regression Results (Model 1)

Independent Variable	β	F-Statistic F(1,242)	p-value
BQ	.306	0.33	0.5661
BG	1.391	7.83	0.006
FBM	.665	2.54	0.112

BIND	-1.634	12.06	0.001
Age	.842	5.49	0.020

Dependent variable: FRQ

The findings show that BG (= 1.391, p<0.05), BIND (= -1.634, p<0.05), and Age (=.842, p<0.05) significantly predict FRQ of NSE-listed firms. The F-test statistic (p<0.05) was statistically significant. BQ and FBM do not significantly predict FRQ.

The relationship between the dependent variable, moderator, and independent variables is examined in Step 2 (Model 2). In Step 2 (Model 2), the association among the criterion, moderator, and predictor variables (board diversity indicators, measured by BQ, BG, FBM, BIND, and Age) was assessed using the panel regression analysis Hausman test as a guide. A statistically significant regression model is required. To determine whether FP moderates the relationship between FRQ and BQ, FRQ was regressed on BQ and FP (step 2). F-test statistic was not statistically significant, which means that the regression model was statistically non-significant, F (2,241) =0.16, p>0.05. Furthermore, according to Table 5.5, the model regression coefficients of BQ and FP were statistically not significant.

Table 5.5: Fixed Effects (Within) Regression Results of Board Qualification, Firm Profitability and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
BQ	0.308	0.536	0.566
FP	-0.007	0.208	0.975
_cons	4.328*	0.285	0.000
R-squared	0.001		
F(2,241)	0.16		
Prob > F	0.8481		

* p<0.05

To determine whether FP moderates the relationship between FRQ and BG, FRQ was regressed on BG and FP. F-test statistic was statistically significant, which means that the regression model was statistically significant, $F_{(2,241)} = 3.90$, $p<0.05$. Additionally, Table 5.6 reveals that the BG model regression coefficient was statistically significant ($p<0.05$).

Table 5.6: Fixed Effects (Within) Regression Results of Board Gender, Firm Profitability and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
BG	1.393*	0.499	0.006
FP	-0.017	0.204	0.935
_cons	4.164*	0.123	0.000
R-squared	0.031		
F(2,241)	3.90		
Prob > F	0.0215		

* p<0.05

To determine whether FP moderates the relationship between FRQ and FBM, FRQ was regressed on FBM and FP. F-test statistic was statistically not significant, which means that the regression model was statistically not significant, $F_{(2,241)} = 1.29$, $p>0.05$. Furthermore, the model regression coefficients of FBM and FP were not statistically significant ($p>0.05$), as revealed in Table 5.7 below.

Table 5.7: Fixed Effects (Within) Regression Results of FBM, Firm Profitability and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
FBM	0.675	0.421	0.110
FB	0.043	0.207	0.837
_cons	4.138*	0.224	0.000
R-squared	0.011		
F(2,241)	1.29		
Prob > F	0.278		

* p<0.05

To determine whether FP moderates the relationship between FRQ and BIND, FRQ was regressed on BIND and FP. F-test statistic was statistically significant, which means that the regression model was statistically significant, $F_{(2,241)} = 6.01$, $p < 0.05$. Furthermore, the model regression coefficient of BIND was statistically significant ($p < 0.05$), per Table 5.8 below.

Table 5.8: Fixed Effects (Within) Regression Results of Board Independence, Firm Profitability and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
BIND	-1.637*	0.472	0.001
FP	-0.027	0.202	0.893
_cons	5.440*	0.276	0.000
R-squared	0.048		
F(2,241)	6.01		
Prob > F	0.0028		

* p<0.05

To determine whether FP moderates the relationship between FRQ and Age, FRQ was regressed on Age and FP. F-test statistic was statistically insignificant, which means that the regression model was statistically not significant, $F_{(2,241)} = 2.74$, $p > 0.05$. Furthermore, the model regression coefficient of FP was statistically not significant ($p > 0.05$), per Table 5.9 below.

Table 5.9: Fixed Effects (Within) Regression Results of Age, Firm Profitability and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
Age	0.844*	0.361	0.02
FP	-0.017	0.205	0.933
_cons	-2.009	2.778	0.47
R-squared	0.022		

F(2,241)		2.74	
Prob > F		0.0667	

* p<0.05

In step 3, Model 3, FRQ was regressed on FP, Board diversity indicators, and Interaction term created by multiplying the centered board diversity indicators (independent variable) and centered moderator (FP). The interaction term should be statistically significant if there is a moderating influence.

The relationship between Age (independent variable), FP (moderator), the interaction term (FP*Age), and FRQ (dependent variable) was estimated using Fixed-effects regression. This study revealed that Age (β= 0.772, p<0.05) significantly influences FRQ, as shown in Table 5.10 below. However, FP (β= -0.231, p>0.05) has no significant influence on FRQ. The F-test statistic (p<0.05) was statistically significant. Age (independent variable), FP (moderator), and the interaction term (FP*Age) account for 3.7 percent of the variation in the FRQ, according to R-squared (R^2). The regression model was significant but the interaction was statistically not significant (see Table 5.10).

Table 5.10: Fixed Effects (Within) Regression Results of Financial Reporting Quality, Predictors: Age, Firm Profitability, and Interaction Term (FP*Age).

FRQ	Coef.	Std. Err.	P>t
Age	0.772*	0.361	0.033
FP	-0.231	0.233	0.322
FP*Age	-2.500	1.314	0.058
_cons	-1.451	2.778	0.602
R-squared	0.037		
F(3,240)	3.05		
Prob > F	0.0293		

* p<0.05

The relationship between BG (independent variable), FP (moderator), the interaction term (FP*BG), and FRQ (dependent variable) was estimated using fixed-effects regression. This study showed that BG (β= 1.620, p<0.01) significantly influences FRQ, as shown in Table 5.11 below. However, FP (β= -0.132, p>0.05), has no significant influence on FRQ. The result of the F-test was statistically significant (p<0.05). The R^2-value of 0.040 indicates that the independent variable (BG), the moderator (FP), and the interaction term (FP*BG) account for 4% of the variance in FRQ. Even though the regression model was statistically significant, Table 5.11 shows that the interaction term (FP*BG) was not.

Table 5.11 Fixed-effects regression model results of Financial Reporting Quality, Board Gender, Firm Profitability, and Interaction term (FP*BG).

FRQ	Coef.	Std. Err.	P>t
BG	1.620*	0.522	0.002
FP	-0.132	0.219	0.547
FP*BG	-2.245	1.572	0.155
_cons	4.110*	0.129	0.000
R-squared	0.040		
F(3,240)	3.29		
Prob > F	0.0213		

* p<0.05

The relationship between BQ (independent variable), FP (moderator), the interaction term (FP*BQ), and FRQ (dependent variable) was estimated using Fixed-effects regression. BQ (β = 0.437, p>0.05) is an insignificant predictor of FRQ in this study, as shown in Table 5.12. FP was likewise not a significant predictor of FRQ (β = -0.259, p>0.05). The regression model was not statistically significant because the F-test result was not statistically significant (p>0.05). According to Table 5.12, the interaction term (FP*BQ) was similarly not statistically significant.

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Table 5.12 Fixed-effects regression model results of Financial Reporting Quality, Predictors: Board Qualification, Firm Profitability, and Interaction term (FP*BG).

FRQ	Coef.	Std. Err.	P>t
BQ	0.437	0.543	0.421
FP	-0.259	0.277	0.352
FP*BQ	-2.515	1.839	0.173
_cons	4.270*	0.288	0.000
R-squared	0.009		
F(3,240)	0.73		
Prob > F	0.5327		

* p<0.05

The relationship between FBM (independent variable), FP (moderator), the interaction term (FP*FBM), and FRQ (dependent variable) was estimated using Fixed-effects regression. This study indicated that FBM (β= 0.739, p>0.05) does not significantly predict FRQ. The regression model was statistically not significant since the F-test statistic was statistically not significant (p>0.05). According to Table 5.13, the interaction term(FP*FBM) was similarly statistically not significant.

Table 5.13 Fixed-effects regression model results of Financial Reporting Quality. Predictors: Foreign Board Members, Firm Profitability, and Interaction term (FP*FBM).

FRQ	Coef.	Std. Err.	P>t
FBM	0.739	0.434	0.09
FP	-0.024	0.235	0.919
FP*FBM	-0.792	1.315	0.548
_cons	4.109*	0.229	0.000
R-squared	0.012		
F(3,240)	0.98		
Prob > F	0.4046		

* p<0.05

The relationship between BIND (independent variable), FP (moderator), the interaction term (FP*BIND), and FRQ (dependent variable) was estimated using Fixed-effects regression. This study indicated that BIND (β= -1.512, $p<0.05$) is a significant predictor of FRQ, as shown in Table 5.14. However, FP (β= -0.208, $p>0.05$) has no significant influence on FRQ. F-test statistic was statistically significant ($p<0.05$), and therefore, the regression model was statistically significant. According to Table 5.14, the interaction term(FP*BIND) was also not statistically significant.

Table 5.14 Fixed-effects regression model results of Financial Reporting Quality, Predictors: Board Independence, Firm Profitability and Interaction term (FP*BIND).

FRQ	Coef.	Std. Err.	P>t
BIND	-1.512*	0.484	0.002
FP	-0.208	0.255	0.415
FP*BIND	-1.771	1.522	0.246
_cons	5.374*	0.282	0.000
R-squared	0.053		
F(3,240)	4.47		
Prob > F	0.0045		

* $p<0.05$

Hypothesis H02 investigated whether firm profitability has a moderation effect on the link between board diversity and FRQ by suggesting that FP does not significantly moderate the association between board diversity and FRQ of NSE-listed firms. Each of the Board diversity indicators was analyzed separately. This study results indicate that firm profitability has no moderation influence on the link among board diversity indicators and the FRQ of NSE-listed firms listed in Kenya since none of the board diversity indicators

fulfilled all of the above Baron and Kenny's (1986) steps for testing the moderating influence as indicated in tables 5.4 to 5.14. So the research failed to reject H02.

5.5   Board Diversity, Internal Controls, and Financial Reporting Quality.

The third objective of the study looked into the intervening impact of internal controls on the relation between board diversity and the FRQ of the NSE-listed companies. The following hypothesis was put to the test.

H03: Internal controls have an insignificant intervening impact on the relation between board diversity and the FRQ of the NSE-listed companies.

The researcher utilized Baron and Kenny's (1986) technique to explore the intervention impact. Multiple regression analyses were carried out in four phases, with the significance of the coefficients assessed at each stage. The first two phases utilize simple linear regression, whereas the third and fourth steps use multiple regression.

Step 1: Evaluate the independent and dependent variables' correlations. Show that the predictor and dependent variables are related. A statistically significant relationship should exist. This step determines that a relationship exists that can be mediated.

Step 2: Estimate the association between the independent and mediator variables. Demonstrate that the independent variable and the mediator are correlated. This stage essentially requires treating the mediator as an outcome variable.

Step 3: Control for the independent variable and estimate the connection among the intervening and the criterion variable. Show that the mediator affects the dependent variable.

Step 4: The connection among the independent and criterion variables is insignificant in the mediator's presence. The impact of the independent variable on the dependent variable should be zero when controlling for the mediator, demonstrating that the mediator mediates the independent-dependent variable relationship.

The Baron and Kenny (1986) approach for testing mediation presumes that the independent variable predicts the dependent variable significantly. Results of this study showed that only BG, BIND, and Age have a significant relationship with FRQ among the indicators of Board diversity.

The researcher used the Hausman specification test to decide amid fixed and random effects. The Hausman specification test outcomes are shown in Table 5.15. Since p<0.05, the Fixed-Effects regression model is chosen. The outcomes of the Hausman specification test are listed in Table 5.15. since P-value is less than 0.05, the Fixed-Effects regression model is preferred.

Table 5.15: Hausman Specification Test.

chi2(6)	P-Value
19.50	0.0034

Null Hypothesis: The appropriate mode is the Random Effects Model.

To determine whether internal controls (IC) has a mediating effect on the relationship between board diversity and financial reporting quality, only three significant board diversity indicators (board gender, age, and BIND) were considered.

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The study utilized Baron and Kenny's (1986) four-step approach for testing mediation effects. In Step 1, the association among Board Gender and FRQ was estimated using a Fixed-Effects regression model.

Table 5.16 shows the results of the regression analysis. F-test statistic was statistically significant, $F(1,242) = 7.83$, $p<0.05$, which means that the regression model was statistically significant. Based on these results, BG ($\beta = 1.391$, $p<0.05$) is a significant predictor of FRQ. R- squared $=0.031$, which suggests that BG accounts for 3.1% of the variance in the FRQ of Firms listed at NSE in Kenya.

Table 5.16 Fixed-effects regression model results: Dependent variable Financial Reporting Quality, independent variable: Board Gender.

FRQ	Coef.	Std. Err.	P>t
BG	1.391**	0.497	0.006
_cons	4.164**	0.123	0.000
R-squared	0.031		
F(1,242)	7.83		
Prob > F	0.0056		

* $p<0.05$

Regression Equation:

$$FRQit = \beta0 + \beta1 BGit + \varepsilon it$$

The Regression equation can be rewritten as follows:

$$FRQit = 4.164 + 1.391 BGit + \varepsilon it$$

In Step 2, the relationship between the independent variable (Board Gender) and the mediator variable (internal controls) was investigated using a fixed-effects regression model. In this step, the mediator is treated as the outcome variable. F-test statistic was

statistically not significant, F(1,242)= 2.46, p>0.05, which means that the regression model

was not statistically significant. BG (β = 1.322, p>0.05) does not significantly predicts IC

based on these results.

Table 5.17: Fixed-effects regression model results: Dependent variable Internal Controls, Independent variable: Board Gender.

IC	Coef.	Std. Err.	P>t
BG	1.322	0.843	0.118
_cons	5.928*	0.208	0.000
R-squared	0.01		
F(1,242)	2.46		
Prob > F	0.1182		

* p<0.05

In step 3 of the mediation model, FRQ was regressed on IC to evaluate the association

between the Dependent variable and Internal controls (mediator). Table 5.18 belowpresents

the results of the Fixed-effects regression analysis. F-test statistic was not statistically

significant, F(1,242)= 2.71, p>0.05, which means that the regression model was

statistically not significant. Based on these results, ICs (β = 0.063, p>0.05) do not

significantly predicts FRQ. The R-squared (R2) value was 0.011, indicating that Internal

Controls account for 1.1 percent of the change in the FRQ of firms listed at NSE in Kenya.

Table 5.18 Fixed-effects regression model results of Financial Reporting Quality and Internal Controls.

FRQ	Coef.	Std. Err.	P>t
IC	0.063	0.038	0.101
_cons	4.099*	0.241	0.000
R-squared	0.011		
F(1,242)	2.71		

Prob > F	0.1009	1,

FRQ was regressed on BG and IC in step 4 of the mediation model (Model 4). The outcomes of the fixed-effects regression analyses are shown in Table 5.19. The regression model was statistically significant, with F $(2,241)$ = 4.9, $p<0.05$, indicating that the F-test statistic was statistically significant. BG ((β = 1.322, $p<0.05$) is a significant predictor of FRQ based on these findings. However, IC ((β = 0.053, $p>0.05$) insignificantly predicts FRQ. The R-squared (R^2) value was 0.039, signifying that Board Gender and Internal Controls together account for 3.9 percent of the variance in FRQ of NSE-listed firms.

Table 5.19 Fixed-effects regression model results of Financial Reporting Quality, independent variables: Board gender and Internal controls.

FRQ	Coef.	Std. Err.	P>t
BG	1.322**	0.499	0.009
IC	0.053	0.038	0.165
_cons	3.851**	0.256	0.000
R-squared	0.039		
F(2,241)	4.9		
Prob > F	0.0082		

** $p<0.05$

Regression Equation:

FRQit=β0+ β1BGit +β1ICit + ϵit

The Regression equation can be rewritten as follows:

FRQit=3.851+ 1.322BGit + ϵit

To determine if the Mediator (IC) mediates the relationship between FRQ and BG, step 1 of the mediation model must be statistically significant. According to the findings ($p<0.05$), the association is statistically significant. The mediator should be statistically significant and correlated with the independent variable (BG) (step 2). Model 2 was not statistically significant according to the study outcomes. Step 3 requires that the mediator and the

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dependent variable have a statistically significant relationship. According to the outcomes, there was statistically no significant association amid FRQ and IC (p>0.05). There was no statistically significant relationship between FRQ, BG, and IC (p>0.05). Because the independent variable and the mediator had no significant relationship (step 2) and the mediator variable (IC) is not a significant predictor of FRQ (step 3), the relationship between BG and FRQ is not mediated by IC.

To determine whether internal controls (IC) has a mediation impact on the connection between the average age of directors (Age) and financial reporting quality, the researcher employed Baron and Kenny's (1986) four-step technique to investigate mediating effects. In phase 1 of the mediation model, the dependent variable (FRQ) was regressed on Age to identify the link between the Dependent variable (FRQ) and the average age of the directors (Independent variable). Table 5.20 below presents the results of the Fixed-effects regression analysis. F-test statistic was statistically significant, $F(1,242)= 5.49$, $p<0.05$, which means that the regression model was statistically significant. Based on these results, Age ($\beta = 0.842$, $P<0.05$) is a significant predictor of the FRQ. R-squared (R^2) was 0.022 suggesting that Age accounts for 2.2 % of the variation in the FRQ of Kenyan NSE-listed firms.

Table 5.20 Fixed-effects regression model results of Financial Reporting Quality, and independent variable: Age.

FRQ	Coef.	Std. Err.	P>t
Age	0.842*	0.359	0.02
_cons	-1.999	2.770	0.471
R-squared	0.022		
F(1,242)	5.49		
Prob > F	0.0199		

* p<0.05

Regression Equation:

FRQit=β0+ β1Ageit + εit

The Regression equation can be rewritten as follows:

FRQit= -1.999+ 0.842Ageit + εit

The association amid the predictor variable (Age) and the mediator variable (internal controls) is examined in Step 2 using a fixed-effects regression model. In this step, the mediator is treated as the outcome variable. F-test statistic was statistically not significant, $F_{(1,242)} = 0.44$, $p > 0.05$, which means that the regression model was statistically not significant. Based on these results, Age ($\beta = 0.404$, $p > 0.05$) does not significantly predict IC.

Table 5.21 Fixed Effects (Within) Regression Results of Age and Internal Controls.

IC	Coef.	Std. Err.	P>t
Age	0.404	0.609	0.507
_cons	3.124	4.693	0.506
R-squared	0.002		
F(1,242)	0.44		
Prob > F	0.5074		

* p<0.05

In step 3 of the mediation model, FRQ was regressed on IC to evaluate the correlation between FRQ (dependent variable) and internal controls (mediator). The fixed-effects regression analysis results are summarized in Table 5.22. The regression model was statistically not significant, with $F(1,242) = 2.71$ and $p > 0.05$. According to these findings, ICs ($\beta = 0.063$, $p > 0.05$) do not significantly predict FRQ. The R-squared (R2) value was

0.011, indicating that internal controls account for 1.1 percent of the variance in the FRQ of Firms listed at NSE in Kenya.

Table 5.22 Fixed Effects Regression Results of Internal Controls and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
IC	0.063	0.038	0.101
_cons	4.099*	0.241	0.000
R-squared	0.011		
F(1,242)	2.71		
Prob > F	0.1009		

* p<0.05

In step 4 of the mediation model (Model 4), FRQ was regressed on Age and IC. Table 5.23 below presents the results of the Fixed-effects regression analysis. The regression model was statistically significant, with $F_{(2,241)} = 3.98$, $p<0.05$, indicating that the F-test statistic was statistically significant. Age ($\beta = 0.818$, $p<0.05$) significantly predicts FRQ based on these findings. However, ICs ($\beta = 0.059$, $p>0.05$) do not significantly predict FRQ. The R-squared (R^2) value was 0.032, indicating that the age of directors and internal controls jointly account for 3.2 percent of the variance in the FRQ of the NSE-listed firms.

Table 5.23 Fixed Effects Regression Results of Age, Internal Controls and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
Age	0.818*	0.359	0.023
IC	0.059	0.038	0.119
_cons	-2.184	2.764	0.43
R-squared	0.032		
F(2,241)	3.98		
Prob > F	0.0199		

* p<0.05

FRQit=β0+ β1Ageit + ICit+ εit

The Regression equation can be rewritten as follows:

FRQit= -2.184+ 0.818Ageit + εit

In step 1, the mediation model must be statistically significant to determine if the Mediator

(IC) mediates the relationship between Age and FRQ. According to the outcomes, the

association is significant (p<0.05). The mediator should be connected with the independent

variable (Age), and the correlation should be statistically significant (step 2). According to

the findings of this investigation, Model 2 was not statistically significant. Step 3 requires

a statistically significant mediator and the dependent variable (FRQ) relationship. The

results showed a statistically non-significant association between FRQ and age (p>0.05).

There was a statistically significant relationship between FRQ, Age, and IC (p< 0.05).

Because the independent variable and mediator have no significant relationship (step 2),

and the mediator variable is not a significant predictor of FRQ (step 3), IC has no mediating

influence on the link between Age and FRQ.

To determine whether internal controls (IC) mediates on the relation between board

independence (BIND) and the FRQ, the four-step approach provided by Baron and Kenny

(1986) for investigating mediation effects was employed. FRQ was regressed on BIND in

step 1 of the mediation model to determine the link between BIND and FRQ. Table 5.24

displays the results of the fixed-effects regression analysis. The regression model was

statistically significant, with F (1,242) = 12.06, p<0.05, indicating that the F-test statistic

was statistically significant. BIND (= -1.634, p<0.05) is a significant predictor of FRQ

based on these findings. The R-squared (R^2) was 0.047, indicating that BIND is responsible

for 4.7 percent of the variance in the FRQ of NSE-listed companies.

Table 5.24 Fixed Effects (Within) Regression Results of Board Independence and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
BIND	-1.634*	0.471	0.001
_cons	5.436*	0.275	0.000
R-squared	0.047		
F(1,242)	12.06		
Prob > F	0.0006		

* p<0.05

Regression Equation:

$FRQit = \beta0 + \beta1 BINDit + \varepsilon it$

The Regression equation can be rewritten as follows:

$FRQit = 5.436 - 1.634 BINDit + \varepsilon it$

In Step 2, the relationship between the independent variable (BIND) and the mediator variable (internal controls) was investigated using a fixed-effects regression model. In this step, the mediator is treated as the outcome variable. F-test statistic was statistically non-significant, F(1,242)= 0.06, p>0.05, which means that the regression model was statistically not significant. Table 5.25 presents these results indicating that BIND (β = -0.200, p>0.05) does not significantly predict IC.

Table 5.25 Fixed Effects (Within) Regression Results of Board Independence and Internal Controls.

IC	Coef.	Std. Err.	P>t
BIND	-0.200	0.809	0.805
_cons	6.355	0.473	0.000

R-squared	0.002		
F(1,242)	0.06		
Prob > F	0.8045		

* p<0.05

In step 3 of the mediation model, FRQ was regressed on IC to evaluate the association between the Dependent variable and Internal controls (mediator).

Table 5.26 summarizes the results of the fixed-effects regression analysis. The regression model was statistically insignificant, with $F(1,242) = 2.71$ and $p>0.05$. According to these findings, IC (= 0.063, $p>0.05$) does not significantly predict FRQ. The R-squared (R2) value was 0.011, indicating that Internal Controls account for 1.1 percent of the variance in the FRQ of Kenyan NSE-listed firms.

Table 5.26 Fixed-effects regression model results of Financial Reporting Quality, independent variable: Internal Controls.

FRQ	Coef.	Std. Err.	P>t
IC	0.063	0.038	0.101
_cons	4.099*	0.241	0.000
R-squared	0.011		
F(1,242)	2.71		
Prob > F	0.1009		

* p<0.05

In step 4 of the mediation model (Model 4), FRQ was regressed on BIND and IC. The fixed effects regression analysis outcomes are shown in Table 5.27. The F-test statistic, $F(2,241) = 7.4$, $p<0.05$, was statistically significant. BIND (= -1.622, $p<0.05$) is a significant predictor of FRQ based on these findings. However, IC (= 0.061, $p>0.05$) does not significantly predict FRQ. The R-squared (R2) value was 0.058, indicating that board

independence and Internal Controls account for 5.8% of the variance in the financial

reporting quality of firms listed on the Nairobi Stock Exchange (NSE).

Table 5.27 Fixed Effects (Within) Regression Results of Board Independence, Internal Controls and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
BIND	-1.622*	0.469	0.001
IC	0.061	0.037	0.105
_cons	5.051*	0.362	0.00
R-squared	0.058		
F(2,241)	7.4		
Prob > F	0.0008		

* p<0.05

Step 1 of the mediation model must be statistically significant to establish whether Internal

Controls (IC) mediates the association between FRQ and BIND. And according to the

findings of the study, the correlation is statistically significant (P< 0.05). The mediator and

the independent variable (BIND) must be correlated, and the relationship must be

statistically significant (step 2). According to the outcomes, model 2 was not statistically

significant in this investigation. Step 3 requires a statistically significant association

between the mediator and the dependent variable (FRQ). According to the study, the

association between the IC and the FRQ was statistically insignificant (p>0.05). FRQ,

BIND, and IC had a statistically significant connection (p<0.05). The independent and

dependent variables had a statistically insignificant association (step 2). Step 3 requires that

the mediator and the dependent variable have a statistically significant relationship (FRQ).

According to the study's findings, there was no statistically significant relationshipbetween

FRQ and IC (p>0.05). There was a statistically significant relationship between

FRQ, BIND, and IC (p<0.05). Because the independent variable and the mediator have no significant relationship (step 2), and the mediator variable does not significantly predict FRQ (step 3), ICs do not significantly mediate the association between BIND and the FRQ.

Hypothesis H03 investigated whether internal controls have a mediation effect on the link between board diversity and FRQ by suggesting that internal controls do not significantly mediate the association between board diversity and FRQ of NSE-listed firms. Three of the Board diversity indicators were analysed separately. This study indicates that internal controls have no mediation influence on the link among board diversity indicators and the FRQ of NSE-listed firms listed in Kenya since none of the board diversity indicators fulfilled all of the Baron and Kenny's (1986) steps for testing the mediating influence as indicated in tables 5.17 to 5.27. So the research failed to reject null hypothesis three (H03).

5.6   Board Diversity, Firm Profitability, Internal Controls, and Financial Reporting Quality.

The study explored the joint influence of board diversity, firm profitability, and internal controls on the FRQ of firms listed at NSE. The following null hypothesis (H04) was developed and tested to investigate the joint effect. H04: Board diversity, firm profitability, and internal controls insignificantly impact the FRQ of NSE-listed firms.

The Hausman specification test was used to choose amid fixed and random effects models. Table 5.28 shows the results of the Hausman test. Since the p-value is less than 0.05, the fixed effect was used.

Table 5.28: Hausman Test Results

chi2(7)	P-Value
19.56	0.0066

Null Hypothesis: The appropriate model is Random Effects

The impact of board diversity indicators, firm profitability, and internal controls on the FRQ of firms listed on the NSE was investigated. Table 5.29 summarizes the findings of the FE panel regression analyses.

Table 5.29: Fixed Effect (Within) Regression Results of Board Diversity and Financial Reporting Quality.

FRQ	Coef.	Std. Err.	P>t
Age	0.856*	0.383	0.026
FBM	0.330	0.444	0.458
BQ	0.861	0.552	0.120
BG	1.201*	0.527	0.023
BIND	-1.685*	0.513	0.001
IC	0.041	0.037	0.275
FP	-0.058	0.201	0.773
_cons	-2.288	2.932	0.436
Model Summary			
R-squared	0.115		
F(7,236)	4.37		
Prob > F	0.0001		
Observations	305		
Number of FIRM_ID	61		

* p<0.05

F-test is statistically significant, which means that the regression model is statistically significant, $F_{(7,236)} = 4.37$, $p < 0.05$. Based on these results, Age ($\beta = 0.856$, $p < 0.05$)

significantly predicts FRQ. This implies that boards with older directors are associated with better FRQ of firms listed at NSE in Kenya.

This study also showed BG ($\beta = 1.201$, p<0.05). This implies that the presence of women board members is associated with better FRQ of firms listed at NSE in Kenya. BIND ($\beta = -1.685$, p<0.05) has a negative and statistically significant influence on FRQ. The relationship between Board Qualifications ($\beta = 0.861$, P>0.05) and FRQ was statistically not significant. This implies that BQ does not significantly predicts FRQ. Similarly, FBM, FP, and IC are not significant predictors of FRQ, as shown in Table 5.20 above.

Hypothesis four (H4) examined the relationship between Board diversity indicators, Firm profitability, internal controls, and FRQ of firms listed at NSE by suggesting that the joint impact of board diversity, firm profitability, and internal controls on FRQ is not significant. As Table 5.29 above shows that the explanatory power was low (R-squared (R^2) value is 0.115) implying that board diversity indicators, firm profitability, and internal controls jointly accounted for 11.5 percent of the variance in FRQ if NSE-listed firms whereas 88.5 percent was explained by other variables

Recalling the prediction model:

$FRQ = \beta_0 + \beta_1 BQ_{it} + \beta_2 Age_{it} + \beta_3 BG_{it} + \beta_4 BIND_{it} + \beta_5 FBM_{it} + \beta_6\ FP_{it} + \beta_7 IC_{sit} + \varepsilon_{it}$

The prediction model was represented as follows:

$FRQ_{it} = -2.288 + 0.856 Age_{it} + 1.201 BG_{it} - 1.685 BIND_{it} + \varepsilon_{it}$

Therefore, if age is increased by one unit, FRQ will increase by 0.856 units, likewise if BG is enhanced by one unit FRQ will increase by 1.201 units, but if board independence is

increased by one unit, FRQ would reduce by 1.685 units. Also, given that the overall model was statistically significant P<0.05, this indicated that hypothesis four (H4), which was that the joint influence of board diversity, firm profitability and internal controls on financial reporting quality of NSE-listed firms is not significant was rejected.

5.7   Discussion of the Findings

The overall objective of the study was to ascertain the relationships among board diversity, firm profitability, internal controls and FRQ of companies listed at NSE in Kenya. The outcomes of the hypotheses examined, as listed in Table 5.30, are thoroughly discussed in this section. The discussion also focused on how well the results agree or disagree with earlier empirical studies and if the findings are consistent with the study's guiding theoretical assumptions.

5.7.1   Board Diversity and Financial Reporting Quality.

The study's first objective determined the association between board diversity and FRQ. The researcher hypothesized an insignificant association among board diversity and FRQ. The prediction was rewritten as FRQit= -2.076+0.855Ageit+1.241BGit -1.692BINDit+it. with p<0.05, as shown in Table 5.3. Furthermore, the findings show that board diversity indicators account for 11% of the variance in the FRQ of NSE-listed companies. Consequently, hypothesis one (H1) was rejected, implying a statistically significant positive association between board diversity and financial reporting quality of Kenyan companies listed on the Nairobi Stock Exchange (NSE). NSE-listed businesses in Kenya should include more age and gender diversity while limiting the number of independent board members to improve financial reporting quality. The results of this study, however,

converged and differed with those of prior empirical studies. This suggests that owing to inconsistent empirical results, the BD-FRQ link is still inconclusive.

These findings are consistent with those of other studies that have investigated the relationship between board diversity and financial reporting quality, including Klai and Omori (2011); Barua et al. (2010); Ho et al. (2015); Makhlouf et al. (2018); Pulungan and Sadat (2014); and Yunos (2011). However, the outcome of this empirical study is inconsistent with Firoozi et al. (2016) and Muhammad et al. (2016) who found that board diversity negatively correlates with financial reporting quality.

The study also agrees with the agency theory perspective that board diversity aims to eliminate the agency problem, enhancing financial reporting quality. Also, these results support the main tenets of upper echelons, resource dependence and social psychology theories.

5.7.2 Board Diversity, Firm Profitability, and Financial Reporting Quality.

The study's second objective established the moderating impact of firm profitability on the relationship between board diversity and FRQ of NSE-listed firms in Kenya. The research hypothesized that firm profitability does not significantly moderate the relationship between board diversity and FRQ of NSE-listed firms in Kenya. The researcher used the three-step strategy of Baron and Kenny (1986) to evaluate the moderating effects of business profitability on the link between board diversity and FRQ of NSE-listed firms in Kenya. Each of the Board diversity indicators was analyzed separately.

The findings did not show a significant moderating impact of firm profitability on the

relationship between board diversity and FRQ. This led to failure to reject hypothesis two (H02). Prior investigations, such as Camfferman and Cooke (2002) and Ebrahimabadi and Asadi (2016), have found similar outcomes. However, the findings were inconsistent with prior results by Raffournir (2006), Fathi (2013), and Al-Asiry (2017), who found a significant relationship between profitability and FRQ. It is worth emphasizing that none of the above research looked at firm profitability as a moderating variable but rather at the link between firm profitability and financial reporting or between firm profitability and information disclosure. These findings support the main views of agency, upper echelons, and resource dependency theory.

5.7.3 Board Diversity, Internal Controls, and Financial Reporting Quality.

The third objective evaluated the intervening influence of internal controls on the connection between board diversity and FRQ of Kenyan NSE-listed companies. The research hypothesized that the intervening influence of internal controls on the connection between board diversity and FRQ of NSE-listed firms is not significant. The study employed the four-step strategy of Baron and Kenny (1986) to assess the intervention effects of internal controls on the connection between board diversity and FRQ of Kenyan NSE-listed firms. Based on the study findings internal controls have no mediation influence on the link among board diversity indicators and the FRQ of NSE-listed firms in Kenya since none of the board diversity indicators fulfilled all of the Baron and Kenny's (1986) steps for testing the mediating influence, hence this led to failure to reject null hypothesis three (H03).

The findings fail to concur with Nalukenge et al. (2017), who investigated corporate

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governance and internal controls over financial reporting in Ugandan Micro Finance Institutions (MFIs) and found that board diversity attributes are significantly linked with strong internal controls and FRQ. Widyaningsih (2016) showed that implementing an internal control framework (which includes the control environment, risk assessment, control activities, information and communication, and monitoring) improves the quality of financial reporting significantly. It's important to note that none of the research mentioned above took internal controls into account as an intervening variable but rather had considered the direct correlation between internal controls and FRQ or internal controls and disclosure quality. These findings support the key views of agency and upper echelons theories.

5.7.4 Board Diversity, Firm Profitability, Internal Controls, and Financial Reporting Quality.

The fourth objective sought to analyze the joint impact of board diversity, firm profitability, and internal controls on the FRQ of listed firms at NSE in Kenya. The study hypothesized no significant joint effect of board diversity, firm profitability, internal controls on FRQ of NSE-listed firms in Kenya. The results ($R2 = 0.115$, F= 4.37, and $p< 0.05$) suggest a significant relationship between board diversity, firm profitability, internal controls, and FRQ with board diversity, firm profitability, and internal controls jointly explaining 11.5% of the variance in FRQ. Based on the outcomes, H4 was rejected, indicating a statistically significant combined effect of board diversity, firm profitability, and internal controls on FRQ of NSE-listed firms in Kenya.

The fourth objective sought to analyze the joint impact of board diversity, firm profitability, and internal controls on FRQ of listed firms at NSE. The research hypothesized that there is insignificant joint effect of board diversity, firm profitability, internal controls on FRQ of NSE-listed firms in Kenya. The results ($R^2 = 0.115$, F= 4.37, and p< 0.05) suggest a significant relationship between board diversity, firm profitability, internal controls, and FRQ with Board diversity, firm profitability, and internal controls jointly explaining 11.5% of the variants in FRQ. From the results, $H0_4$ is rejected, indicating a statistically significant joint influence of board diversity, firm profitability, and internal controls on FRQ of NSE-listed firms in Kenya.

The concepts of board diversity, firm profitability, internal controls, and financial reporting quality have never been examined together before, as this study has done. Previous studies (Omoro, 2014; Kamalluarifin, 2016; Srinidhi et al., 2011; Thiruvadi and Huang, 2011) focused on just two variables, ignoring the combined effect of all the variables. It's also worthwhile to note that these findings support the key tenets of agency, upper echelons, resource dependence, and social psychology theories.

5.8   Revised Conceptual Framework

Following data collection and analysis, a revised conceptual framework, from the conceptual framework as shown in Figure 2.1 above is presented in Figure 5.1 below from the findings of the study. A depiction of the set of relationships and their relationships following data analysis is shown.
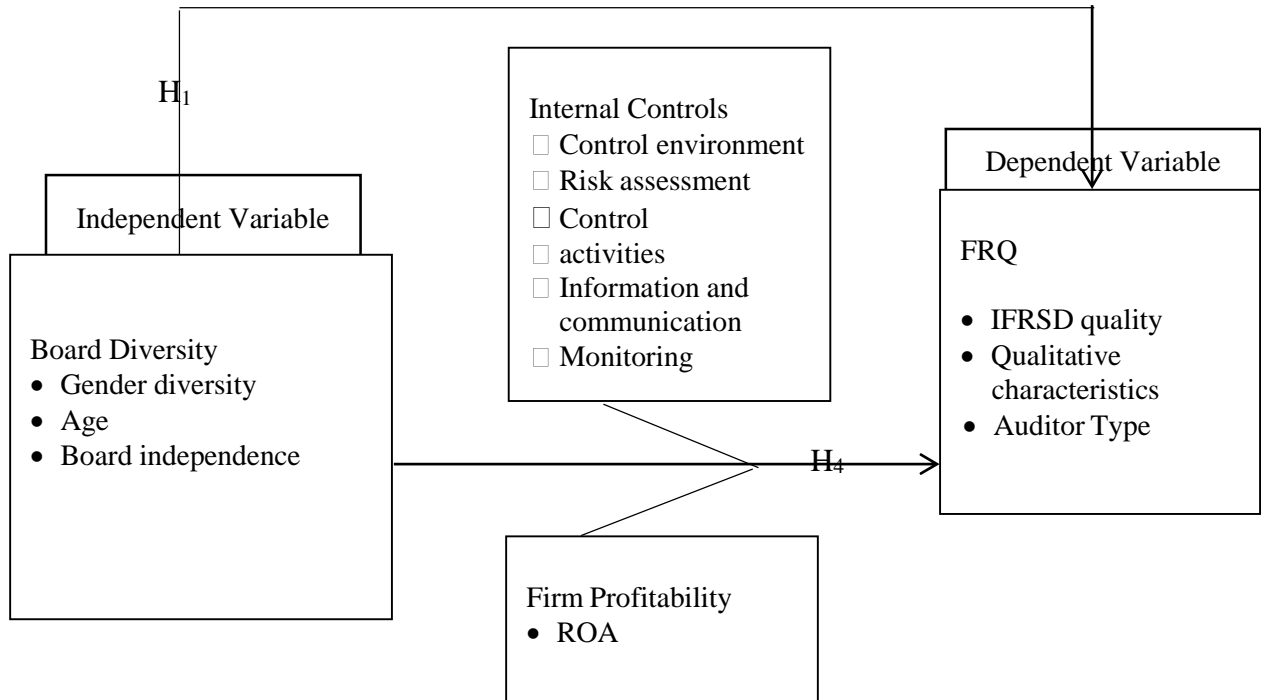
Figure 5.1: Conceptual Framework   Source: Researcher (2021)

To determine the statistical significance between the board diversity and FRQ, the following null hypothesis (H_1) that board diversity did not have a significant influence on FRQ of listed firms at NSE in Kenya, was tested. From the findings, the null hypothesis was rejected and the relationship between board diversity and FRQ as measured by IFRSD, qualitative characteristics and auditor type was maintained.

In addition, the study tested the second null hypothesis (H_2) that firm profitability did not have a significant moderating effect on the relationship between board diversity and FRQ of listed firms at NSE in Kenya, the study failed to reject this null hypothesis as shown in Figure 5.1 above, and hence, this relationship was not maintained. The third objective was focused at examining the statistical significance of internal controls between the

relationship board diversity and FRQ of listed firms at NSE in Kenya. The following null hypothesis (H_3) was formulated and tested, that is, internal controls do not have a significant intervening effect on the relationship between board diversity and FRQ of listed firms at NSE in Kenya. The study failed to reject the null hypothesis and, therefore, the relationships between internal controls, board diversity and FRQ was not maintained.

Further, the study considered testing the combined effect of the study variables (board diversity, firm profitability and internal controls) on FRQ of listed firms at NSE Kenya. The fourth null hypothesis (H_4) was formulated and tested. From the findings, H_4 was subsequently rejected. As Figure 5.1 above shows, the joint effect of board diversity, firm profitability and internal controls relating to FRQ was maintained.

5.9   Chapter Summary

The general goal of this research determined the relationship between board diversity, firm profitability, internal controls, and the FRQ. Secondary data were acquired from the yearly financial reports of NSE-listed companies. Hypotheses were developed and evaluated.

The hypotheses test results show that hypothesis one (H01) that the connection between board diversity and the FRQ of NSE-listed firms in Kenya is significant leading to the rejection of hypothesis one. The fixed-effects regression model depicted a significant relationship between board diversity and FRQ. The second null hypothesis (H02) about the moderating effect of firm profitability on the association between board diversity and FRQ of firms listed at the Kenyan Stock Exchange (NSE) was confirmed.

Likewise, the researcher confirmed the null hypothesis (H03) on the intervening effects of internal controls on the link among board diversity and the FRQ of the firms listed on the NSE in Kenya. Further, hypothesis four (H04), which examined the combined influence of board diversity, firm profitability, and internal controls on quality financial reporting of NSE-listed firms in Kenya, was consequently rejected. The overview of research objectives, hypotheses, and test outcomes is shown in Table 5.30 below.

Table 5.30: Summary of Research Objectives, Hypotheses, and Test Results.

Research Objectives	Hypothesis	Results	Implications
Determine the relationship between board diversity and FRQ of NSE-listed firms in Kenya.	H01: The relationship between board diversity and FRQ of NSE listed firms in Kenya is not significant	Age (β = 0.855, P<0.05), BG (β = 1.241, P<0.05), BIND (β = -1.692, P<0.05), R-squared ($R^{2)}$ = 0.110, F (5,238) = 5.86, $p < 0.05$. are significant predictors of financial reporting quality FBM (β = 0.395, p>0.05) and BQ (β = 0.870, p>0.05) are not significant predictors of financial reporting quality. There is a significant positive relationship between board diversity and FRQ, with board diversity indicators jointly accounting for 11% of the variance in FRQ.	From the results, H01 is rejected implying a statistically significant relationship between board diversity and FRQ of NSE-listed firms in Kenya. The prediction equation is: FRQ_{it}= -2.076+0.855Age$_{it}$+1.241BG$_{it}$ -1.692BIND$_{it}$+ε_{it}
Establish the influence of firm profitability on the relationship between board diversity and FRQ of listed firms at NSE in Kenya.	H2: Firm profitability has no significant moderating influence on the relationship between board diversity and FRQ of NSE-listed firms in Kenya.	BG (β = 1.391, P<0.05), BIND (β = -1.634, P<0.05) and Age (β = .842, P<0.05), BQ (β = .306, P>0.05), FBM (β =.665, P> 0.05). BQ (F (2,241) =0.16, P>0.05), BG (F (2,241) =3.90, P<0.05), FBM (F (2,241) =1.29, P>0.05), BIND (F (2,241) =6.01, P<0.05), Age (F (2,241) =2.74, P>0.05), (FP*Age), age (β= 0.772, P<0.05), FP (β= -0.231, p>0.05). (FP*Age) β=-2.500, P>	The results; Fail to reject H2 implying that FP has a statistically insignificant moderating impact on the relationship between board diversity and FRQ of NSE-listed firms in Kenya.

		0.05), F $(3,240)$ =3.05, P<0.05), R-squared (R^2) = 0.037, $(FP*BG)$, BG $(\beta= 1.620, P<0.05)$, FP $(\beta= -0.132, p>0.05)$, R-squared (R^2) =0.040, $(FP*BQ)$, BQ $(\beta= 0.437, p>0.05)$, FP $(\beta= -0.259, P>0.05)$, R-squared (R^2) =0.009, $(FP*FBM)$, FBM $(\beta= 0.739, p>0.05)$, FP $(\beta= -0.024, p>0.05)$, F $(3,240)$ =0.98, P>0.05), R-squared (R^2) = 0.012. $(FP*BIND)$ BIND $(\beta= -1.512, P<0.05)$, FP $(\beta= -0.208, P>0.05)$, $(FP*BIND)$ $(\beta= -1.771, P>0.05$, R-squared (R^2) = 0.053	
Evaluate the impact of internal controls on the relationship between board diversity and FRQ of NSE-listed firms in Kenya.	H03: Internal controls have no significant intervening effect on the relationship between Board Diversity and the FRQ of NSE-listed firms.	BG $(\beta = 1.391, P<0.05)$, F $(1,242)$ = 7.83, P<0.05, R-squared (R^2) = 0.031, FRQ_{it}=4.164+ 1.391BG_{it} + ε_{it} F$(1,242)$= 2.46, P>0.05, BG $(\beta = 1.322, P>0.05)$, F$(1,242)$= 2.71, p>0.05, IC $(\beta = 0.063, p>0.05)$, R-squared (R^2) =0.011, F $(2,241)$ = 4.9, p<0.05, BG $(\beta = 1.322, p<0.01)$, IC $(\beta = 0.053, p>0.05)$ R-squared (R^2) = 0.039	The results; Fail to reject H03 implying that ICs have a statistically insignificant moderating impact on the relationship between board diversity indicators and FRQ of NSE-listed firms in Kenya.

| | | F (1,242)= 5.49, p<0.05, Age (β = 0.842, P<0.05), IC (β = 0.059, p>0.05), R-squared (R^2) = 0.022,
 F (1,242) = 0.44, p>0.05, Age (β = 0.404, p>0.05)**,**
 F(1,242)= 2.71, p>0.05, IC (β = 0.063, p>0.05),
 R-squared (R^2) was 0.011
 F (2,241) = 3.98, p<0.05, Age (β = 0.818, p<0.05), IC (β = 0.059, p>0.05), R-squared (R^2) = 0.032

 F (1,242) = 12.06, P<0.05, BIND (β = -1.634, p<0.05), R-squared (R^2) was 0.047.

 F(1,242)= 0.06, p>0.05, BIND (β = -0.200, P>0.05),), R-squared (R^2) = 0.002.

 F(1,242)= 2.71,P>0.05, IC (β = 0.063,P>0.05),
 R-squared (R^2) was 0.011.

 F (2,241) = 7.4, p<0.05, BIND (β = -1.622, p<0.05), IC (β = 0.061, p>0.05), R-squared (R^2) was 0.058. | |

Analyze the joint impact of board diversity, firm profitability, and internal controls on FRQ of listed firms at NSE in Kenya.	H4:Board diversity, firm profitability, and internal controls do not significantly impact on FRQ of NSE-listed firms.	$F(7,236)= 4.37, P<0.05$, Age ($\beta = 0.856$, $p<0.05$, BG ($\beta = 1.201$, $p<0.05$), BIND ($\beta = -1.685$, $p<0.05$), BQ ($\beta = 0.861$, $P>0.05$), FBM ($\beta = 0.330$, $P>0.05$), FP ($\beta = -0.058$, $P>0.05$), IC ($\beta = 0.041$, $P>0.05$). R-squared (R^2) = 0.115 suggesting that board diversity indicators, firm profitability, and internal controls jointly account for 11.5% of the variance in FRQ of NSE-listed firms in Kenya.	The results, H4, is rejected, implying a statistically significant relationship between board diversity, firm profitability, internal controls, and FRQ of NSE-listed firms in Kenya. The prediction equation is; $FRQ_{it} = -2.288+0.856Age_{it}+1.201BG_{it} - 1.685BIND_{it}+\varepsilon_{it}$

These findings were discussed and compared to theory and previous research. The results were found to agree as well as differ with several other studies, theoretical, and conceptual propositions. The summary, conclusions, and recommendations are presented in Chapter 6.

CHAPTER SIX: SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

6.1 Introduction

Chapter six summarizes the key research findings based on the hypotheses tested. Based on the empirical findings, several inferences are drawn on account of specific outcome of the hypotheses tested. This chapter also summarizes the study's contribution to knowledge, theory development, management practice, and policy formulation. Moreover, this chapter presents several limitations identified in the course of the study and offers significant recommendations for further research.

6.2 Summary of the findings

Based on the four objectives that guided the study, consistent findings are reported in regards to the four hypothesis that were empirically test. The association between board diversity and the FRQ of Kenyan NSE-listed companies was investigated in Hypothesis one (H01). Regression results from a panel fixed effects model in Table 5.3 reveals that board age (β = 0.855, p<0.05), board gender (BG) (β = 1.241, p<0.05), and BIND (β = -1.692, p<0.05) are all major predictors of FRQ, while board qualifications (β= 0.870, p>0.05) and board nationality (β= 0.395, p>0.05) are not. R-squared (R2) is 0.110, indicating that board diversity indicators jointly account for 11 percent of the variance in FRQ (dependent variable), and the entire model was statistically significant (p<0.05), leading to the rejection of hypothesis one.

The moderating influence of firm profitability on the link among board diversity and FRQ of NSE-listed firms in Kenya was studied in Hypothesis Two (H2). To determine the hypothesized link, the researcher utilized Baron and Kenny's (1986) recommended technique, which looked at each diversity indicator separately. According to the findings of this study, firm profitability had insignificant moderating influence on the link between board diversity indicators and the FRQ (dependent variable) of NSE-listed firms; thus, the study failed to reject hypothesis Two (H02).

The third hypothesis (H03) looked into the mediation effect of internal controls in the relation amid board diversity and the FRQ of the NSE-listed companies. The four-step technique provided by Baron and Kenny (1986) for mediation testing was employed. In step 1 of the mediation model, the model must be statistically significant to determine if the mediator (IC) mediates the association between FRQ and BG. According to the study's findings, the relationship is statistically significant ($p<0.05$). Step 2 requires that the mediator and the dependent variable have a statistically significant relationship. Model 2 was not statistically significant, according to the findings ($p>0.05$, $F(1,242) = 2.46$). Step 3 requires that the mediator and the dependent variable have a strong correlation. According to the findings, IC insignificantly predicts FRQ ($P>0.05$). The association between BG, IC, and FRQ was significant ($p<0.05$). BG ($= 1.322$, $p<0.05$) significantly predicts FRQ, whereas IC ($\beta = 0.053$, $p>0.05$) does not. Hence, since the link among the independent variable and the moderator is non-significant, the moderator variable (IC) has no mediating influence on the association between BG and FRQ (step 2), and the mediator variable (IC) is not a significant predictor of FRQ (step 3).

To establish if the Mediator (IC) mediates the association between FRQ and Age, in step 1, the intervention model must be statistically significant. In model, IC significantly ($P<0.05$) mediates the association between Age and FRQ. The mediator should be correlated to the predictor variable (Age), with a statistically significant relationship (step 2). According to the findings of this investigation, Model 2 was not statistically significant. Step 3 mandates that the association among the mediator and the criterion variable (FRQ) be statistically significant. The findings showed no statistically significant link between FRQ and age ($p>0.05$). The connection between FRQ, Age, and IC was statistically significant ($p<0.05$). IC had no mediating influence on the association between Age and FRQ because the correlation among the predictor variable and the intervener variable was insignificant (step 2). The mediator variable is not a significant predictor of FRQ (step 3).

Finally, step 1 of the mediation model, the model should be statistically significant to assess whether Internal Controls (IC) mediate the relationship between FRQ and BIND. Furthermore, the mediator should be connected with the independent variable (BIND), and the link should be statistically significant (step 2). Model 2 was not statistically significant, per the findings of this investigation. Step 3 requires that the relationship between the mediating variable and the criterion variable be statistically significant ($p<0.05$). The outcomes of the research show a statistically insignificant relationship between FRQ and IC ($p>0.05$). FRQ, BIND, and IC had a statistically significant ($p<0.05$). Because in step 2, the association among the predictor variable and the mediator was insignificant, IC has no mediating impact on the relation between the BIND and the FRQ. The mediator variable is not a significant predictor of FRQ (step 3). Consequently, the study failed to reject (H03).

The fourth hypothesis (H04) looked at the impact of board diversity, firm profitability, and internal controls on the FRQ of NSE-listed firms in Kenya. According to the study outcomes, board diversity, firm profitability, and internal controls, jointly significantly predicts the FRQ of NSE-listed companies in Kenya. The total model was statistically significant ($R2 = 0.115$, $F(7,236)= 4.37$, and $P< 0.05$), demonstrating that board diversity, firm profitability, and internal controls all have a significant association with the FRQ of Kenyan NSE-listed companies, hence leading to rejection of null hypothesis four (H04).

6.3   Conclusions of the Study

On the basis of the empirical results, the current study draws several conclusions. Apparently, there is convergence in findings with the prior empirical literature in regard to the relationship among board diversity, firm profitability, internal controls and FRQ. The study determined the relationship between board diversity, company profitability, internal controls, and FRQ among Kenyan NSE-listed companies. Agency theory, upper echelons theory, resource dependency theory, and social psychological theory informed the research. The investigation was built on a positivist research philosophy since existing theories and literature supported it. The researcher used statistical tools to test hypotheses and draw conclusions about the relationship between study variables. The study included sixty-one (61) NSE-listed companies. It looked at secondary data from NSE-listed organizations' yearly audited financial reports for five years and found a response rate of 92 percent.

The study's first goal was looked at the correlation among board diversity and FRQ of Kenyan NSE-listed companies. According to the findings, hypothesis one (H1) was rejected, implying that board diversity and the FRQ of NSE-listed firms have a substantial

link. Age, board gender, and board independence are three factors that influence this relationship. Increased board age and gender would result in better financial reporting, whereas increased board independence would result in a considerable drop in financial reporting quality. Failure to reject hypothesis two (H02) implies that firm profitability does not moderate the relationship between board diversity and FRQ. Likewise, failure to reject hypothesis three (H03) implies that internal controls do not intervene in the relationship between board diversity and FRQ and the rejection of Hypothesis four (H4) suggests that board diversity, firm profitability, and internal controls jointly significantly influence the FRQ of NSE-listed firms in Kenya.

6.4 Contributions of the Study

This empirical investigation's results advance literature in three different ways. First, it significantly advances knowledge and theory, particularly in the areas of agency theory, resource dependency theory, upper echelons theory and social psychology theory. Second, it contributes favourably to management practice and thirdly, it contributes to policy formulation that directs economic growth.

6.4.1 Contribution to Knowledge

The study's outcomes contribute to past research and understanding of the effect of board diversity (gender, age, and board independence) on improved FRQ. The study's main contribution is that board diversity indicators jointly predicted FRQ. Several previous works of literature (Klai & Omori, 2011; Barua et al. 2010; Makhlouf et al., 2018; Ho et al., 2015; Pulungan & Sadat, 2014; Yunos, 2011), explored the relationship amid board diversity and FRQ revealed consistent results. The study's findings are inconsistent with

other strands of literature (Labelle et.al., 2010; Dobbin & Jung, 2010) which revealed that board diversity and FRQ had a statistically significant but negative association.

Similarly, the third strand of research found no link between board diversity and financial reporting quality (Muhammad et al., 2016; Firoozi et al., 2016). Another important addition is the lack of a moderation influence of firm profitability on the connection among board diversity and the FRQ. Furthermore, the indicators utilized in these studies for board diversity and FRQ were not the same as those employed in the current study. Moreover, these studies employed indicators of board diversity and FRQ that were different from the indicators used in the present study. Furthermore, their findings show that organizations with geographically dispersed independent directors have low FRQ unlike organizations with less geographically dispersed boards, as assessed by the level of restatements and abnormal accruals.

This study employed IFRS Disclosure, qualitative qualities, and auditor type as FRQ indicators, which were not jointly used in previous studies. The analysis is enhanced by looking into the moderating effect of firm profitability on the correlation among board diversity and the FRQ. Because the findings show that firm profitability does not significantly influence the association amid board diversity and FRQ of Kenyan NSE-listed firms, it provides further information for future research.

Furthermore, the study adds to previous research by examining the impact of ICs on the connection amid board diversity and FRQ of NSE-listed companies. The impact of ICs on FRQ has been studied before, but the results have been equivocal and conflicting (Mawanda, 2008; Bongani, 2013; Widyaningsih, 2016; Edward, 2011). The study looked

at the direct intervening influence of internal controls on the connection among board diversity and FRQ using Baron and Kenny's (1986) approach.

6.4.2 Contribution to Policy and Practice.

The board of directors of the NSE-listed companies could use appropriate choices in terms of board diversity to improve financial reporting quality, particularly in terms of female representation, board independence, and age. According to the study's findings, age, BIND, and BG all significantly impact FRQ. Given the board of directors' oversight role, the research can help the appointing authorities guarantee that board members have the proper skills, qualifications, experience and independence, age, and gender balance, hence strengthening governance frameworks, leading to better FRQ.

The findings may be used by financial reporting regulators, for instance, the ICPAK, in their supervisory efforts to enhance proper disclosures in yearly audited financial reports. Financial reporting measures may be included in the Auditor-audit General's goals. The Auditor-General may make value-adding suggestions to strengthen FRQ in Kenyan NSE-listed firms. Because the outcome of the research state that board diversity indicators, firm profitability, and internal controls jointly significantly impacted the FRQ of NSE-listed firms, the control environment, a crucial part of the internal control framework, should be tightened by hiring people with integrity and ethical beliefs for managerial positions, including board positions. The accuracy of financial data disclosures in yearly reports and audited financial statements and the integrity of financial reporting systems will be improved. A thorough risk assessment and feedback strategies that might help financial

reporting stakeholders acquire trust should be undertaken regularly to find difficulties in the process of financial reporting.

6.4.3 Contribution to Theory.

To test hypotheses and empirically support or falsify theories, the current study was guided by positivist research philosophy. According to the findings, board diversity significantly predicts the FRQ of Kenyan NSE-listed companies. To defend the interests of shareholders, the board of directors oversees the operations of organizations. The findings show that board age, board independence, and board gender significantly impact financial reporting quality, minimizing conflicts among management and shareholders, validating the agency theory, which focuses on agency conflicts between agents (management) and principals (shareholders).

The impact of board diversity attributes on FRQ strengthens resource dependence theory and upper echelons theory. Through its monitoring functions in the governance systems of NSE-listed firms, the board protects stakeholders' interests. Furthermore, when robust IC systems are created and implemented, institutions' capacities are increased and strengthened in the best interests of stakeholders.

6.5 Recommendations

Financial information of high quality is essential as it positively affects stakeholders in making acquisition, funding, and associated resource management decisions that improve firms' overall growth. The objective at a broad level was to explore the relationship among board diversity, firm profitability, internal controls and FRQ of NSE-listed firms. The

conclusions arrived at in this study pave the way for policy implications on the study findings.

This research has expanded many horizons of knowledge from study findings. It adds credibility to agency theory that selecting the best corporate governance practices for the board is vital for a firm that needs to out-perform other firms in the industry by enjoying a competitive advantage. This study established the significance of various theories and their influence in supporting the hypothesized association.

The study supports the established theories, such as agency theory. For instance, board diversity in its various dimensions minimizes this current agency concern, thus introducing an ordinary relation between different governance mechanisms at the board level and financial reporting. It could now be argued that an effective board should provide quality financial reporting. Poor board systems will allow the managers to participate in actions that will potentially result in inventive financial statements by earnings distortion. The agency theory best illustrates this opportunistic management behaviour. According to the conclusions of this research, the board of directors acts as a shareholder representation in transparent financial reporting that appropriately reflects the entity's financial performance and position. In other words, board diversity with proper internal control systems is an internal governance mechanism that companies focus on countering opportunistic managerial behaviours. Further, motivation via profits acts as an appropriate tool for reaching the objectives and wishes of the shareholders. Following the social psychological theory, these motivations, in turn, could lead to more accurate and effective decision-making.

The policy initiatives are to enjoy the findings for their applicability. Some NSE-listed firms have not received the best governance at the board level, yet they are essential to the overall performance of the industry and the contribution to the growth of the economy. As a result, policymakers will be able to use this as a guide to design policies to improve the FRQ for companies. For instance, ICPAK in their financial reporting supervisory role may use the findings to enhance financial disclosure requirements.

The board is responsible for internal financial reporting and regulating the company's overall operations. Managers thus need to strengthen the structures for internal controls to boost FRQ. Board members, managers, and other key personnel have to ensure fair certainty about accomplishing the entity's goals in respect to quality and efficacy of operations, transparency of financial reports, and adherence to existing rules and regulations while safeguarding the company's image.

The board of directors, the corporation's top management organ, makes decisions regarding day-to-operations and supervisory functions such as evaluating a firm's performance and important choices related to the company's objectives. As a result, effective boards are necessary to encourage new ideas and knowledge application to propel and integrate the organization into the competitive worldwide market. In practice, managers need to adopt good governance and embrace diversity to aid companies in practicing quality financial reporting. Good reporting correlates with high-level market dynamism causing firms to become more interested in technological trends.

Efficient internal controls help firms to stop fraud errors and minimize wastage. Additionally, managers need to understand that efficient internal control systems act as the

first line of protection in securing money, avoiding and even helping to detect fraudulent activities. Further, managers ought to understand that the critical goal of any venture includes profitability. Profitable enterprises have opportunities for growth and hence can reveal better information to demonstrate the quality of their projects and the undertakings they plan to achieve. Doing so will expand their reputations and avoid underestimating their behaviour.

6.6   Study's Limitations

The current study looked at the association between board diversity and the FRQ of NSE-listed companies. It further explored the influence of internal controls and firm profitability on the hypothesized association. However, the study had some limitations. For example, there was a challenge of obtaining data from firms that had not complied via having all their financial statements in the public domain for some years going into the study period. This led to their exclusion and thus lowered the degrees of freedom. Second, the study ignored unlisted firms. Therefore, any generalization of the results of this study cannot be made without caution.

It was impossible to accommodate natural changes in the corresponding processes and the general population (board members). Repeated measurements employed in panel data, on the other hand, may produce streamlined and stereotypical answers; comparability measurement instruments may be compromised over time. Moreover, panel data depicted an invaluable tool to deal with several biases that can be adopted to conclusions from other sources of data structures. Furthermore, with panel data, the temporal order of probable

causes of a given effect can be known through repetitive measurements at a personal level, meaning that the policy recommendations and causal conclusions have greater foundations.

6.7   Areas for Further Research

This research focused only on those firms that give the best results and thus are listed on NSE. This can be a limitation since such results cannot be generalized by extension to other firms across the industry. As a result, the sample size could be enlarged, and non-listed companies may be researched alongside listed companies. The results may be inclusive to all companies, not only those listed to champion but rather facilitate generalization. The variables considered, for example, the board diversity, can do well for all firms, not only the listed ones, to have worthwhile research. More empirical studies will be in the best interest to uncover what happens in other countries for comparison purposes and provide more wide coverage regarding the current study objectives. The study employed secondary data for five years (2014-2018); future research might go backward, say ten years (2011-2021), to ascertain the long-run influence of board diversity indicators on FRQ.

Future studies should consider using multiple respondents from each firm, as this is preferable and provides more reliable data. The study can be expanded to examine how employees in different departments and at different management levels differ on the study's critical factors by selecting multiple respondents from various departments (marketing, finance, operations) and management levels.

In conclusion, the study could not exhaust all statistical procedures used in similar studies. Given that each model used has its strengths and demerits, this study might have used a range of statistical methodologies. Other statistical approaches might have produced

different results, and supplemented current empirical evaluations and related studies. This research performed correlation and regression analyses to check diverse variable linkages. Future research might use various econometric approaches, such as the Autoregressive Distributive Lag (ADL) model. In addition, future research should investigate using multiple techniques (that is, quantitative and qualitative).

6.8   Chapter Summary

This chapter has summarized the study outcomes as associated with four study objectives and corresponding testing of the study hypotheses. Also, the chapter has presented a summary of the study results. It has highlighted the theoretical, policy, and managerial implications. Applying a board diversity approach has significantly impacted FRQ and, thus, strategies necessary to maintain improved FRQ across firms listed in Kenya. The research concluded by outlining the study's limitations and related areas for future research.

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APPENDICES

Appendix I: Introductory Letter

UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES & SOCIAL SCIENCES
SCHOOL OF BUSINESS

Telephone: 0724-200311   P.O. Box 30197
Telegrams: "Varsity" Nairobi   Nairobi, KENYA
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17th August, 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER FOR RESEARCH
ROSE KOLI JAMHURI – REGISTRATION NO. D80/72538/2012

The above named is a registered PhD candidate at the University of Nairobi, School of Business. She is conducting research on *"Board Diversity, Firm Profitability, Internal Controls and Financial Reporting Quality of Nairobi Securities Exchange Listed Companies"*.

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the research project. The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

Thank you.

21/8/2020

Prof. Mary Kihoti
Associate Dean, Graduate Business Studies
SCHOOL OF BUSINESS

Appendix II: Nairobi Securities Exchange Listing

Agricultural Category
1.   Eaagads
2.   Kakuzi
3.   Kapchorua Tea Company
4.   Limuru Tea Company
5.   Rea Vipingo Plantations
6.   Sasini Ltd
7.   Williamson Tea Kenya

Automobiles and Accessories
1. Car and General
2. Marshalls East Africa

Banking
1.   Barclays Bank
2.   Stanbic Kenya Holdings
3.   Diamond Trust Bank
4.   Equity Group Holdings
5.   Housing Finance
6.   I&M Holdings
7.   Kenya Commercial Bank
8.   National Bank
9.   NIC Bank
10.   Standard Chartered
11.   Co-op Bank of Kenya

Commercial and Services
1.   Express
2.   Hutchings Biemer
3.   Kenya Airways
4.   Longhorn Kenya
5.   Nation Media Group
6.   WPP Scangroup
7.   Standard Group
8.   TPS EA (Serena)
9.   Uchumi Supermarket
10.   Sameer Africa
11.   Deacons EA
12.   Nairobi Business Ventures
13.   Atlas African Industries

Construction and Allied
1.   ARM Cement
2.   35. Bamburi Cement

3.   36. Crown Paints Kenya
4.   37. E.A. Cables
5.   38. E.A. Portland cement

Energy and Petroleum
1.   KenGen
2.   KenolKobil Ltd
3.   KP&LC
4.   Total Kenya
5.   Umeme Ltd

Insurance
1.   Britam Holdings
2.   CIC Insurance
3.   Jubilee Holdings Group
4.   Kenya Re Corporation
5.   Liberty Kenya Holdings
6.   Sanlam Kenya

Investment and Services
1.   Centum Investment Company
2.   Olympia Capital Holdings
3.   Transcentury
4.   Nairobi Securities Exchange
5.   Home Africa
6.   Kurwitu Ventures

Manufacturing and Allied
1.   A Baumann & Company
2.   BOC Kenya
3.   BAT Kenya Ltd
4.   Carbacid Investments
5.   East African Breweries
6.   Eveready EA
7.   Kenya Orchards
8.   Mumias Sugar Company
9.   Unga Group
10.   Flame Tree Group Holdings

Telecommunication and Technology
 1.   Safaricom Ltd

Source: www.nse.co.ke (2018)

Appendix III: Board Diversity and Firm Profitability Data Capture Form

Name of the company……………………………………….

Year ………………………….

Data values from the company's final reports and website

(All amounts should be in Kenya Shillings)

Item /Years	2014	2015	2016	2017	2018
Profit after tax					
Total assets					
Total debt					
Total equity					
Total number of board members					
Number of board members with a higher degree such as master's or Ph.D. in accounting /finance or CPA					
The average age of directors					
Number of female board member					
Number of independent non-executive board directors					
Number of foreign board members					

Appendix IV: Internal Controls and Auditor Type - Data Capture Form

Internal Control Framework	Score	2014	2015	2016	2017	2018
Control Environment						
Any manual or guidelines on internal control in the company?	1 for yes, 0 for no					
Any committee in charge of internal control (audit committee or risk management committee at the board level)?	1 for yes, 0 for no					
The board chairman and the CEO is not one person?	1 for yes, 0 for no					
Any human resource policy?	1 for yes, 0 for no					
Risk Assessment						
Any committee or department for risk management?	1 for yes, 0 for no					
Any risk evaluation disclosed in the annual report?	1 for yes, 0 for no					
Any safety and environmental risk disclosed?	1 for yes, 0 for no					
Are main risks specified?	1 for yes, 0 for no					
Control Activities						
Any control for authorizing and approving?	1 for yes, 0 for no					
No fixed asset impairment this year	1 for yes, 0 for no					
Any committee or department for budgeting?	1 for yes, 0 for no					
Any emergency response system?	1 for yes, 0 for no					
Information and Communication						
Any channel for internal communication of information?	1 for yes, 0 for no					
Is the annual audit opinion a non-qualified one?	1 for yes, 0 for no					
There was no accounting error or correction	1 for yes, 0 for no					
There was no auditor switching	1 for yes, 0 for no					
Monitoring						
Any evaluation of the execution of the internal control inspection	1 for yes, 0 for no					

Any plan to improve internal control?	1 for yes, 0 for no					
Any opinion from the board of directors on internal control?	1 for yes, 0 for no					
Any opinion from the auditor on internal control?	1 for yes, 0 for no					
Auditor Type						
Is auditor type from the Big 4?	1 for yes, 0 for no					

Appendix V: International Financial Reporting Standards Disclosure Index Data Capture Form

NAME OF COMPANY ……………………… YEAR ………

For each of the IFRS/IAS analyzed in the questionnaire, indicate a score of 1 if yes or 0 if no.

Statements			2014	2015	2016	2017	2018
DQA	IAS Ref.	Preparation and Presentation of Financial Statements Disclosures IAS 1					
DQA1	IAS 1.10	Has the entity prepared and presented a complete set of financial statements which include a statement of financial position, statement (s) of profit or loss and other comprehensive income, statement of changes in equity, statement of cash flow, and notes?					
DQA2	IAS 1.16	If the entity's financial statements comply with IFRSs has the entity made an explicit and unreserved statement of such compliance in the notes?					
DQA3	AIS 1.25	Has the entity prepared financial statements on a going concern basis, unless management intends to liquidate the entity or cease trading or has no realistic alternative but to do so?					
DQA4	AIS 1.27	Has the entity prepared its financial statements, except for cash flow information, using the accrual basis of accounting?					
DQA5	IAS 1.49	Has the entity identified the financial statements and distinguished them from other information in the same published document?					
DQA6	IAS 1.51	Has an entity displayed the presentation currency prominently, and repeated it when necessary for the information presented to be understandable?					
DQB	IAS Ref.	Inventories AIS 2					
DQB7	AIS 2.36 (a)	Have the entity's financial statements disclosed the accounting policies adopted in measuring inventories, including the cost formula used;					
DQB8	AIS 2.36 (b)	Have the entity's financial statements disclosed the total carrying amount of inventories					
DQB9	AIS 2.36 (c)	Have the entity's financial statements disclosed the carrying amount of inventories carried at fair value less costs to sell					
DQC	IAS Ref.	Accounting Policy Disclosures AIS 8					
DQC10	IAS 8.13	Has the entity selected and applied its accounting policies consistently for similar transactions, other events, and conditions, unless an IFRS specifically requires or permits categorization of items for which different policies may be appropriate?					
DQD	IAS Ref.	Events after the Reporting Period AIS 10					
DQD11	IAS 10.17	Has the entity disclosed the date when the financial statements were authorized for issue and who gave that authorization?					
DQE	IAS Ref.	Property Plant & Equipment Disclosure IAS 16					
DQE12	IAS 16 P73 (a)	Have the entity's financial statements disclosed the measurement bases used for determining the gross carrying amount for each class of property, plant and equipment?					
DQE13	IAS 16.73 (b)	Have the entity's financial statements disclosed the plant and equipment the depreciation methods used for each property class?					

DQE14	IAS 16.73 (c)	Have the entity's financial statements disclosed the useful lives of each class of property, the plant, and equipment, or the depreciation rates used?					
DQE15	IAS 16.73(d)	Have the entity's financial statements disclosed the gross carrying amount for each class of property, the plant and equipment, and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period?					
DQE16	IAS 16.73 (e)	Have the entity's financial statements disclosed, for each class of property, the plant and equipment a reconciliation of the carrying amount at the beginning and end of the period showing; additions, disposals, depreciation, and impairment losses?					
DQF	IAS Ref.	State ment of Cash flows AIS 7					
DQF17	AIS 7.13	Has the entity disclosed the cash flows arising from operating, investing, and financing activities?					
DQF18	AIS 7.25	Has the entity recorded cash flows arising from transactions in a foreign currency in an entity's functional currency by applying to the foreign currency amount the exchange rate between the functional currency and the foreign currency at the date of the cash flow?					
DQF19	IAS 7.45	Has the entity disclosed the cash and cash equivalents presented a reconciliation of the amounts in its statement of cash flows with the equivalent items reported in the financial statements?					
DQF20	AIS 7.35	Has the entity separately disclosed cash flows arising from taxes on income classified as cash flows from operating activities unless they could be specifically identified with financing and investing activities?.					
DQF21	AIS 7.31	Has the entity separately disclosed cash flows from interest and dividends received and paid and classified each in a consistent manner from period to period as either operating, investing, or financing activities?					

Appendix VI: Operational Measures Utilized for the Qualitative Characteristics

NAME OF COMPANY ……………………… YEAR ………

For qualitative characteristics analyzed in the questionnaire, award a score of 1 if the

firm's financial statements met the characteristic and 0 if the firm's financial statements

did not meet the characteristic.

Qualitative Characteristics	Score	2014	2015	2016	2017	2018
Relevance						
R1 Has annual reports disclosed forward-looking information?	1 for yes, 0 for no					
R2 Has the annual reports disclosed information in terms of business opportunities and risks?	1 for yes, 0 for no					
R3 Has the company used fair value as a measurement basis?	1 for yes, 0 for no					
R4 Has the annual report provided feedback on how various market events and significant transactions affected the company?	1 for yes, 0 for no					
R5. Has the annual report contained information onCSR?	1 for yes, 0 for no					
R6.Has the annual report properly disclosed the extraordinary gains and losses?	1 for yes, 0 for no					
R7. Has the annual report contains information regarding personnel policies?	1 for yes, 0 for no					
R8. Has the annual report contains information concerning divisions?	1 for yes, 0 for no					
R9. Has the annual report contains an analysis concerning cash flows?	1 for yes, 0 for no					
R10.Has the annual report disclosed the intangible assets sufficiently?	1 for yes, 0 for no					
R11. Has the annual report disclosed the "off-balance" activities?	1 for yes, 0 for no					
R12. Has the annual report disclosed the financial structure?	1 for yes, 0 for no					
R13. Has the annual report contained information concerning the companies' going concern?	1 for yes, 0 for no					
Relevance total score (13)						
Faithful representation						
F1 Has the annual report explained the assumptions and estimates made clearly?	1 for yes, 0 for no					

F2 Has the annual report explained the choice of accounting principles clearly?	1 for yes, 0 for no					
F3 Has the annual report highlights the positive and negative events in a balanced way when discussing the yearly results?	1 for yes, 0 for no					
F4 Has the annual report included an unqualified auditor's report?	1 for yes, 0 for no					
F5 Has the annual report extensively disclosed information on corporate governance issues?	1 for yes, 0 for no					
F6. Has the annual report contained disclosure related to both positive and negative contingencies?	1 for yes, 0 for no					
F7. Has the annual report contain information concerning bonuses of the board of directors?	1 for yes, 0 for no					
Faithful representation total score (7)						
Understandability						
U1 Has the annual report been well organized?	1 for yes, 0 for no					
U2 Are notes to the balance sheet and the income statement clear?	1 for yes, 0 for no					
U3 Do graphs and tables clarify the information presented?	1 for yes, 0 for no					
U4 Does the use of language and technical jargon easy to follow in the annual report?	1 for yes, 0 for no					
U5 Has the annual report included a comprehensive glossary?	1 for yes, 0 for no					
U6. Is the annual report understandable in the perception of the researcher?	1 for yes, 0 for no					
Understandability total score (6)						
Comparability						
C1 Does the company make notes of changes in accounting policies to explain the implications of the change?	1 for yes, 0 for no					
C2 Does notes to revisions in accounting estimates and judgments explain the implications of the revision?	1 for yes, 0 for no					
C3 How do the company's previous accounting period's figures adjusted for the effect of the implementation of a change in accounting policy or revisions in accounting estimates?	1 for yes, 0 for no					
C4 Are the results of the current accounting period compared with results in previous accounting periods?	1 for yes, 0 for no					
C5 Does the information in the annual report comparable to information provided by other organizations?	1 for yes, 0 for no					
C6 Does the annual report present financial index numbers and ratios?	1 for yes, 0 for no					
Comparability total score (6)						
Timelines						
Has the auditors' report been signed within 90 days after book year-end?	1 for yes, 0 for no					

Source: Braam & Beest, 2013 adapted.

Appendix VII: Research Permit

This is to Certify that Ms. ROSE Kali JAMBURI of University of Nairobi, has been licensed to conduct research in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Emba, Garissa, Homabay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makueni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Tanariver, Tharaka-Nithi, Transnzoia, Turkana, Uasin-Gishu, Vihiga, Wajir, Westpokot on the topic: BOARD DIVERSITY, FIRM PROFITABILITY, INTERNAL CONTROLS, AND FINANCIAL REPORTING QUALITY OF NAIROBI SECURITIES EXCHANGE LISTED COMPANIES IN KENYA for the period ending: 30/November/2021.

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