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**Audit committee attributes, Internal Audit Function, and fraud risk
management: A Case of CGIAR Organizations in Kenya**

Phoebe Awuor Omondi Owiti

**A Thesis Submitted in Partial Fulfilment of the Requirements for the Award
of Degree of Master of Commerce at Strathmore University**



**Strathmore Business School
Strathmore University**

Nairobi, Kenya

May, 2025

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Phoebe Awuor Omondi Owiti

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Date: 20th May 2025

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Date: 20th May 2025

ABSTRACT

More than ever, all stakeholders in an entity must work collaboratively to effectively tackle the ever rising risk of fraud. The role of the audit committee has been determined to be central in effectively managing fraud risk in organisations. Whilst numerous past studies have been conducted on the effect of audit committee attributes on fraud risk management their conclusions have been varied. Additionally, these studies did not consider the moderating variables between the audit committee attributes and fraud risk management. Consequently, these past studies demonstrated geographical, contextual, methodological, and conceptual gaps. This study's objective was to contribute in bridging the noted research gaps by assessing the level of influence of the audit committee attributes on fraud risk management in organizations and the moderating effect of the presence of an internal audit function. The study was conducted on nine CGIAR organizations with a presence in Kenya, targeting a sample of 185 respondents selected through stratified random sampling. It applied the quantitative research design and used a questionnaire with closed-ended questions and a 5-tier Likert scale for data collection. Ordinal logistic regression was used to test the direct influence of audit committee attributes on fraud risk management. The study's findings revealed that the audit committee attributes i.e. composition, independence, meetings, and expertise significantly predicted variations in fraud risk management. The moderation model demonstrated that the internal audit function significantly enhanced the relationship between audit committee attributes and fraud risk management. The study concluded that audit committees that had well constituted and inclusive memberships; that were functionally relationally, and structurally independent; that held frequent and well-structured meetings; and that had committee members with adequate financial know-how were critical in achieving effective fraud risk management. Further, the study also concluded that the presence of internal audit functions enhanced the effectiveness of audit committees in enhancing fraud risk management. The study recommended that policymakers, regulators, CGIAR headquarters, and CGIAR organizations enhance the characteristics of audit committees and institute fraud risk framework. The findings of the study will also inform future research into the interplay between audit committee characteristics and the internal audit function on fraud risk management. The study's limitations included the limitation of scope to CGIAR organizations; the application of a quantitative methodology which excluded information that could have been derived from adding qualitative approaches; and the exclusion of audit committee members as respondents to the study.

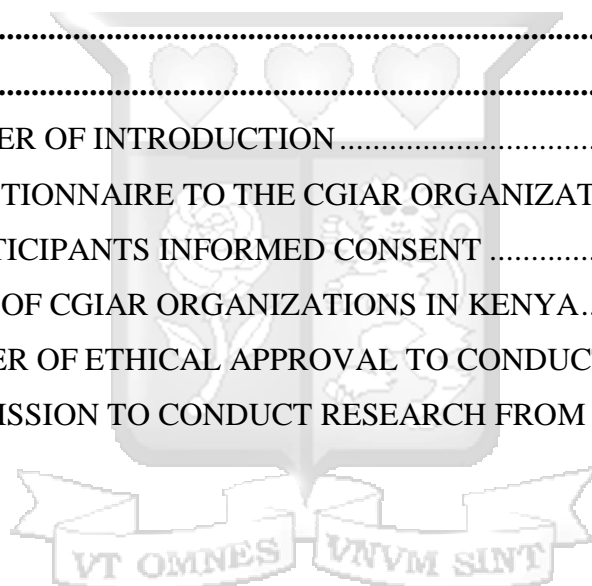
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LIST OF ABBREVIATIONS

ACFE.....	Association of Certified Fraud Examiners
AfricaRice.....	Africa Rice Center
CGIAR	Consultative Group for International Agricultural Research
CIFOR-ICRAF.....	Center for International Forestry Research and World Agroforestry
CIMMYT.....	International Maize and Wheat Improvement Center
ESG	Environmental, Social and Governance
Et al	Et alia or and others
Etc	Et cetera
FAO.....	Food and Agriculture Organization
I.e.....	Id est or that is
ICARDA.....	International Center for Agricultural Research in the Dry Areas
IFAD	International Fund for Agricultural Development
IITA.....	International Institute of Tropical Agriculture
ILRI.....	International Livestock Research Institute
International Bioversity – CIAT	The Alliance of Bioversity and International Center for Tropical Agriculture
IRRI.....	International Rice Research Institute
NACOSTI.....	National Commission for Science, Technology, and Innovation
PFM.....	Public Finance Management
PwC.....	PricewaterhouseCoopers
SEC	Securities and Exchange Commission
UNDP	United Nations Development Programme

DEFINITIONS OF OPERATIONAL TERMS

- Audit Committee:** An audit committee is a part of an entity's board that oversees financial reporting, risk management, and compliance processes (Velte, 2020).
- Fraud:** Fraud refers to a statement of a substantial fact that is untrue, intentional and is believed by the victim who acts on it and suffers damage (Cheliatsidou et al., 2023)
- Fraud can also be defined as a deed of deliberate dishonesty with an objective of acquiring some benefit that is damaging to another party (Ambiyo, 2020)
- Fraud Risk:** Fraud risk is the likelihood or probability of an unforeseen monetary, reputational, or substantial damage, from duplicitous actions of an internal or external player (Power, 2021).
- Fraud Risk Management:** Fraud risk management is defined as the holistic and proactive fraud mitigation approach that is embedded within an organization with the aim of fraud deterrence and early exposure of fraud symptoms (Power, 2021)
- Internal Audit** Internal auditing is a standalone and impartial assurance and advisory function aimed at enhancing value and optimizing an organization's operations. It assists the organization in meeting its goals by utilizing a methodical and structured approach to assess and enhance the efficacy of risk management, control measures, and governance frameworks (Institute of Internal Auditors, 1983).

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DEDICATION

I dedicate this study to my children Mark, Catherine and Jude whom I pray will grow up to be persons of integrity who will work towards fostering accountability to create a more honest world. I also dedicate this study to the Women on Boards Kenya who have been working tirelessly to ensure female representation in boards and in places of influence.



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The ACFE (2021) explains fraud risk management as a wide-ranging outline for detecting, appraising, and putting in place mitigating measures against the various fraud categories. To manage the risk of fraud therefore, an organization must employ both proactive i.e. preventive controls as well as reactive i.e. detective controls (Power, 2021). Chen et al., (2015) argued that in the absence of actual fraud risk management, entities could suffer substantial pecuniary losses, reputational destruction, and possible legal exposure from fraud. Lister (2021), in emphasizing the importance of fraud risk management indicated that if the possibility of fraud is left unimpeded, it grows to become a culture which inhibits the organization's growth.

ACFE (2021) characterizes fraud as any act that is based on deception in order to obtain a benefit. The risk of fraud affects all organizations (Khadra & Delen, 2020). Based on a study by Khadra and Delen (2020), the far reaching effects of fraud include the undermining of the rule of law, the violation of liberties, lack of transparency in institutions, loss of resources, and the erosion of investors' capital in organisations. Erbuga (2020) agrees that the risk of fraud is a worldwide problem and that individuals within and without an organization gain overtly or covertly from fraud to the detriment of the affected entity.

Fraud is estimated to cost organizations all over the world up to 5% of their yearly revenues (Onyango, 2022). Actually, in a study by PwC on worldwide economic crimes, over 4,000 out of 6,000 respondents stated that they had fallen prey to corporate fraud in the last 24 months (PwC, 2022). Indeed, fraud continues being a global threat whose impact is shattering due to substantial monetary losses, permanent damage to reputation, legal exposure, and waning employee morale, all of which can eventually risk the survival of an organization (Albrecht et al., 2018). According to a survey premised on country-specific fraud reports, although it is difficult to objectively state the direct loss from fraud, determining the indirect costs related to the risk of fraud was even more

daunting because the full extent of loss for some fraud only unravel over a long space of time (ACFE, 2021).

Owing to the fact that fraud is a growing concern, it is critical that the governance bodies of organizations prioritize the management of fraud risk (Power, 2021). Effectively reducing fraud risks calls for collaborative efforts of all stakeholders, with the board, management, auditors and policymakers working together to proactively tackle the problem of fraud (Yazdani, 2021). This is more so because of the more interlinked nature of economies and global supply chains, the emergent modern day catastrophes and the ESG implications of these factors (Agić & Jeremić, 2023).

The current state of the world, in addition to the fact that digitalization and resultant cyber-risks increases an organization's fraud risks, requires that all stakeholders, including audit committees collaborate in mitigating these fraud risks (Agić & Jeremić, 2023). The board must lead in the fight against the various classes and schemes of corporate fraud (Salawu et al., 2023). For the board to fulfil its primary responsibility for corporate reporting to the organization's stakeholders, it relies greatly on its audit committee to watch over corporate risks, controls, fiscal disclosure and audits (Wilbanks et al., 2017). The obligation of the board's committee of finance and audit has been expanded to encompass the monitoring of the quality of the corporate reporting processes (including whistleblowing platforms), the robustness of the audit of financial statements and the quality of sustainability assurance (Agić & Jeremić, 2023). The audit committee is therefore critical in the assessment and mitigation of corporate fraud risks (Mwangi & Ndegwa, 2020).

1.1.1 Audit Committee Characteristics and Fraud Risk management

The audit committee is a subset of an entity's board of trustees or directors or advisors that is entrusted with the scrutiny and oversight of monetary reporting processes, the corporate risk oversight practices, the internal control processes, the selection of auditors, and the consideration of reports from internal and external auditors (Othman et al., 2010). Various studies (Mnif & Borgi, 2017; Appuhami & Tashakor, 2017; Buallay, 2018; Khudhair et al., 2019; Endrawes et al., 2020; Fariha et al., 2022) have found that the efficacy of this committee in delivering on its obligation

and mandate depend of its characteristics and attributes which include size, structure, independence, competence, meetings, number of other board memberships, age of members, rotation, tenure, equity ownership and continuous learning. Of these audit committee characteristics and attributes, composition, independence, quality of meetings, and expertise are the most relevant for fraud risk management (Yu, 2013; Soltani, 2014; Wilbanks et al., 2017; Bhagat & Bolton, 2019; Abdullah & Said, 2019; Ambiyu, 2020; Velte, 2023; Biswas et al., 2023; Jibril et al., 2023).

McLaughlin et al. (2021) defines the composition of the audit committee as constitution of the members of this committee in terms of their demographic features e.g. age and gender, as well as personal attributes such as their standing in society. The committee's independence refers to its actual and perceived separation and removal from the routine functioning of the organization as demonstrated by its objectivity and lack of conflict of interest (Almakhfor & Norton, 2021). Oussii et al. (2019) explain meetings of the committee to be the periodic deliberations between the respective members, auditors, and management over the accounting processes, audit reports, emerging risks, and mitigating controls. Velte (2020) defines the collective expertise of the committee as the individual members' accounting know-how, practical experience, financial skill, and relevant industry understanding.

Velte (2023) posits that the audit committee's constitution, removal from routine organizational functions, meetings and proficiency are essential characteristics in fraud risk management. Various studies endorse the notion that these specific attributes of audit committees have an influence on fraud risk management. For example, Yu (2013) argues that a well constituted and independent audit committee is the key to achieving public accountability practices that in turn supports fraud detection and prevention; Ambiyu (2020) adds that to have effective fraud mitigation, these characteristics of audit committees should be carefully considered; Bhagat and Bolton (2019) aver that these attributes of an audit committee have a great influence on whether or not fraud occurs in an organization; and based on Soltani (2014), deficient audit committees lead to occurrences of fraud.

On the other hand, there are several other studies that go against the grain that there is a direct correlation between the characteristics of the audit committee and fraud risk management in an organization. For example, Abdullah and Said (2019) found that committee diligence (measured by frequency of committee meetings in a year) as well as the audit committee size (measured by sum of committee members) had no influence on the number of fiscal crime occurrences; and that a risk management committee established by management was more effective in stemming financial crime. Jibril et al. (2024) established that there was no correlation between audit committee's impartiality, diversity and meetings with compulsory energy disclosures; and that there was evidence that effective energy disclosures were a factor of a firm's size, age and profitability. Biswas et al. (2023) found that tenure of committee members and frequent assembly (including formal and informal meetings) were positively correlated to the likelihood of corporate scandal; and that composition of the audit committee (measured by gender parity) as well as fiscal and accounting know-how of the committee members had a negligible negative association to the likelihood of corporate scandal.

The trend of studies having varied results regarding the influence of audit committee features on fraud risk management is also replicated when individual characteristics were reviewed. Illustrations of these studies for each of the relevant committee features are briefly discussed herein. McLaughlin et al. (2021) found that an audit committee's composition enables it offer effective oversight over fraud management and therefore should ideally consist of non-executive and independent persons of integrity; while contrary to this, Nasir et al. (2019) found that there was no compelling evidence that an audit committee's composition influences an organisation's fraud risk management. Likewise, Almakhfor and Norton (2021) state that it is crucial that the audit committee ensures that it remains and is seen to be independent from management who it oversees; yet Biswas et al. (2023) in studying family owned businesses established that directors related to management and with a shareholding in the company were more diligent in their oversight role than independent directors in non-family owned companies. Oussii et al. (2019) found that in addition to having regular recorded meetings, in-camera meetings with auditors enable the committee to dig deeper into fraud risk issues; yet on the other hand, Yin et al. (2012) established that the link between committee meetings and fraud risk management was insignificant. Finally, Velte (2020) established that financial and industry proficiency of committee

members was crucial in their ability to comprehend key audit matters and hence fraud risk management; while on the other hand, Baatwah et al. (2019) found that for as long as the committee's chair had the requisite expertise, it was not important for the other members to have financial or industry expertise to effectively manage the risk of fraud.

1.1.2 The CGIAR Organizations

According to Greenland (1997), in May 1971, the World Bank, FAO, IFAD and UNDP together formed the CGIAR. Fundamentally, the CGIAR is an international conglomerate of global research institutions whose research is aimed at achievement of food security. CGIAR's goal is to advance science and innovation in agriculture and food to enable poor people, especially women, to better feed their families. The CGIAR organizations also aim to improve agricultural productivity and resilience of the poor and marginalized so that they can benefit from economic growth and ensure adequate management of natural resources amidst climate change and other obstacles. In recent years, CGIAR has undergone profound reforms aimed at improving synergies between the different Research Centers and other players in the agricultural world. This has seen the number of research organization reducing from thirty-three (33) to thirteen (13) at the present. Nine (9) out of the thirteen (13) have a presence in Kenya and are The Africa Rice Center (AfricaRice); The Alliance of Bioversity International and International Center for Tropical Agriculture (International Bioversity – CIAT); The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF); The International Center for Agricultural Research in the Dry Areas (ICARDA); The International Institute of Tropical Agriculture (IITA); The International Livestock Research Institute (ILRI); The International Maize and Wheat Improvement Center (CIMMYT); The International Potato Center (CIP); and The International Rice Research Institute (IRRI).

Each of the nine (9) research organizations in Kenya has a board of trustees that includes audit committees. The organization specific audit committees are tasked with oversight over the application of donor funds for their intended uses. The audited annual reports from each research organization includes a risk management statement from the board to the public. The statement indicates that the board has overall obligation of ensuring the efficacy of the risk mitigation

processes. This statement further indicates that the audit committee provides oversight over the management of financial and scientific fraud risk. The CGIAR organizations have the option of using the CGIAR Headquarters internal auditors or having their own in-house internal audit functions.

1.2 Statement of the Problem

Audit Committees attributes' may hinder, enhance or have no influence at all on occurrence of fraud (Velte, 2023). Audit committees' characteristics and management of fraud risk have become crucial topics in various studies and writings on enterprise governance (Jacobs, 2012). Some of the major corporate failures from fraud, such as Enron, WorldCom, Global Crossing and Adelphia may have been as a result of negligence and weaker audit committees (Rezaee et al., 2003). Had the audit committees of Enron and WorldCom been well constituted, independent from management, held effective meetings with internal and external auditors, and had well qualified members, the corporate scandals could have either been avoided altogether or their impact would have been greatly reduced (Pandit et al., 2017).

Various qualitative studies have been conducted on audit committees (Yu, 2013; Soltani, 2014; Bhagat & Bolton, 2019; Velte, 2020, 2023). These have clarified the features of audit committees i.e. independence, size, competence, experience, frequency of meetings, diversity, number of board engagements for each member, age of members, rotation of membership, tenure of membership, gender balance and continuous learning. Whilst these characteristics have concretized the variables in studies regarding audit committees, their conclusions on how these characteristics relate to fraud risks have varied extensively. Indeed, a number of studies (Yu, 2013; Soltani, 2014; Bhagat & Bolton, 2019; Oussii et al., 2019; Velte, 2020; McLaughlin et al., 2021; Almakhor & Norton, 2021; Velte, 2023) find that these attributes influence fraud risk management, while other studies (Yin et al., 2012; Abdullah & Said, 2019; Nasir et al., 2019; Baatwah et al., 2019; Biswas et al., 2023; Biswas et al., 2023; Jibril et al., 2024) found no correlation between the characteristics of audit committees and the management of susceptibility to fraudulent behavior. Further, these varying conclusions could have been occasioned by the fact

that the studies were carried out within different regulatory jurisdictions. Depending on the country or region, corporate regulators may either require formation of audit committees, or recommend having audit committees, or not have any requirements for having audit committees.

Global organisations such as the CGIAR with operations spread all over the world are prone to both scientific and financial fraud (Adair et al., 2006). According to Barrett et al. (2009), various stakeholders and publics associated with these organisations require assurances that these risks are well managed. Due to this, the audit committees and the respective boards of each of the CGIAR organisations issue annual risk management statements in the audited financial statements and strong public statements on the importance of ethics as well as commitment to zero tolerance to fraud (Change, 2023). Therefore, it is in the interest of the CGIAR and similar organizations to engage effective audit committees with attributes that enable them to manage the risk of fraud, as outlined in the statements contained in their annual reports. However, the lack of consensus on whether these characteristics actually contribute to fraud risk management presents a challenge that this study sought to address.

Further, the past studies have also demonstrated geographical, contextual, methodological, and conceptual gaps. Previous studies, such as those by Yu (2013), Soltani (2014), and Bhagat and Bolton (2019), were predominantly conducted in Western contexts, specifically the USA and Europe. These regions operate under distinct regulatory environments, cultural norms, and corporate governance frameworks, which may not be directly applicable to organizations in developing countries. Whilst the conclusions from these studies were informative, they also underscored the difficulty in replicating them in African contexts with different regulatory environments, cultural norms and corporate governance frameworks. This presented a significant geographical gap in the literature. This study sought to address this gap by focusing on CGIAR organizations with a presence in Kenya, thereby providing insights grounded in a different socio-economic and regulatory landscape.

In addition to their geographical limitations, the aforementioned studies largely focused on corporate or publicly listed entities, often neglecting unique institutional contexts such as international non-profit research organizations. These contexts may present distinct governance

structures, fraud risk exposures, and audit committee dynamics that differ substantially from those in commercial entities. By targeting CGIAR organizations operating in Kenya, this study sought to contribute to bridging the contextual gap by examining fraud risk management within a specialized, underexplored organizational environment, thus offering a richer understanding of audit committee influence in diverse institutional settings.

The studies conducted by Yu (2013) and Soltani (2014) employed qualitative and descriptive methodologies that, while insightful, were inherently difficult to replicate due to their reliance on subjective interpretations and context-specific narratives. Even Bhagat and Bolton's (2019) mixed-methods approach retained qualitative elements that posed replication challenges. In contrast, the current study adopted a purely quantitative methodology designed for consistency, objectivity, and replicability across various organizational and regulatory settings. This approach directly addressed the methodological gap by enhancing the reliability and generalizability of the findings.

A notable shortfall in earlier studies is the lack of consideration for moderating or intervening variables in their conceptual frameworks. This omission limited the understanding of how audit committee attributes may interact with other governance mechanisms to influence fraud risk management outcomes. The present study bridged this conceptual gap by incorporating the internal audit function as a moderating variable, offering a more nuanced model that captures the complexity of organizational fraud controls. This enriched conceptualization allowed for a deeper analysis of the dynamics at play in audit committee effectiveness.

1.3 Objectives of the Study

The general and specific objectives of the study are stated here.

1.3.1 General Objective of the Study

The general objective of the study was to assess the influence of the audit committee of the board of directors on fraud risk management of the CGIAR organisations.

1.3.2 Specific Objectives of the Study

The specific objectives for the study were:

- i. To establish the level of influence of the composition of the audit committee on fraud risk management of CGIAR organisations.
- ii. To determine the level of influence of the independence of the audit committee on fraud risk management of CGIAR organisations.
- iii. To assess the level of influence of the meetings of the audit committee on fraud risk management of CGIAR organisations.
- iv. To investigate the level of influence of the expertise of the audit committee on fraud risk management of CGIAR organisations.
- v. To assess the moderating effect of the existence of an internal audit department on the relationship between audit committee attributes and fraud risk management within CGIAR organizations.

1.4 Research Questions

The study set out to answer the following research questions:

- i. What is the level of the influence of the composition of the audit committee on fraud risk management of CGIAR organisations?
- ii. What is the level of the influence of the independence of the audit committee on fraud risk management of CGIAR organisations?
- iii. What is the level of the influence of the meetings of the audit committee on fraud risk management of CGIAR organisations?

- iv. What is the level of the influence of the expertise of the audit committee on fraud risk management of CGIAR organisations?
- v. Is there a moderating effect of the existence of an internal audit department on the relationship between the audit committee attributes and fraud risk management within CGIAR organisations?

1.5 Scope of the Study

This study intended to establish the influence of the audit committee of the board of directors on fraud risk management, focusing specifically on the CGIAR organizations with operations in Kenya. The conceptual scope of the research covered four (4) characteristics of audit committees i.e. composition of the audit committee, independence of the audit committee, nature and frequency of audit committee meetings, and expertise of the audit committee members; and their relationship to fraud risk management practices within these organizations.

The geographical scope was confined to the nine CGIAR organizations operating in Kenya, targeting respondents who had direct or indirect interactions with the audit committees. These respondents included the director generals, heads of corporate services, accountants, heads of research, and internal auditors, who possess the relevant knowledge and experience regarding both the audit committee's operations and fraud risk management.

The research took place between March and April 2025, adopting a quantitative research approach to assess the influence of the audit committee's characteristics on fraud risk management. The theoretical framework for this research was grounded in the Agency Theory and the Fraud Triangle Model, which provided insights into the dynamics between audit committees and the mitigation of fraud risks in the context of CGIAR organizations in Kenya.

1.6 Significance of the Study

The outcomes and results of the study will enhance understanding of audit committee concepts and practices in relation to fraud risk management. The contribution of this study to the enhanced management of the threats of fraud was particularly notable given the growing problem and complexity of fraud globally as highlighted by ACFE (2021), Onyango (2022) and PwC (2022). The main beneficiaries of this study shall be the policymakers and government, CGIAR headquarters, the CGIAR organizations and researchers and scholars.

1.6.1 Policymakers and Government

The findings of this study will provide the Kenyan government policymakers and regulators with insights and a basis for developing governance guidelines and specifications on the required attributes of audit committees. This is particularly so, given that the study was premised in Kenya and therefore took into consideration the geographical and contextual conditions in Kenya. Further, the study will aid in the enhancement of regulatory frameworks towards the mitigation of fraud risks.

1.6.2 Headquarters of the CGIAR

The CGIAR headquarters oversees the governance and management structures of the constituent CGIAR organisations. It offers guidance on board constitution, board and management mandates, and required periodic board and management statements. The study's findings will aid the CGIAR headquarters in developing a governance framework for recruiting the right candidates to the audit committees of the CGIAR organisations.

1.6.3 The CGIAR Organisations

There are thirteen (13) independent CGIAR organisations with each having its own management structure and oversight board. Each CGIAR organization presents audited annual reports which include risk management statements from their respective boards to the CGIAR headquarters. The

study's findings will aid the CGIAR organisations in ensuring that their audit committees of the board are well constituted and equipped to offer oversight in line with their risk management statements.

1.6.4 Researchers and Scholars

The characteristics of audit committees is a topic of significant research interest and debate, with a number of research questions. Increasingly, researchers and scholars are being encouraged to examine understudied characteristics, consider contemporary issues such as fraud and cybersecurity, and to embrace diverse research methods and theories. The study's outcomes will be significant to academicians, intellectuals, and future researchers who will want to delve into further investigations and research on corporate governance and particularly on the efficacy of audit committees to manage fraud risk.

1.7 Chapter Summary

This chapter provided the study's introduction. It gave an outline of the study's background that briefly discussed the dependent (fraud risk management) and independent variables (audit committee composition, independence, meetings, and expertise). The chapter then provided the problem statement that justified the reason for the study. It also stated the objectives of the study and the questions the study sought to answer. Finally, the chapter discussed the scope of the study as well as its significance to specific interested parties.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter includes relevant theoretical models used for the study as well as the empirical literature that informed the study. Particularly, it captures existing literature on the influence of the audit committees of boards on the fraud risk management in organisations. Further, the chapter enumerates similarities and differences in the findings of the reviewed studies. It lays out the noted research gaps as well as how this study proposes to bridge these gaps. Finally, the chapter presents the study's conceptual framework.

2.2 Theoretical Framework

This segment gives a theoretical outline of audit committees of the boards as well as fraud risk management. The theories applied in this study are the Agency Theory and the Fraud Triangle Model. The study used this multi-theoretical framework approach to facilitate holistic understanding of the complex connection between the features of the audit committees and fraud risk management. In particular, the Agency Theory sheds light on the oversight responsibilities of the audit committee while the Fraud Triangle Model elucidates the circumstances under which how fraud cases occur.

2.2.1 The Agency Theory

Jensen and Meckling (1976) were the first to postulate this theory. It states that an agency relationship subsists between an organization's management i.e. the agents and the owners of the organization i.e. the principles. This theory further posits that because of the differences in focus between the agents and principles, organizations experience agency problems i.e. conflicts of interests which are innate in any association where one is projected to act in alignment with the interests of another. It adds that agency problems occur when inducements or incentives exist for an agent to not act entirely in alignment with the objectives of a principal. The theory further states

that owing to these agency problems, the principles bear additional agency costs towards the monitoring over agents or management.

In expounding the principles of the Agency Theory, Bhimani (2008) indicates that underpinning the theory is the principle of clear segregation of possession and control. This justifies why the imposition of oversight over agents through boards, audits, etc. becomes necessary in organizations. Boivie et al. (2021) add that the accountability of management depends on both the right of the owners to call the directors to account, but also on their ability to do so. They add that based on the Agency Theory, the prime role of the board of an organization is to ensure that executive behavior is aligned with the interests of the owners.

Ahmed (2021) argues the key mandate of the audit committees of boards is critical in minimizing agency problems. In agreeing with this, Raimo et al. (2021) found that an operative audit committee will strengthen fiscal reporting by bridging the information disparities between the external publics including owners that consume information from financial reports and the managers. An audit committee's monitoring role is key in ensuring corporate responsibility and satisfactory financial reporting (Ahmed, 2021).

Gomez-Mejia et al. (2005) reviewed the Agency Theory in various international contexts and observed that while this theory did not unequivocally identify contextual factors allowing for its wider relevance and versatility, the adopted worldwide elucidations did not inhibit agency complications. By applying Agency Theory to the Kenyan context, the study gained insights into the unique challenges and dynamics in enterprise stewardship and management processes in the country. Injeni et al. (2022) in reviewing the agency factors in Kenya noted that the challenges included corruption and nepotism in management of boards; family owned structures with a blurred line between management and boards; and the inconsistent enforcement of corporate governance requirements. The study would therefore lead to recommendations tailored to mitigate agency problems in the Kenyan context.

The Agency Theory was critical to this study because it recognizes the separation of the public (who are the real owners or principles of CGIAR organizations) and the management who act as

their agents. Specifically, the study strived to depict the characteristics and attributes of audit committees that enable them to offer oversight over management as envisioned by the Agency Theory and achieve effective fraud risk management on behalf of the public.

2.2.2 The Fraud Triangle Model

This model was first advanced by a criminologist called Dr. Donald Cressey who examined two hundred and fifty (250) criminals in five (5) months and identified that fraud was occasioned by three (3) major factors i.e. pressure, opportunity, and rationalization (Cressey, 1953). Collectively, pressure, opportunity, and rationalization are referred to as the Fraud Triangle (Abdullahi & Mansor, 2018).

Lister (2021) states that the element of pressure is an essential aspect of committing fraud. He defines pressure as the incentive to commit fraud and identifies three variables of pressure i.e. personal, job-related, and external pressures. Vona (2019) examines a number of personal pressures as key incentives for fraud and determines that greed, extravagant lifestyle that is beyond one's means, debt, addictions and financial strain are aspects of personal pressure. Work related pressure refers to a situation where an individual seeks to achieve corporate objectives notwithstanding the repercussions (Hooper & Pornelli, 2010). External pressures refer to situations where a person is pushed to act in a certain way against their better judgement by third parties (Murphy & Dacin, 2011). In recognizing that pressure is different from one individual to another, Albrecht et al. (2019) stressed the significance of applying the word "perceived" in reference to pressure.

Rae et al. (2017) define opportunity as a flaw in an organization's processes and systems that an individual has authority, and capacity to harness and abuse to execute fraud. Even where a person is under strain, fraud is unlikely to arise unless there is an opportunity (Hooper & Pornelli, 2010). People are predisposed to commit fraud where there are weaknesses in internal controls, lack of robust audits, poor accounting records, and where duties are not sufficiently segregated. Tuanakotta (2018) agree that even when an individual is experiencing pressure or has ill intention, they will be unable to perpetrate fraud unless an opportunity to do so presents itself.

According to Howe and Malgwi (2019), rationalization refers to a variety of subjective ethical justifications expressed by a fraudster before committing fraud. Even with pressure and opportunity, the offenders will not commit fraud unless they are able to rationalize their unethical behaviors (Cressey, 1953). The space in the middle of pressure and opportunity is bridged when the perpetrator is able to validate their wrong or unethical actions (Howe & Malgwi, 2019).

Cheliatsidou et al. (2023) in endorsing the implementation of a Worldwide Fraud Triangle Model observed that the traditional Fraud Triangle Model had variants depending on its application to national, industrial, and professional contexts. In the Kenyan context, opportunities for fraud arise from weak internal controls and inadequate regulatory oversight; the pressure to commit fraud comes from the high unemployment and poverty rates; and the rationalization comes from the cultural normalization of corruption (Musyoki, 2023). By situating the Fraud Triangle Model within the Kenyan context, the study strived to advance crucial insights into the complexities of fraud and corruption, as well as develop targeted strategies to mitigate risks and promote ethical behavior in all sectors.

In considering fraud risk mitigation practices of the CGIAR organizations, the study drew from the provisions of the Fraud Triangle Model. In particular, the study examined the role of the audit committees in reducing the pressures to commit fraud, in decreasing the opportunities that could occasion fraud, and in making it difficult to rationalize fraud.

2.3 Empirical Review

The empirical evaluation of this study lays out an objective and critical review of the empirical studies on the influence of the audit committee on fraud risk management. It adopts the variables used by previous studies (Yu, 2013; Soltani, 2014; Wilbanks et al., 2017; Bhagat & Bolton, 2019; Abdullah & Said, 2019; Ambiyu, 2020; Velte, 2023; Biswas et al., 2023; Jibril et al., 2023) on the effect of audit committee attributes and/or characteristics on fraud risk management i.e. the composition, independence, meetings, and the expertise of the audit committee. The empirical

review not only recognizes the existing studies but also seeks to enumerate identified research gaps.

2.3.1 Attributes of the Audit Committee

Othman et al. (2015) defined the audit committee of the board as a major committee of an entity's board of directors whose mandate is to superintend fiscal reporting and disclosure. Mardessi (2022) also emphasized the significance of the audit committee as a vital element of a company's governance structure that oversees statutory compliance. Boards rely on their audit committees to offer effective oversight of the companies' risk and control mechanisms; annual financial auditing process; internal audit reports; etc. hence making these committees the cornerstones for effective corporate governance (Bepari, 2023).

Various studies have found the key board attributes to include size, structure, independence, competence, meetings, number of other board memberships, age of members, rotation, tenure, equity ownership and continuous learning (Shawtari et al., 2017; Allam, 2018; Khaireddine et al., 2020; Rashid, 2020). These characteristics and attributes were determined to also apply to audit committees of boards by a number of studies (Mnif & Borgi, 2017; Appuhami & Tashakor, 2017; Buallay, 2018; Khudhair et al., 2019; Endrawes et al., 2020; Fariha et al., 2022). In determining the influence of the audit committee in fraud risk management, many studies (Yu, 2013; Soltani, 2014; Wilbanks et al., 2017; Bhagat & Bolton, 2019; Abdullah & Said, 2019; Ambiyu, 2020; Velte, 2023; Biswas et al., 2023; Jibril et al., 2023) have considered the key audit committee characteristics to be composition, independence, quality of meetings, and the technical know-how and relevant experience of the members.

Yu (2013) sought to investigate the internal and external factors that enabled management engage in financial securities fraud. The study reviewed thirteen companies that had not been adversely listed by SEC as well as thirteen others that had adverse listing by the commission. The study observed that companies with reliable corporate governance norms and practices including well constituted audit committees did not have cases of financial securities fraud. Conversely, the companies that had been adversely listed also had poor corporate governance practices. One of the

conclusions of the study was that a company's audit committee should be independent and with a diverse selection of directors who have financial expertise. Whilst this was a balanced study i.e. by reviewing characteristics of both adversely listed companies as well as those not so listed, its assumption that the companies not adversely listed by SEC have not engaged in financial securities fraud is unrealistic because not all fraud is reported. Further, the study was based in the USA where companies were subject to strict regulatory frameworks such as the Sarbanes-Oxley Act, mandatory disclosures, and governance structures. This study, in addition to the geographical gaps, created a contextual gap in understanding how different regulatory exposures in the world influence financial reporting, fraud risk, and governance practices. Also, the study did not take into account the varied complexities of companies. The study did not distinguish companies on the basis of age, size, spread of operations, etc. and may have been comparing companies that were not of equal footing. This study recognized that whether or not an entity was adversely listed by regulators was not an indicator of its effectiveness in fraud risk management. As such, no references were made such regulators' reports. Further, this study was based on organizations managed centrally by the same headquarter and whose relative ages and sizes were therefore expected to be similar.

Soltani (2014) while reviewing the anatomy corporate fraud in USA and in Europe found that audit committees that lacked diversity, were not independent, did not hold regular meetings, had members without requisite financial expertise, contributed to occurrence of corporate fraud. The study reviewed three American corporate failures i.e. HealthSouth, Worldcom, and Enron; as well as three corporate scandals from Europe i.e. Vivendi Universal, Royal Ahold, and Parmalat. This study highlighted that notwithstanding considerable variations between the U.S.A. and Europe with respect to government or political entities, legal frameworks, and administrative standards or norms, there were important similarities in their ineffective audit committees and hence boards. However, in contrast to Yu (2013), while Soltani (2014) reviewed companies of comparable ages, sizes and spread of operations, it did not consider companies with no scandals and was therefore not entirely balanced. For balance, this study selected organizations irrespective of whether or not they had been adversely listed. Also, their age and size profiles of the subject organizations were noted to be similar. Further, based in Europe and USA, this study took into consideration more developed western regulatory environments. In so doing, the generalization of its conclusions may

have been challenging as it overlooked practices, difficulties, and loopholes that entities operating in other parts of the world with less developed regulatory frameworks face.

Wilbanks et al. (2017) surveyed one hundred and thirty-six (136) audit committee members from mid-sized public companies in USA and sought to establish how they fulfilled their responsibilities towards deterring fraudulent financial reporting risks. The study found that having no personal or professional ties with management empowered the audit committee members to have better oversight; having gender balance in the audit committee enabled better consideration of emerging perspectives; having structured meetings enabled the members of the committee interrogate contents of financial reports; and that being financially literate helped the members of the committee to understand and challenge financial statements. By having the audit committee members as respondents, this study obtained first-hand feedback from audit committee members. However, the study was carried out over thirty-six (36) months and could have been too expensive to replicate in other jurisdictions. This study sought a methodology that would be easily replicable with reasonable cost implications.

Bhagat and Bolton (2019) reviewed audited financial statements of one hundred (100) largest financial institutions in USA for the period between 2002 and 2016. The authors had carried out an earlier study covering the period between 1991 and 2001 but wanted to conduct this particular study to record the subtleties of the financial crisis, the Great Recession, Sarbanes-Oxley, and Dodd-Frank. On one hand, the study reviewed compliance with stipulated corporate governance initiatives which included having effective audit committees; while on the other, it computed a number of financial performance ratios from the audited reports of the corporates selected for the study. The study established that adherence to the various corporate governance requirements was positively correlated to financial growth and improved financial results. This study further affirmed that the characteristics of an audit committee had a direct bearing on whether or not fraud occurred in that company. This was an informative study, based on mixed data which had quantitative as well as qualitative components. However, it also relied heavily on company reports and returns required by the various regulators in USA, that may not be applicable in other jurisdictions outside USA. This study sought a methodology that would be easily replicable with reasonable cost implications.

Abdullah and Said (2019) studied web-based data on corporate financial crimes in Malaysia. In particular, the study adopted a two-pronged approach for each of the identified crime case. On one hand, it aimed to examine the characteristics of the audit committees as a corporate governance mechanism and their association with the financial crimes reported; but also, the study reviewed the efficacy of constituting and using a management risk committee in the deterrence of financial crime. Contrary to the findings by Yu (2013), Soltani (2014), Wilbanks et al. (2017) and Bhagat and Bolton (2019), this research paper established that the audit committee diligence (based on meeting frequency in a year), the size of the audit committee (based on the number of committee members) had no impact on the number of financial crime occurrences. Also of significance, the study found that a risk management committee made up of management was more apt in preventing financial crime. While this study serves to highlight the divergent findings of corporate governance studies, its underlying rationale was difficult to comprehend. This is because not all financial crimes are published in websites and also having a risk management committee made up of management does not preclude having an audit committee as was stated in the study's conceptual framework i.e. a company does not need to have either one or the other as assumed in this study. In fact, such a management committee would most likely be supervised by an audit committee of the board. This study sought to identify organizations irrespective of whether or not they had ever been adversely published for financial crime.

In Kenya, Ambiyu (2020), carried out a purely quantitative study of the influence of the attributes of the audit committee on fraud exposure and deterrence of the devolved governments in western Kenya. This study was premised on the requirement of the Public Finance Management Act (PFM) of 2012 that mandated the instituting of audit committees in all Kenyan county governments. The study concluded that there was a negative connection between adverse auditor-general reports and diversity within the committee, independence of the committee, regular committee meetings, and committee members holding accounting qualifications. However, this study encountered a relatively low response rate i.e. sixty-nine (69) respondents out of the targeted one hundred and eighty-two (182) respondents. Further, the study limited the indicator for detection and prevention of fraud in the counties to only their auditor-general reports which in itself is not comprehensive. Finally, because it was a purely quantitative study, it may not have captured why the mandatory

requirements that the audit committee members hold accounting qualifications did not prevent adverse auditor general reports for the affected counties. This study used a large sample and employed follow-up techniques to ensure a reasonable response rate.

Velte (2023) also concluded that an audit committee that was diverse, independent, held regular and structured meetings, and had industry as well as financial knowledge was effective in managing fraud risk in an organization. Though the study was by a well cited author on the subject of audit committees, it was based on a review of sixty-eight (68) archived studies in Europe and applied the vote-counting methodology whose soundness and validity is considered to be limited. The study was also limited to Europe. This study used a methodology that could be replicated across various jurisdictions.

Finally, Biswas et al. (2023) and Jibril et al. (2024) had opposing findings i.e. that some audit committee characteristics actually caused corporate scandals and that those audit committee characteristics had no influence on required disclosures. Biswas et al. (2023) while reviewing companies in Bangladesh found that tenure of audit committee members and meeting frequency were positively correlated to the likelihood of corporate scandal; and that composition of the audit committee (indicated by its gender parity) as well as fiscal know-how of the committee members had a negative but insignificant connection to the likelihood of corporate scandal. Based in Nigeria energy sector, Jibril et al. (2024) established that there was no link in between the audit committee's removal from the day-to-day operations of the entity, diversity and meetings with the compulsory energy disclosures; and that there was evidence that effective energy disclosures were a factor of a firm's size, age and profitability.

The study relied on the foregoing studies in defining the characteristics and attributes of audit committee with regards to fraud risk management as the audit committee's composition, independence, the quality of meetings, and members' collective expertise.

2.3.2 Influence of Audit Committee Composition on Fraud Risk Management

Tai et al. (2020) state that an audit committee of the board comprises of directors tasked with the primary obligation of overseeing fiscal reporting systems, the audit processes, the organization's internal control systems and adherence to the legal framework. McLaughlin et al. (2021) define the composition of the audit committee as constitution of the members of this committee in terms of their demographic features e.g. age and gender, as well as personal attributes such as their standing in society. Méndez and García (2007) add that while the finance and audit committee should comprise of members with varied ages and gender, their membership should be based on meritocracy. According to Malik (2014), the members of the committee ought to be recruited competitively from various backgrounds and ideally be independent directors. An ideal audit committee's composition ought to reflect gender parity (Raghunandan et al., 2001). In acknowledging the important role an audit committee plays in fraud risk management, Beasley and Salterio (2001) add that that the members of the committee must be persons of integrity whose reputations and character are beyond reproach.

The composition of an audit committee significantly impacts fraud risk management because the committee's members, with their specific skills and experience, directly influence the oversight and scrutiny of financial reporting practices, which can either deter fraudulent activities or enable them to occur if not properly constituted (Mardessi, 2022). This oversight role over management is supported by the Agency Theory. Further, scrutiny of financial, internal controls and risk management processes offers additional deterrent controls against fraud and hence manages the opportunity and rationalization aspects as envisioned in the Fraud Triangle Model. That said, the conclusions of studies on the link between the composition of the audit committees and fraud risk management have not been consistent. While McLaughlin et al. (2021) concluded that an audit committee's composition enables it offer effective oversight over fraud management and therefore should ideally consist of non-executive and independent persons of integrity, Nasir et al. (2019) found that there was no compelling evidence that an audit committee's composition influences an organisation's fraud risk management. This inconsistency in conclusion may have been occasioned by the different geographical contexts and methodological approaches of the studies.

2.3.3 Influence of Audit Committee Independence on Fraud Risk Management

Lee et al. (2004) define an audit committee's independence as the lack of any association with the management and staff of an entity. The committee's independence is enhanced by including non-executive and non-related members (Koh et al., 2007). Audit committee independence ultimately results in better oversight over fiscal reporting, processes of control and monitoring systems (Bédard et al., 2014).

Almakhfor and Norton (2021) opine that because the audit committee oversees the providers of independent assurance i.e. auditors, it is crucial that the audit committee is and is seen to be independent from management. Should disputes arise between assurance providers and management, an independent audit committee would be a reliable arbiter in ensuring that corrective action is taken aligns with the interests of the organization (Chan et al., 2013).

The independence of the audit committees as demonstrated by their lack of ties to management allows them to objectively assess potential fraudulent activities, scrutinize financial reporting practices more thoroughly, and effectively challenge management decisions that might be susceptible to fraud, ultimately reducing the risk of fraudulent activities (Mardessi, 2022). The devolvement or segregation of possession and control and the imposition of independent oversight over management underpins the Agency Theory. Further, scrutiny of financial, systems of internal control and processes of risk management by an independent audit committee addresses both opportunity and rationalization aspects addressed in the Fraud Triangle Model. However, studies on the link between the independence of the audit committees and fraud risk management have had divergent conclusions. Almakhfor and Norton (2021) state that it is crucial that the audit committee ensures that it remains and is seen to be independent from management who it oversees; yet Biswas et al. (2023) in studying family owned businesses established that that directors related to management and with a shareholding in the company were more diligent in their oversight role than independent directors in non-family owned companies. This inconsistency in conclusion may have been occasioned by the different geographical contexts and methodological approaches of the studies.

2.3.4 Influence of Audit Committee Meetings on Fraud Risk Management

Stewart and Munro (2007) state that the audit committee should develop a suitable charter which will spell out the manner in which it will carry out its meeting deliberations. Oussii et al. (2019) explain meetings of the committee to be the periodic deliberations between the respective members, auditors, and management over the accounting processes, audit reports, emerging risks, and mitigating controls. Sharma et al. (2009) add that such conferences should be well-timed and held routinely; and the emerging deliberations and recommendations be well minuted alongside the emanating action points.

Oussii et al. (2019) recommend that in addition to the regular agenda items that review financial statements and internal control reports with related parties and auditors, the committee meetings ought to include in-camera sessions with all auditors away from managers. It is the chairperson's responsibility to include in-camera meetings on every audit committee meeting agenda and ensure that auditors have sufficient time is set aside to communicate privately and candidly with the committee (Compernelle & Richard, 2018). Similarly, Free et al. (2021) state that in camera sessions also provide the committee with the opportunity for candid questioning of auditors.

An audit committee's meetings are directly linked to fraud risk management because frequent meetings allow them to actively monitor the entity's systems of internal controls and processes of risk assessment and address emerging concerns, thereby reducing the probability of fraud occurring (Mardessi, 2022). The oversight over management processes and controls is supported by the provisions of the Agency Theory. Additionally, the committee's scrutiny of processes, reports, and mitigation measures in place addresses both opportunity and rationalization aspects addressed in the Fraud Triangle Model. However, studies on the inter-relationship between the meetings of the audit committees and fraud risk management have had different findings. Oussii et al. (2019) found that in addition to having regular recorded meetings, in-camera meetings with all auditors enable audit committee to dig deeper into fraud risk issues; yet on the other hand, Yin et al. (2012) concluded that there was an insignificant correlation between the meetings of the committee and fraud risk management. This inconsistency in conclusion may have been occasioned by the different geographical contexts and methodological approaches of the studies.

2.3.5 Influence of Audit Committee Expertise and Fraud Risk Management

Abad and Bravo (2018) state that the audit committee members deliver on their mandate by ensuring the performance of dual key tasks i.e. monitoring and oversight over the entity's management on one hand, and audit advisory on the other. Members of the audit committee with financial and accounting academic and professional qualifications are effective in their role in the audit committee (Ghafran & O'Sullivan, 2017). Mustafa and Ben (2010) add that the expertise of members of the committee does not only comprise of academic and professional qualifications, but also of relevant experience in accounting and auditing. Interpersonal skills are also critical for the audit committee members, especially when they would have to mediate between management and auditors (Salleh & Stewart, 2012). The audit committee should be made up of members with sufficient financial training and experience (Ferreira, 2008). In a world with intertwined present-day threats such as reorientation of political affiliations, surge in technological advancements, and climatic disruptions, the audit committee members must possess both financial and operational know-how and expertise, to enable them contribute towards shaping adaptive strategies; selecting leaders with relevant 21st-century expertise; and safeguarding organizational ethics, culture and values (Moyo, 2021). Finally, Velte (2020) established that financial and industry know-how and skill of audit committee members was crucial in their ability to comprehend key audit matters and hence fraud risk management.

An audit committee's collective know-how and skill is connected with fraud risk management because a well-informed committee with relevant financial and accounting knowledge is better equipped to identify potential fraud risks, oversee internal controls designed to prevent fraud, and effectively respond to any fraudulent activity detected within a company (Mardessi, 2022). This oversight role over management is supported by the Agency Theory. Further, scrutiny of financial, internal controls and risk management processes offers additional deterrent controls against fraud and hence manages the opportunity and rationalization aspects as envisioned in the Fraud Triangle Model. That said, the conclusions of studies on the relationship between the know-how and skill of the audit committees and fraud risk management have not been consistent. Velte (2020) established that financial and industry expertise of audit committee members was crucial in their ability to comprehend key audit matters and hence fraud risk management; while on the other

hand, Baatwah et al. (2019) found that for as long as the audit committee's chairperson had the requisite expertise, it was not important for the other members to have financial or industry expertise to effectively manage the risk of fraud. This inconsistency in conclusion may have been occasioned by the different geographical contexts and methodological approaches of the studies.

2.4 Summary of Literature Review and Knowledge Gaps

This study reviewed various studies whose objectives were related to the objectives of the study (Yu, 2013; Soltani, 2014; Wilbanks et al., 2017; Bhagat & Bolton, 2019; Abdullah & Said, 2019; Ambiyono, 2020; Velte, 2023; Biswas et al., 2023; Jibril et al., 2023). The concurrences and divergences from previous research studies in this subject was showcased via the empirical analysis. The techniques and approaches depicted or applied in the preceding studies were also reviewed and presented.

The empirical reviews noted the methodologies applied by these studies and the various contributions made to the compilation of literature about influence of audit committees on fraud risk management. Most of these studies were qualitative in nature and applied the descriptive research design (Yu, 2013; Soltani, 2014; Wilbanks et al., 2017; Bhagat & Bolton, 2019; Abdullah & Said, 2019; Velte, 2023; Biswas et al., 2023; Jibril et al., 2023).

The empirical reviews also identified conceptual gaps where the effect of moderating variables were not considered; methodological gaps where the use of qualitative methodologies clarified the variables but had varied conclusions; geographical gaps where the studies were carried out in USA, Europe and Asia and were influenced by the regulatory provisions in these countries; and knowledge gaps of what quantitative methodologies and moderating variables would reveal. The main studies reviewed, the research gaps identified, and the approaches and means to be applied by this study to bridge these research gaps are summarized in the table below:

Table 2. 1: Key Studies and Research Gaps

Author	Title	Findings	Research gap and how this study filled them
Yu (2013)	Securities fraud and corporate finance: Recent developments.	A company's audit committee should be independent and with a diverse selection of directors who have financial expertise.	<p>The study focused reports obtained from SEC in USA and has the following gaps:</p> <ul style="list-style-type: none"> • Geographical gap i.e. based on companies in the USA. • Methodological gap i.e. this was a qualitative and descriptive study and difficult to replicate. • Conceptual gap i.e. did not study the intervening and moderating factors. <p>This study was based in Kenya, and adopted a quantitative research design and</p>
Soltani (2014)	The anatomy of corporate fraud: A comparative analysis of high profile American and European corporate scandals.	Audit committees that lacked diversity, were not independent, did not hold regular meetings, had members without requisite financial expertise, contributed to occurrence of corporate fraud.	<p>The study focused on corporate failures in USA and Europe and has the following gaps:</p> <ul style="list-style-type: none"> • Geographical gap i.e. based on companies in the USA and Europe. • Methodological gap i.e. this was a qualitative and descriptive study and difficult to replicate. • Conceptual gap i.e. did not study the intervening and moderating factors.
Wilbanks et al. (2017)	Audit committee oversight of fraud risk: The role of social ties, professional ties, and governance characteristics.	This study found that having no personal or professional ties with management empowered the audit committee members to have better oversight; having gender balance in the audit committee enabled better consideration of emerging perspectives; having structured meetings assisted the audit committee members interrogate contents of financial reports; and that being financially literate helped the audit committee members understand and challenge financial statements.	<p>The study covered 134 listed companies in USA and has the following gaps:</p> <ul style="list-style-type: none"> • Geographical gap i.e. based on companies in the USA. • Methodological gap i.e. this was a qualitative and descriptive study and difficult to replicate. • Conceptual gap i.e. did not study the intervening and moderating factors. <p>This study will be based in Kenya, will be adopt a quantitative research design and will study the moderating effect of the existence of an internal audit function in an organization.</p>
Bhagat & Bolton (2019)	Corporate governance and firm performance: The sequel.	This study found that compliance with the various corporate governance requirements was positively associated with financial growth and improved financial results. Further, this affirmed that the attributes and/or characteristics of an audit committee had a direct bearing on whether or not fraud occurred in that company.	<p>The study reviewed audited financial statements of the 100 largest financial institutions in USA and has the following gaps:</p> <ul style="list-style-type: none"> • Geographical gap i.e. based on companies in the USA. • Methodological gap i.e. this study applied a mix of descriptive or qualitative and quantitative

Author	Title	Findings	Research gap and how this study filled them
Abdullah & Said (2019)	Audit and risk committee in financial crime prevention.	Audit committee diligence (measured by meeting frequency in a year) as well as the audit committee size (measured by number of committee members) had no influence on the number of fiscal fraud or crime occurrences; and that a risk management committee established by management was more effective in stemming financial crime.	<p>methodologies. The qualitative aspects many be difficult to replicate.</p> <ul style="list-style-type: none"> • Conceptual gap i.e. did not study the intervening and moderating factors. <p>This was established on a study of financial crimes reported in public websites in Malaysia. It presents the following gaps:</p> <ul style="list-style-type: none"> • Knowledge gap – given its conclusions contradict other studies. • Geographical gap – the study is based in Malaysia. • Conceptual gap i.e. did not study the intervening and moderating factors.
Ambiyo (2020)	Effect of Audit Committee Characteristics on Fraud Detection and Prevention-a Study of County Governments in Western Region.	The audit committee's composition, independence, frequency of meetings, and expertise had a direct influence on fraud detection and prevention.	<p>This was a quantitative study based on the Kenyan public sector. It presented the following gap:</p> <ul style="list-style-type: none"> • Conceptual gap i.e. did not study the intervening and moderating factors. <p>This study will include a study of the moderating effect of the internal audit department in an organization.</p>
Velte (2023)	Which attributes of audit committees are most beneficial for European companies? Literature review and research recommendations.	The most beneficial audit committee characteristics in fraud risk management are the audit committee's configuration, objectivity, meetings, and know-how/skill.	<p>The study reviewed companies in Europe and has the following gaps:</p> <ul style="list-style-type: none"> • Geographical gap i.e. based on companies in the Europe. • Methodological gap i.e. this was a qualitative and descriptive study and difficult to replicate. • Conceptual gap i.e. did not study the intervening and moderating factors.
Biswas et al. (2023)	Audit committee diligence: do independent directors matter?	The tenure of the members of the audit committee and meeting frequency were positively correlated to the likelihood of corporate scandal; and that composition of the audit committee (indicated its by gender parity) as well as financial skills of members of the audit committee had a negative but insignificant connection to the likelihood of corporate scandal.	<p>This study reviewed companies in Bangladesh and had the following gaps:</p> <ul style="list-style-type: none"> • Knowledge gap – given its conclusions contradict other studies. • Geographical gap – the study is based in Bangladesh. • Conceptual gap i.e. did not study the intervening and moderating factors.
Jibril et al. (2024)	Audit committee attributes, board of director's independence and	There was no correlation between the autonomy, diversity and meetings of an audit, and compulsory energy disclosures; and that there was	<p>This study reviewed companies in the energy sector of Nigeria and had the following gaps:</p>

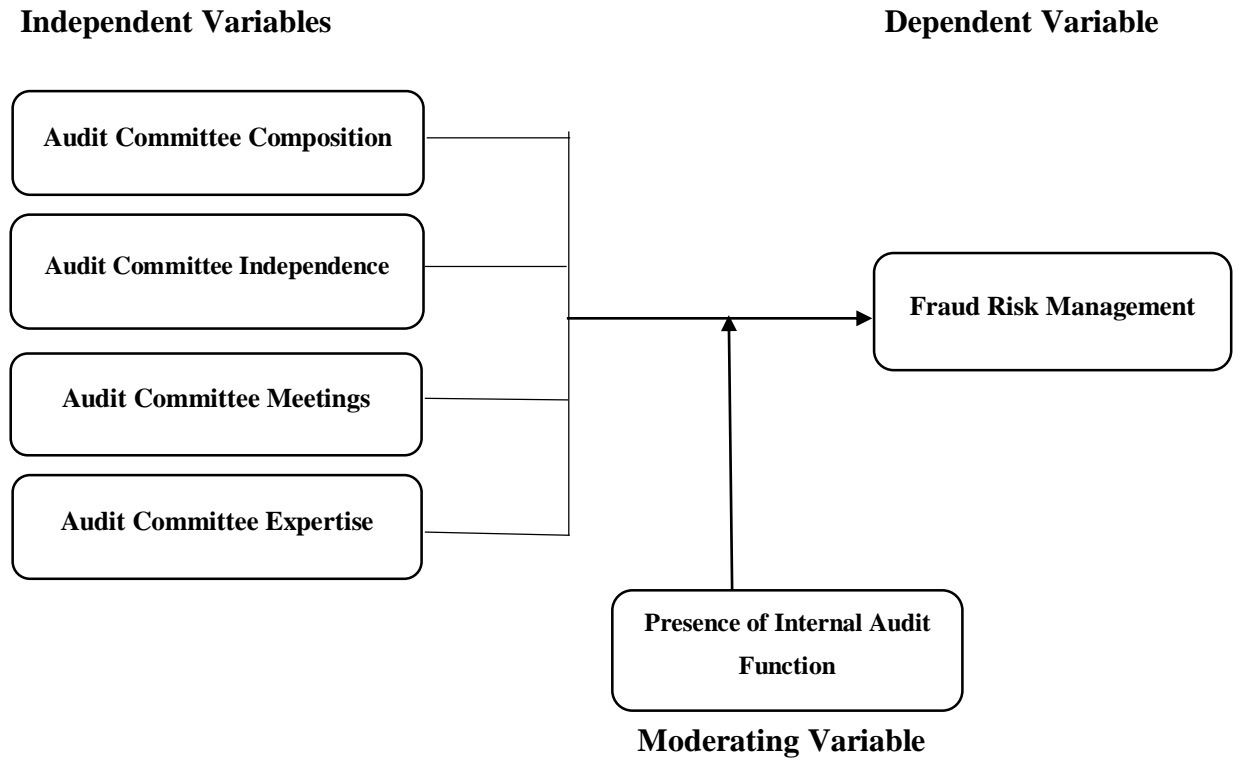
Author	Title	Findings	Research gap and how this study filled them
	energy disclosure for environmental sustainability in Nigeria.	evidence that effective energy disclosures were a factor of a firm's size, age and profitability.	<ul style="list-style-type: none"> • Knowledge gap – given its conclusions contradict other studies. • Geographical gap – the study is based in Nigeria. • Conceptual gap i.e. did not study the intervening and moderating factors. <p>This study will be based in Kenya, will be adopt a quantitative research design and will study the moderating effect of the existence of an internal audit function in an organization.</p>

Source: Researcher (2024)

2.5 Conceptual Framework

According to McGaghie et al. (2001), a conceptual framework guides a study in recognizing the research variables and expounding on their connection. This study adopts the same independent variables used by previous studies (Yu, 2013; Soltani, 2014; Bhagat & Bolton, 2019; Ambiy, 2020; Velte, 2023) i.e. composition of the audit committee, independence of the audit committee, audit committee meetings, and expertise of the audit committee. Fraud Risk Management is the dependent variable that the study intends to elucidate. Further, this study also includes the availability of an internal audit department as a moderating variable. This is depicted in the figure below:

Figure 2. 1: Conceptual Framework



Source: Researcher (2024)

2.6 Operationalization of Variables

Onyango (2022) argues that operationalization enables the clarification of concepts into discernable features that can be assessed using indicators. This study’s dependent and independent variables will be quantified using a measure or scale whose ranges will be from 1 (strongly disagree) to 5 (strongly agree). The indicators used in the studies are summarized in the table below:

Table 2. 2: Operationalization of Variables

Variable	Constructs	Definition of Operation	Measures for Rating	Data Analysis	Supporting Literature
Dependent Variable	Fraud risk Management	Establishment of a fraud risk management	A five-tier Likert scale on the	Inferential statistics and descriptive	ACFE (2023)

Variable	Constructs	Definition of Operation	Measures for Rating	Data Analysis	Supporting Literature
		programme demonstrating dedication to high ethical and integrity principles; availability of a comprehensive fraud risk assessment; deployment of preventative and detective fraud control activities; establishment of a communication process on potential fraud, investigation and corrective action; and performance of evaluations on the effectiveness of risk management.	implementation level and the believed usefulness	analysis	
Independent Variables:	Audit Committee Composition	Age diversity; gender parity; criminal records, ethical standing.	A five-tier Likert scale on the range of age; assessment of gender balance; assessment of members' ethical standing and lack of criminal records.	Inferential statistics and descriptive analysis	Wilbanks et al. (2017)
	Audit Committee Independence	Objective oversight and feedback; declaration of conflict of interest; rotational membership; relationship with management or staff.	A five-tier Likert scale on Assessment of objectivity of oversight; practice of conflict of interest declaration; rotational membership and belief of whether there	Descriptive analysis and inferential analysis	Soltani (2014)

Variable	Constructs	Definition of Operation	Measures for Rating	Data Analysis	Supporting Literature
			are relationships with management of staff.		
	Audit Committee Meetings	Number of meetings in a year; timely sharing of meeting agenda and reports; in camera sessions; minutes and action points.	A five-tier Likert scale on the range of number of meetings in a year; range of timeliness of reports and agenda; whether or not there are in-camera sessions; whether or not minutes are and action points are prepared.	Inferential statistics and descriptive analysis	Oussii et al. (2019)
	Audit committee expertise	Meritocracy in committee recruitment; financial and accounting qualifications; professional membership in good standing; work experience	A five-tier Likert scale on Whether committee members are recruited competitively; accounting and financial qualifications; professional affiliations; number of years of experience.	Inferential statistics and descriptive analysis	Velte (2020)
Moderating Variable:	Presence of Internal Audit Function	Whether or not Organization has internal audit function	=1 there is an internal audit function, or 2 there is <u>no</u> internal audit function	Descriptive statistics, Regression analysis	See et al. (2020)

Source: Researcher (2024)

2.7 Chapter Summary

The second chapter of this study comprised of the literature review. The chapter set out the two theories on which the study was anchored on i.e. the Agency Theory as well as the Fraud Triangle Model that underpinned the study. It also offered a critical discussion of the empirical research on the influence of audit committee attributes on fraud risk management. The chapter then presented the study's conceptual framework depicting the study's variables. Finally, the chapter illustrated how the variables would be operationalized and measured.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter lays out the guiding philosophy, methodology, approaches and techniques that were used in conducting the study. It includes a summary of this study's philosophy; the research design; the target population and sampling frame; the sampling procedure and sample size; the data collection technique; the data collection procedure; the considerations made for the research data's quality and reliability; the data presentation and analysis; and the action points made towards achieving ethical requirements.

3.2 Research Philosophy

Saunders et al. (2014) defined research philosophy as a collection of guidelines and principles used to advance knowledge and its ideologies. The study was grounded in the pragmatism philosophy, which allowed for the amalgamation of both qualitative and quantitative approaches. Indeed, Morgan (2024) explained that pragmatism was best suited for a number of real-world situations and as such adopts the use of a multiplicity of techniques to best resolve the research problems at hand. In line with pragmatism, the study was able to apply the individual respondents' answers to explore the relationship between the audit committee attributes and fraud risk management in CGIAR organizations in Kenya.

3.3 Research Design

McLaughlin (2012) defined research design as the framework that supports the research process, guiding the study in finding solutions to the research questions. In this study, a combination of quantitative and descriptive research designs i.e. a quantitative descriptive research design was employed. Quantitative methods allowed for the objective collection and analysis of data, while

descriptive designs facilitated the systematic organization, presentation, and interpretation of the data. By using questionnaires, the study aimed to gather factual information from respondents to explore the associations between audit committee characteristics and fraud risk management. The descriptive research design helped to portray the current reality of the relationships between the study's variables, offering a clear depiction of the state of affairs regarding audit committee effectiveness and its influence on fraud risk management in CGIAR organizations. The decision to use a quantitative and descriptive design was based on the need to assess objective relationships and provide a factual representation of the interplay between these variables.

3.4 Target Population

The target population for the study consisted of individuals from nine CGIAR organizations operating in Kenya i.e. The Africa Rice Center (AfricaRice); The Alliance of Bioversity International and International Center for Tropical Agriculture (International Bioversity – CIAT); The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF); The International Center for Agricultural Research in the Dry Areas (ICARDA); The International Institute of Tropical Agriculture (IITA); The International Livestock Research Institute (ILRI); The International Maize and Wheat Improvement Center (CIMMYT); The International Potato Center (CIP); and The International Rice Research Institute (IRRI). According to the CGIAR 2023 Annual Report, the total number of relevant individuals across these nine organizations was 247. These individuals interacted either directly or indirectly with their respective audit committees, and included director generals, heads of corporate services, accountants, heads of research, and internal auditors. The study aimed to ensure a balanced representation across these categories, with the sample consisting of nine director generals, ten heads of corporate services, ninety accountants, sixty-four heads of research, and seventy-four internal auditors. The total target population for the study was 247 individuals, and these individuals represented the core decision-making and operational roles within the audit committees of CGIAR organizations in Kenya. The research sought to collect data from 185 respondents, which were selected using a stratified random sampling technique to ensure diversity and accuracy in representing the broader population.

Table 3. 1: Target Population

CGIAR Organization in Kenya	Frequency	Percentage
AfricaRice	25	10%
International Bioversity – CIAT	35	14%
CIFOR-ICRAF	48	19%
ICARDA	21	9%
IITA	20	8%
ILRI	36	15%
CIMMYT	22	9%
CIP	20	8%
IRRI	20	8%
Total	247	100%

Source: CGIAR Annual Report (2023)

3.5 Sampling Frame

Saunders et al. (2014) described a sampling frame as an inventory of all objects in a population that can be selected for inclusion in a sample, including people, homes, organizations, and more. For this study, the sampling frame consisted of individuals from the nine CGIAR organizations operating in Kenya. These individuals were selected from various roles that interact with audit committees. Specifically, the sampling frame included nine (9) director generals, ten (10) heads of corporate services, ninety (90) accountants, sixty-four (64) heads of research, and seventy-four (74) internal auditors. Together, these roles represent key personnel involved in or influencing audit committee activities within CGIAR organizations. The aggregate number of persons in the sampling frame was 247. This sampling frame was designed to ensure that a diverse and representative group from across the organizations participated in the study, providing insights from multiple perspectives related to audit committee functioning and its role in fraud risk management.

Table 3. 2: Sampling Frame

	Frequency	Percentage
Director general	9	4%
Heads of corporate services	10	4%
Accountants	90	36%
Heads of research	64	26%
Internal auditors	74	30%
Total	247	100%

Source: CGIAR Annual Report (2023)

3.5.1 Rationale of Selected Respondents

The respondents in the study comprised individuals from the nine CGIAR organizations with operations in Kenya who interacted directly or indirectly with the audit committees, i.e., the director generals, the heads of corporate services, accountants, heads of research, and internal auditors. The director generals were selected because, in addition to the secretarial role they played in their boards, they also participated in the selection of members of their boards and hence audit committee members, and also reported to their respective audit committees. The heads of corporate services, the accountants, and the heads of research had direct and indirect reporting lines to their audit committees. The internal auditors had direct reporting lines to their audit committees.

3.6 Sampling Technique and Sample Size

Kothari (2008) defined sampling as a process of identifying and selecting items in a population that would participate in a study. Further, a sample is a fraction of the entire population, or a portion selected from the population (Bernard, 2013).

The study used the stratified random sampling method to select a sample. Stratified proportional random sampling involves identifying the distinct groups in a population and using their relative proportions to select sampled items from each of the groups, making it more likely to result in a

representative sample of the population (Onyango, 2022). Stratification helps decrease the standard error by permitting a limited level of control over the variance (Latham, 2007).

From the sampling frame, the study’s respondents were divided into five distinct categories: the director generals, the heads of corporate services, the accountants, the heads of research, and the internal auditors. To achieve a stratified sample, the study sampled at least 75% from each category. This was in compliance with the guidelines provided by Mugenda (2008), which state that at least a tenth of the total population needs to be sampled where the population consists of one thousand (1000) or more; and at least a sample of three-out-of-every-ten of the population needs to be sampled where the population consists of fewer than one thousand (1000). As a result, the sample size was one hundred and eighty-five (185) members of staff.

3.6.1 Sample of the Respondents

The study achieved a stratified random sample of one hundred and eight-five (185) staff members as illustrated in Table 3.3 below:

Table 3. 3: Sample Size

	Population	Sample (75% of Population)
Director generals	9	7
Heads of corporate services	10	7
Accountants	90	67
Heads of research	64	48
Internal auditors	74	56
Total	247	185

Source: CGIAR Annual Report (2023)

3.7 Data Collection Technique

The study used a questionnaire for data collection. Saunders et al. (2014) stated that questionnaires are often utilized to obtain information from participants in descriptive and explanatory studies. By utilizing closed-ended questions and a 5-tier Likert scale, the study's questionnaire followed a well-designed layout.

The questionnaire had four distinct sections. Section A of the questionnaire gathered the study respondents' demographic information. Section B of the questionnaire obtained data on the independent variables, while Section C addressed the study's dependent variable sub-dimensions. A five-tier Likert scale was used to quantify the responses (strongly agree - 5, agree - 4, neutral - 3, disagree - 2, and strongly disagree - 1). Section D gathered information on the moderating variable, i.e., the presence of an internal audit function.

3.8 Data Collection Procedures

Guided by Fowler Jr (2013), all respondents received the study's questionnaires using a deliver and collect afterwards method. Each respondent identified in the study's sample was contacted individually. A register kept by the researcher tracked questionnaire dissemination to the respondents. Additionally, the researcher ensured that all required permissions were acquired before the collection of data. In cases where the drop and pick approach was deemed untenable, the researcher used Google Forms to gather data electronically.

3.9 Research Quality and Reliability

Research quality and reliability were achieved through limited duplication and testing of the study, which helped assess the consistency and legitimacy of the study's questionnaire, as well as real-world considerations of its utility (Bhattacharjee, 2012). A pilot test was crucial in identifying

weaknesses that could arise, shortcomings in the study rationale, and challenges in the research process (Creswell, 2014).

Although sections A, B, and C of the questionnaire used in the study were adopted from an already piloted study by Ambiyó (2020), section D of the questionnaire, developed by the researcher, had not yet been piloted. As such, a pilot test was conducted for the questionnaire using 10% of the total sample size of one hundred and eighty-five (185), resulting in a pilot sample of about nineteen (19) respondents. The pilot sample was derived from the target population in proportion to the sample strata for validity, relevance, and effectiveness and is demonstrated below:

Table 3. 4: Pilot Sample Size

	Sample Size	Pilot Sample Size (10% of Selected Sample)
Director generals	7	1
Heads of corporate services	7	1
Accountants	67	7
Heads of research	48	4
Internal auditors	56	6
Total	185	19

Source: Author (2025)

3.9.1 Validity of the Research Instrument

The development of the questionnaire was guided by previous studies and relevant concepts. As a result, the questionnaire was designed to align with the study's objectives. It was divided into four (4) distinct sections—Sections A, B, C, and D—to achieve construct validity. Section A was used to obtain background and demographic information of the respondents. Section B focused on obtaining feedback on the independent variable dimensions of audit committee composition, independence, meetings, and expertise. Section C was used to gather data on the dependent variable, i.e., fraud risk management. Finally, Section D aimed to collect data on the moderating variable, i.e., the internal audit function. To further enhance the validity of the questionnaire, Sections A, B, and C were adapted from a previously piloted study by Ambiyó (2020), while

Section D was piloted on a sample of nineteen (19) participants drawn from the study's population. The content validity and relevance of the study questionnaire were reviewed and affirmed by the study's supervisor.

3.9.2 Reliability Tests

Cooper et al. (2014) describe reliability as the extent to which a research tool, such as a questionnaire produces stable results across repetitive tests or experiments. In this study, the reliability of the questionnaire was assessed using Cronbach's alpha, a commonly used method for measuring internal consistency. The reliability and validity of data collected from questionnaires and other instruments play an important role in how the data are interpreted (Creswell, 2013).

A higher value of Cronbach's alpha indicates that the items on the questionnaire are strongly correlated, while a lower value suggests weaker correlations among the items being tested (Onyango, 2022). This study applied Cronbach's alpha to measure consistency on a scale from zero (0) to one (1). Values closer to one (1) would indicate that the variables being examined are reliably measurable, while a value between 0.7 and 0.99 is considered acceptable, indicating good internal consistency (Fraenkel & Wallen, 1996).

3.10 Data Analysis and Presentation

The investigator ensured that the numerical data obtained from the study were carefully edited, coded, entered, and cleaned to guarantee precision and consistency. SPSS was used to analyze both descriptive and predictive characteristics of the data. In addition to basic statistics like frequencies, relative percentages, averages or means, and standard deviations, the findings were presented using tabular formats.

To achieve the study's five objectives, which included: (1) establishing the influence of the composition of the audit committee on fraud risk management, (2) determining the influence of audit committee independence on fraud risk management, (3) assessing the influence of audit

committee meetings on fraud risk management, (4) investigating the influence of audit committee expertise on fraud risk management, and (5) determining the moderating effect of the internal audit function on the relationship between the audit committee and fraud risk management, Spearman's correlation analysis was used. This method was employed to measure the correlation between categorical variables: the independent variables (audit committee composition, independence, meetings, and expertise), the moderator variable (presence of internal audit function), and the dependent variable (fraud risk management). A five-point Likert scale was applied to quantify the independent and dependent variables, where 1 denoted strong disagreement, 2 represented disagreement, 3 indicated neutrality, 4 was agreement, and 5 signified strong agreement. The moderator variable, which pertained to the presence or absence of an internal audit function, was coded as a binary variable (0 for absence, 1 for presence). From this, the study employed the two (2) ordinal logistic regression models i.e. the Direct Effect model and the Moderated Effect model. These are laid out below:

i) Direct Effect Model

$$\text{Fraud Risk Management} = \beta_1 \text{ Audit Committee Composition} + \beta_2 \text{ Audit Committee Independence} + \beta_3 \text{ Audit Committee Meetings} + \beta_4 \text{ Audit Committee Expertise} + \epsilon_1$$

ii) Moderated Effect Model

$$\begin{aligned} \text{Fraud Risk Management} = & \beta_1 \text{ Audit Committee Composition} + \beta_2 \text{ Audit Committee Independence} \\ & + \beta_3 \text{ Audit Committee Meetings} + \beta_4 \text{ Audit Committee Expertise} + \beta_5 \text{ Availability of an Internal} \\ & \text{Audit Function} + \beta_6 (\text{Audit Committee Composition} \cdot \text{Availability of an Internal Audit} \\ & \text{Department}) + \beta_7 (\text{Audit Committee Independence} \cdot \text{Availability of an Internal Audit Department}) \\ & + \beta_8 (\text{Audit Committee Meetings} \cdot \text{Availability of an Internal Audit Department}) + \beta_9 (\text{Audit} \\ & \text{Committee Expertise} \cdot \text{Availability of an Internal Audit Department}) + \epsilon_1 \end{aligned}$$

Where:

- Constants $\beta_1 - \beta_4$ represent the coefficients for the effects of the independent variables. They demonstrate the influence of the independent variable when the moderator variable is zero (0) (i.e. the baseline group);
- Constant β_5 is the coefficient for the effect of the moderator variable. This is a binary variable that has the values of zero (0) and one (1). It indicates the correlation between the moderator variable and the dependent variable;
- Constants $\beta_6 - \beta_9$ represent the link or connection between the independent variables and the moderator variable. They also indicate changes in the interplay between the independent variable and the dependent variable when the moderator value is one (1) compared to when the moderator value is zero (0); and
- ϵ_1 represents the error measure.

In addition to the Cronbach alpha test, other diagnostic procedures such as multicollinearity, autocorrelation, and normality tests were carried out before conducting analytical modelling.

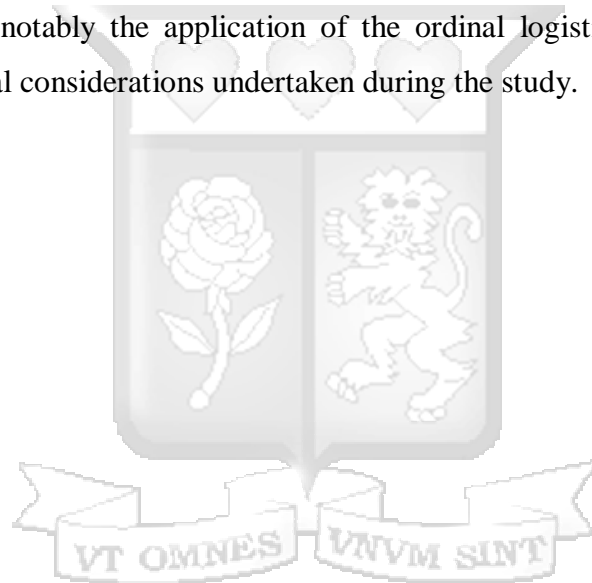
3.11 Ethical Considerations

After receiving a letter from Strathmore Business School confirming ethical approval and an official permit from the National Commission for Science, Technology, and Innovation (NACOSTI) to conduct research, the researcher reached out to all the targeted institutions and participants to seek permission for their involvement in the study. Upon receiving the requisite approval, the researcher delivered the questionnaires and gathered signed consent from all the respondents. A cover letter explaining the study's objectives was included with each questionnaire for each of the intended respondents. The researcher, who was also identified in the cover letter as the lead contact person mentioned to each respondent that they had a right to not participate in the study if they so wished. The study did not gather personal information, preserving its quality and

integrity. To maintain academic honesty, full acknowledgment was given to all sources, whether published or unpublished.

3.12 Chapter Summary

This chapter detailed the study's methodology, including the research philosophy, design, and the rationale for using stratified random sampling. It outlined the data collection method, specifically, the use of a questionnaire, and the procedures adopted to enhance response rates. The chapter also addressed research quality, discussing instrument validity and reliability testing. It described the data analysis approach, notably the application of the ordinal logistic regression model, and concluded with the ethical considerations undertaken during the study.



CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the results of the data analysis conducted in order to fulfill the study's objectives. The overall objective of this study was to assess the influence of the audit committee of the board of directors on fraud risk management and the Moderating Effect of Internal Audit Departments of the CGIAR organizations. The results were presented in alignment with the study's objectives. To make the discussions easier to comprehend, results were laid out in tables. Spearman's correlation analysis was used to assess the strength and direction of association between audit committee characteristics and fraud risk management was presented. Thereafter, a direct effect ordinal logistic regression model was performed to test the strength of the relationships between the variables; as well as a moderated ordinal logistic regression analysis was conducted to determine whether the presence of an internal audit function moderates the relationship between audit committee attributes and fraud risk management. The chapter outlines the results from these analyses.

4.2 The Study's Rate of Response

An aggregate of one hundred and eighty-five (185) questionnaires were administered to selected respondents across the nine (9) CGIAR organizations operating in Kenya. Out of these, one hundred and thirty-four (134) questionnaires were duly completed and returned in time for evaluation, accounting for a response rate of 72.43%. According to Fosnacht et al. (2017), a response rate above 70% is considered acceptable and adequate for academic research, particularly in organizational studies. Therefore, the achieved response rate meets the threshold for reliable analysis. All duly populated questionnaires were scrutinized for comprehensiveness, completeness, consistency, and accuracy. They were found to be valid and suitable for further statistical analysis.

4.3 Demographic Profile of Respondents

This section presented the demographic make-up and attributes of the one hundred and thirty-four (134) respondents who participated in the study. The information included the respondents' gender, level of education, professional experience, and job categories. Understanding these attributes was essential in contextualizing the responses and providing insights into the knowledge and experience levels of the respondents in relation to audit committee practices and fraud risk management in CGIAR organizations. Table 4.1 below summarizes the demographic attributes and characteristics of the study's respondents.

Table 4. 1: Demographic Profile of the Respondents

Category	Distribution	Frequency	Percentage (%)
Gender	Male	85	63.4
	Female	49	36.6
Level of Education	Doctorate Degree	42	31.3
	Master's Degree	51	38.1
	Bachelor's Degree	41	30.6
Experience (Years)	1–5 Years	22	16.5
	6–10 Years	37	27.8
	11–15 Years	22	16.5
	16–20 Years	22	16.5
	Over 20 Years	30	22.6
Job Category	Director General	6	4.5
	Head of Corporate Services	4	3
	Accountant	55	41
	Head of Research	37	27.6
	Internal Auditor	32	23.9

Source: Research Data (2025)

4.3.1 Gender of Respondents

The gender distribution shows that the majority of respondents were male i.e. 63.4%, while female respondents accounted for 36.6%. This indicates a reasonable gender balance, suggesting that CGIAR organizations have made strides in promoting gender diversity in leadership and governance roles, which is in line with global efforts to enhance inclusivity and diversity in corporate governance.

4.3.2 Respondents' Qualifications

In terms of education, 30.6% of respondents possessed a Bachelor's degree, and 38.1% of the respondents held a Master's degree, while 31.3% had a Doctorate degree. The high percentage of respondents with postgraduate qualifications i.e. 66.4% implies that a majority of the study's participants had advanced knowledge and expertise, which is essential for overseeing governance processes, risk management, and fraud mitigation efforts.

4.3.3 Respondents' Years of Professional Qualification

With respect to professional expertise, 55.6% of the participants had more than a decade of experience, and 22.6% had accumulated over 20 years of experience in their respective roles. This suggests that the vast majority of the participants had considerable experience, positioning them well to provide informed responses regarding the influence of audit committee characteristics on fraud risk management.

4.3.4 Respondents' Job Categories

The representation across various job categories or strata was diverse, with accountants representing 41% and internal auditors 23.9% making up the majority of the respondents. Their participation in the study ensured that whilst the other categories were included in the study, the perspectives of these individuals who play a critical role in financial oversight and fraud prevention were well captured.

In summary, the characteristics of respondents based on their demographic information demonstrated that the study drew responses from a well-educated, experienced, and professionally diverse group of respondents, guaranteeing the legitimacy and rigour of the findings.

4.4 Descriptive Statistical Findings

The study performed descriptive statistics based on quantifiable data from a 5-level Likert scale survey. Measures of central tendency (Mean, Median, and Standard Deviation), frequency, and distribution were used to consolidate, categorize, and highlight the main attributes of the data obtained. The findings are presented below:

4.4.1 Audit Committee Composition

This section presented the descriptive analysis of the responses on the composition of audit committees within CGIAR organizations operating in Kenya. The analysis focused on four key indicators: age diversity, gender diversity, criminal background, and ethical standing of committee members. Participants were requested to express their degree of agreement with each assertion on a five-level Likert scale. The analysis as shown in Table 4.2 laid out overall trends in the respondents' agreement and the implications of the observed mean and standard deviation values.

Table 4. 2: Descriptive Statistics for Audit Committee Composition

Statement	Mean	Std. Dev
Our Audit Committee Consists of Members from Different Age Groups	4.22	0.54
The Audit Committee Can Be Said to Be Diversified in Terms of Gender	4.19	0.55
Members of Our Audit Committee Do Not Have Past Criminal Records	4.29	0.47
Members of Our Audit Committee Have Unquestionable Ethical Standing in The Society	4.29	0.52

Statement	Mean	Std. Dev
Average	4.2475	0.52

Source: Research Data (2025)

Across all the four indicators under audit committee composition, the vast majority of respondents agreed with the positive statements presented. Specifically, 94% of respondents agreed that their audit committees consisted of members from different age groups. Similarly, 92.5% agreed that there was gender diversity within their audit committees. An even higher proportion of respondents i.e. 99.3% agreed that members of the audit committee did not have past criminal records, and 97% agreed that these members possessed unquestionable ethical standing in society. In all the statements, the rate of disagreement was zero, while neutrality remained below 8%.

The average mean score across all items was 4.25, indicating a high overall level of agreement. This strong agreement with the positive characteristics of committee composition implies that CGIAR organizations are largely in compliance with globally recommended standards for board sub-committees. The low standard deviation, i.e. an average of 0.52 indicates a high level of consistency in responses, suggesting that these practices are fairly standard across the organizations included in the study.

4.4.2 Audit Committee Independence

This section examines the level of independence of the audit committees within CGIAR organizations. Independence in this context refers not only to procedural independence, such as the committee’s ability to review reports and policies objectively, but also relational independence, which concerns the potential influence that management may have over the committee’s functioning. Table 4.3 presents the descriptive statistics for the statements related to audit committee independence.

Table 4. 3: Descriptive Statistics for Audit Committee Independence

Statement	Mean	Std. Dev
Our audit committee members review our reports and policies objectively	4.29	0.49
Our audit committee members have declarations of no conflicts of interest	4.57	0.5
Our audit committee members serve on a rotational basis with no member allowed to serve for more than three (3) years	4.51	0.53
Our audit committee members do not have association with our management and employees	2.99	0.88
Average	4.09	0.6

Source: Research Data (2025)

The responses reveal that a significant majority of the respondents agreed that the audit committee members operate independently in three (3) of the four (4) key aspects assessed. Specifically, 98.5% of respondents agreed that audit committee members review reports and policies objectively; 100% of the respondents indicated that their audit committee members declared conflicts of interest; and 98.5% of respondents affirmed that audit committee members served on a rotational basis. These responses suggest that procedural independence was well established within these organizations. However, when assessing relational independence, a noticeable gap emerged. In response to the statement of whether audit committee members did not have any associations with management and employees, only 26.1% of respondents agreed; 44% indicated that they were neutral; and 29.8% disagreed with the statement. This indicates that whilst the audit committees were procedurally and functionally independent, respondents perceived potential conflicts of interest arising from personal or professional connections between audit committee members and management.

The overall mean score for audit committee independence was 4.09, reflecting a general consensus among respondents that the audit committees were independent. However, the relatively low mean for the statement about associations with management i.e. 2.99 combined with a higher standard deviation of 0.88 suggested that there was considerable variability in how respondents viewed relational independence. This variability could indicate differing experiences or perceptions across the various CGIAR organizations in Kenya.

4.4.3 Audit Committee Meetings

This section examined the frequency, quality, and structure of the audit committee meetings within CGIAR organizations. Meetings are a vital component of the audit committee's oversight role, providing a platform for reviewing financial reports, discussing internal controls, and addressing emerging risks. Table 4.4 presents the descriptive statistics for the responses related to audit committee meetings.

Table 4. 4: Descriptive Statistics on Audit Committee Meetings

Statement	Mean	Std. Dev
Our audit committee holds meetings at least four (4) times in a year	4.08	1.23
The agenda and reports to be reviewed by our audit committee are shared at least three (3) weeks in advance of the meeting	3	0.91
Our audit committee meetings include in-camera sessions with internal and external auditors	4.49	0.69
Deliberations and action plans from our audit committee meetings are minuted	4.59	0.55
Average	4.04	0.845

Source: Research Data (2025)

The responses revealed that a majority of respondents agreed that audit committees met regularly, with 52.2% strongly agreeing and 26.1% agreeing that their committees held meetings at least four times per year. However, a notable 17.9% of respondents either disagreed or remained neutral. This suggested that while most committees were engaged regularly, there were variations in the frequency of meetings across CGIAR organizations. Regarding the preparation for these meetings, only 31.2% of respondents agreed that the agenda and reports were shared at least three weeks in advance, while 33.6% disagreed, and 35.8% remained neutral. This indicated that meeting preparation may not have always met best practices, which could have affected the effectiveness of committee discussions and decision-making. In terms of meeting structure, a significant 91.8% of respondents agreed that their audit committees included in-camera sessions with internal and external auditors, which was considered a best practice for addressing sensitive issues away from management's influence. Moreover, 98.5% of respondents affirmed that deliberations and action plans from audit committee meetings were minuted and documented, indicating strong compliance with formal meeting protocols.

The overall mean score for audit committee meetings was 4.04, which was a strong indication that audit committees were largely fulfilling their responsibility of regular meetings and maintaining a structured approach to oversight. However, the relatively higher standard deviation (0.845) suggests that the consistency and effectiveness of meetings may have varied across the different CGIAR organizations.

4.4.4 Audit Committee Expertise

This section evaluated the qualifications, professional expertise, and work experience of audit committee members in CGIAR organizations. The competency of the audit committee members was a critical factor in determining the effectiveness of their oversight role, especially in managing financial risks and fraud prevention. Table 4.5 presents the descriptive statistics for the responses related to audit committee expertise.

Table 4. 5: Descriptive Statistics for Audit Committee Expertise

Statement	Mean	Std. Dev
Members of our audit committee are recruited on merit	4.34	0.51
Members of our audit committee have audit, financial management, or accounting qualifications	4.55	0.5
Members of our audit committee are members in good standing of relevant professional bodies	4.44	0.53
Members of our audit committee have work experience in audit, financial management, or accounting	4.57	0.5
Average	4.475	0.51

Source: Research Data (2025)

The responses indicated that CGIAR organizations were dedicated to ensuring that their audit committees consisted of highly skilled and knowledgeable members. 98.5% of respondents agreed that their audit committee members were recruited based on merit, with 62.7% strongly agreeing with this statement. Similarly, 99.8% of respondents agreed that committee members held relevant qualifications in audit, financial management, or accounting, with 55.2% strongly agreeing. Moreover, 98.5% affirmed that the audit committee members were members in good standing of relevant professional bodies, and 100% of respondents agreed that audit committee members had work experience in audit, financial management, or accounting.

The overall mean score for audit committee expertise was the highest among all components at 4.475, with a low standard deviation of 0.51. This was an indication of strong agreement and consistency among respondents. These findings highlighted that CGIAR organizations prioritized selecting audit committee members with relevant qualifications and experience, ensuring that the committee was equipped to handle complex financial oversight and risk management duties.

4.4.5 Internal Audit Department

The study sought to assess the effect of the presence of an internal audit function within CGIAR organizations on fraud risk management. In so doing, the study established whether or not the subject cigar organisations had internal audit functions. Table 4.6 presents the descriptive statistics for the responses regarding the presence of an internal audit function within the organizations.

Table 4. 6: Descriptive Statistics for Internal Audit Department’s Presence

Statement	Yes	No	I am not sure	Mean	Standard Deviation
Our audit organization has an internal audit function	70.10%	29.90%	0.00%	1.3	0.46

Source: Research Data (2025)

The results showed that 70.1% of respondents indicated that their organizations had an internal audit function, while 29.9% reported the absence of one. No respondents indicated uncertainty about this aspect, as 0% selected the option “I am not sure.” The findings revealed that a majority of CGIAR organizations in Kenya had established an internal audit department, which was a significant positive indicator of governance and fraud risk management. The internal audit function plays a crucial role in independently evaluating the effectiveness of financial controls, compliance measures, and risk mitigation strategies. The high percentage of organizations with an internal audit function was consistent with best practices in corporate governance, where organizations with robust internal audit functions were better positioned to prevent and detect fraud (See et al., 2020).

Internal audit departments are often tasked with reviewing internal controls, assessing operational efficiency, and ensuring adherence to organizational policies and legal requirements. As noted by Agić & Jeremić (2023), the presence of a dedicated internal audit function strengthens the organization’s capacity to independently scrutinize management practices, reducing the opportunity for fraud and improving accountability within the organization. The Fraud Triangle Model also highlights the significance of such internal monitoring mechanisms, as internal audits

address the opportunity component of fraud by identifying weaknesses in financial and operational processes that could be exploited. However, the 29.9% of respondents who reported the absence of an internal audit function raised concerns about governance gaps within those organizations. Without an internal audit department, there may have been insufficient oversight, making the organization more vulnerable to fraud and other risks. This aligned with findings by Power (2021), who argued that organizations without a strong internal audit presence were more prone to compliance failures and undetected fraud. Moreover, as Rae et al. (2017) pointed out that the absence of internal audit significantly weakened the ability to detect and address fraud, as the function was critical for providing an independent and objective review of management activities. Given the relatively high percentage of organizations with an internal audit function, the study noted that CGIAR organizations were generally committed to robust oversight and risk management. However, the gap in organizations without internal audit raised questions about the effectiveness of fraud risk management in those institutions and pointed to a potential area for improvement.

The study's findings indicated that the majority of CGIAR organizations in Kenya benefited from the presence of an internal audit function, which strengthened their overall governance structure and enhanced their ability to manage fraud risk. The presence of this department is crucial in addressing the opportunity for fraud and improving the organization's internal control mechanisms. However, the significant proportion of organizations without an internal audit function suggested the need for further investment in risk management and oversight structures to ensure that all CGIAR organizations were fully equipped to prevent and detect fraud effectively. Strengthening internal audit functions in organizations that lack them should be a priority to align with global governance standards and Fraud Triangle Model, ensuring comprehensive oversight and fraud risk mitigation.

4.4.6 Fraud Risk Management

The study sought to assess the effectiveness of the fraud risk management practices within CGIAR organizations, focusing on the communication of fraud risk management programs, the execution of fraud risk assessments, the deployment of fraud controls, and the ongoing evaluation of these

practices. Effective fraud risk management was crucial for safeguarding an organization’s assets, reputation, and long-term sustainability. Table 4.7 presented the descriptive statistics for the responses regarding fraud risk management in the organizations.

Table 4. 7: Descriptive Statistics for Fraud Risk Management

Statement	Mean	Std. Dev
The organization establishes and communicates a Fraud Risk Management Program that demonstrates the expectations of the board of directors and senior management and their commitment to high integrity and ethical values regarding managing fraud risk	3.96	0.91
The organization performs comprehensive fraud risk assessments to identify specific fraud schemes and risks, assess their likelihood and significance, evaluate existing fraud control activities, and implement actions to mitigate residual fraud risks	3.85	0.95
The organization has deployed preventive and detective fraud control activities to mitigate the risk of fraud events occurring or not being detected in a timely manner	3.76	0.99
The organization has established a communication process to obtain information about potential fraud and deploy a coordinated approach to investigation and corrective action to address fraud appropriately and in a timely manner	3.25	0.9
The organization performs ongoing evaluations to ascertain whether each of the five principles of fraud risk management is present and functioning and communicates Fraud Risk Management Program deficiencies in a timely manner to parties responsible for taking corrective action, including senior management and the board of directors	2.7	0.83
Average	3.504	0.916

Source: Research Data (2025)

The responses indicated that a majority of respondents i.e. 79.1% agreed that their organizations have established and communicated a fraud risk management program that reflected the board’s

commitment to integrity and ethical values. Similarly, a majority of the respondents i.e. 76.1% agreed that their organizations performed comprehensive fraud risk assessments. Further 72.3% of respondents indicated that their organizations deployed preventive and detective fraud control activities. However, when it came to the establishment of a communication process for fraud detection and the ongoing evaluation of the fraud risk management program, a significant number of respondents were either neutral or disagreed. Specifically, only 44.8% agreed that their organization had an effective fraud communication process, and just 20.1% agreed that ongoing evaluations of fraud risk management practices were performed consistently. The overall mean score for fraud risk management was 3.504, which was notably lower than the other components of audit committee practices. The standard deviation of 0.916 reflected variability in responses, indicating inconsistency in the implementation of fraud risk management practices across CGIAR organizations.

The findings indicated that while CGIAR organizations generally had established fraud risk management frameworks, there were significant gaps in their implementation and monitoring. For example, while 79.1% of respondents agreed that fraud risk management programs were in place and aligned with the board's commitment to integrity, the relatively low agreement on communication processes and ongoing evaluations suggested that these programs were not always actively managed or monitored. The absence of a consistent evaluation process for fraud risk management raised concerns about the long-term effectiveness and adaptability of these programs, especially in rapidly changing environments where fraud risks evolve. The lack of ongoing evaluations, indicated by 20.1% of respondents, meant that fraud management strategies may not have been updated or refined based on new risks, feedback, or emerging trends. This finding aligned with Albrecht et al. (2018), who emphasized that without regular reviews, fraud risk management programs risk became outdated and ineffective. Furthermore, without regular evaluations, organizations may fail to identify gaps or weaknesses in their controls, leaving them vulnerable to undetected fraud.

The response to the item regarding the communication process for potential fraud was similarly concerning. Although 40.3% of respondents agreed that such a communication process was in place, a substantial proportion remained neutral or disagreed i.e. 53.7%. This indicated that in

some organizations, staff and stakeholders may lack clear channels for reporting suspected fraud or may not feel confident that their concerns would not be taken seriously. Rae et al. (2017) and Murphy & Dacin (2011) highlighted the importance of transparent communication processes in fraud prevention. Without an open, accessible, and trusted communication system, employees may hesitate to report potential fraudulent activity, allowing problems to fester and grow undetected. Despite these gaps, the positive responses related to the establishment of fraud risk assessments and the deployment of fraud controls were encouraging. 53% of respondents agreed that their organizations performed comprehensive fraud risk assessments, and 72.3% agreed that preventive and detective fraud controls were in place. These findings aligned with best practices in risk management, as organizations that actively assessed and addressed fraud risks were better equipped to prevent fraud and minimize its impact when it occurred. This aspect was supported by Albrecht et al. (2018), who emphasized the importance of risk assessments in identifying vulnerabilities and mitigating risks early on.

From the perspective of the Fraud Triangle Model, the findings were mixed. On one hand, the deployment of preventive and detective controls addresses the opportunity for fraud by making it harder for fraud to be perpetrated without detection. On the other hand, the lack of strong communication and evaluation processes allowed rationalization to persist unchecked. Without a clear avenue for employees to report fraud, or an ongoing review process to ensure fraud risk strategies were working, there was greater potential for rationalizing unethical behavior, especially in an environment where individuals may feel that their concerns would be ignored or dismissed. In terms of Agency Theory, the results reflected the importance of ensuring that fraud risk management was an ongoing process that was actively overseen by the audit committee and senior management. Without regular evaluation and communication, the organization's ability to align management's actions with stakeholder interests was weakened, potentially leading to an increase in agency problems and fraud risks.

The study's findings revealed that CGIAR organizations in Kenya generally had fraud risk management frameworks in place, particularly in the areas of fraud risk assessment and the deployment of fraud controls. However, gaps remained in the monitoring, evaluation, and communication aspects of fraud risk management. Strengthening these areas would help align the

organizations with global standards of best practice in governance and risk management, ensuring that fraud risks are continuously monitored and mitigated in a dynamic risk environment.

4.5 Diagnostic Tests

Diagnostic tests were conducted before conducting any inferential statistical analysis. The tests performed include the Multicollinearity Test, Autocorrelation Test, and Normality Tests. Each test served to check the assumptions of the regression model and ensure that the data was suitable for the analysis that followed. The results were presented in the respective tables, followed by discussions and interpretation of each test.

4.5.1 Multicollinearity Test

Multicollinearity refers to the presence of high correlations between two or more independent variables in a regression model, which can distort the results and lead to incorrect conclusions. To check for multicollinearity, the study examined the Tolerance and Variance Inflation Factor (VIF) values for each independent variable. These statistics helped assess the degree of correlation between the predictor variables.

Table 4. 8: Multicollinearity Test

Model	Collinearity Statistics		
	Variable	Tolerance	VIF
	Audit Committee Composition	0.798	1.254
	Audit Committee Independence	0.79	1.267
	Audit Committee Meeting	0.458	2.183

Audit Committee Expertise	0.748	1.337
Internal Audit Department	0.511	1.956

a Dependent Variable: Fraud Risk Management

Source: Research Data (2025)

The results of the multicollinearity test showed that all of the variables had Tolerance values above 0.4 and VIF values below 10, indicating that there was no significant multicollinearity among the independent variables. Specifically, the VIF values ranged from 1.254 (Audit Committee Composition) to 2.183 (Audit Committee Meeting), which were well below the threshold of 10. Tolerance values ranged from 0.458 (Audit Committee Meeting) to 0.798 (Audit Committee Composition), all of which were well above the critical value of 0.1. These results suggested that the independent variables in the model were not highly correlated with each other, and multicollinearity was not a concern.

This finding was important because multicollinearity could inflate standard errors, making it difficult to determine the true effect of each independent variable. In this case, the absence of multicollinearity ensured that the regression model was reliable and that each predictor variable had a distinct and measurable impact on the dependent variable, Fraud Risk Management.

4.5.2 Shapiro-Wilk Normality Tests

For regression analysis to yield valid results, it is crucial that the residuals are normally distributed. The Shapiro-Wilk normality test conducted on each variable showed that most variables, including Audit Committee Composition ($p = 0.348$) and Audit Committee Independence ($p = 0.666$), did not significantly deviate from normality. These results suggested that the residuals for these variables were approximately normally distributed. However, Audit Committee Meeting ($p = 0.00$) and Internal Audit Department ($p = 0.019$) showed significant deviations from normality, indicating potential issues for these variables.

Table 4. 9: Normality Tests

Variable	Significance
Audit Committee Composition	0.348
Audit Committee Independence	0.666
Audit Committee Meeting	0
Audit Committee Expertise	0.174
Internal Audit Department	0.019

Source: Research Data (2025)

Despite these deviations, the study noted that violations of normality did not necessarily invalidate the regression model, particularly with large sample sizes. According to Hair et al. (2014), the central limit theorem ensured that the sampling distribution of the estimates would be approximately normal, even if the data was not perfectly distributed. Therefore, while non-normality was observed for these two variables, the impact on the regression analysis was minimal due to the large sample size of 134 respondents.

In conclusion, the diagnostic tests indicated that the data was suitable for regression analysis. The absence of multicollinearity and autocorrelation, along with generally normal residuals, assured the reliability of the model. Although there were slight normality violations for some variables, the large sample size reduced their potential impact, allowing for robust and meaningful results in the analysis.

4.6 Inferential Statistics

The study conducted correlation and regression analysis to examine the relationships between audit committee characteristics and fraud risk management; and to determine whether internal audit functions had a moderating effect on these relationships. Pearson correlation was employed to identify the strength and direction of the associations between the independent variables i.e. the audit committee characteristics and the dependent variable i.e. fraud risk management; while ordinal logistic regression analysis was used to assess the predictive power and influence of the

audit committee characteristics on fraud risk management and whether internal audit departments had a moderating effect. The results of these analyses were presented and discussed in detail in the following sections.

4.6.1 Correlation Analysis

In this study, a Pearson correlation analysis was conducted to examine the relationships between the independent variables (Audit Committee Composition, Audit Committee Independence, Audit Committee Meetings, and Audit Committee Expertise) and the dependent variable, Fraud Risk Management. The Pearson correlation coefficient measures the strength and direction of the linear relationship between two continuous variables, with values ranging from -1 to 1, where 0 indicates no correlation, 1 indicates a perfect positive correlation, and -1 indicates a perfect negative correlation. A p-value of 0.01 was used as the threshold for statistical significance.

Table 4. 10: Correlation Analysis

		Fraud Risk Management	Audit Committee Composition	Audit Committee Independence	Audit Committee Meeting	Audit Committee Expertise
Fraud Risk Management	Pearson Correlation	1				
	Sig. (2-tailed)					
Audit Committee Composition	Pearson Correlation	.227**	1			
	Sig. (2-tailed)	0.008				
Audit Committee Independence	Pearson Correlation	.320**	.368**	1		
	Sig. (2-tailed)	0	0			
Audit Committee Meeting	Pearson Correlation	.804**	0.121	.261**	1	
	Sig. (2-tailed)	0	0.162	0.002		

		Fraud Risk Management	Audit Committee Composition	Audit Committee Independence	Audit Committee Meeting	Audit Committee Expertise
Audit Committee Expertise	Pearson Correlation	.251**	.360**	.326**	.281**	1
	Sig. (2-tailed)	0.004	0	0	0.001	

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

Source: Research Data (2025)

The results from the correlation analysis provided valuable insights into the relationships between the independent variables and the dependent variable. First, the correlation between Fraud Risk Management and Audit Committee Composition was 0.227, which was statistically significant at the 0.01 level ($p = 0.008$). This suggested a moderate positive correlation between the composition of the audit committee and the effectiveness of fraud risk management. In other words, organizations with a more diverse and well-composed audit committee tend to have stronger fraud risk management practices. This finding aligned with Soltani (2014), who found that audit committee composition, particularly its diversity and expertise, positively impacted the organization's ability to manage fraud risks.

The correlation between Fraud Risk Management and Audit Committee Independence was stronger at 0.320, also significant at the 0.01 level ($p = 0$). This indicated that greater independence of the audit committee was positively related to more effective fraud risk management. The result corroborates Agency Theory, which emphasizes that independent audit committees are more likely to act in the best interest of the stakeholders, reducing the potential for fraud. Soltani (2014) and Yu (2013) also emphasized the critical role of audit committee independence in ensuring unbiased oversight and strengthening fraud prevention.

When examining the relationship between Fraud Risk Management and Audit Committee Meetings, the correlation was 0.804, which was highly significant ($p = 0$). This strong positive correlation suggested that the frequency and quality of audit committee meetings were closely associated with improved fraud risk management. The results were consistent with the findings of

Wilbanks et al. (2017), who found that frequent meetings and thorough discussions of audit findings increased the audit committee’s effectiveness in detecting and managing fraud.

The correlation between Fraud Risk Management and Audit Committee Expertise was 0.251, which was statistically significant at the 0.01 level ($p = 0.004$). This positive relationship indicated that the higher the expertise of the audit committee members, particularly in financial management and audit, the better the fraud risk management practices were within the organization. This finding corroborates Velte (2020), who posited that the financial expertise of audit committee members enhanced their ability to identify fraud risks and recommend effective controls.

4.6.2 Regression Analysis

4.6.2.1 Direct Effect Model

The study conducted an ordinal logistic regression analysis to determine the level of influence that the various audit committee attributes had on Fraud Risk Management. This regression model was deemed most appropriate because the dependent variable i.e. fraud risk management was measured using a Likert-type scale and represented ordinal-level data. The regression model examined the level of influence of four independent variables i.e. Audit Committee Composition, Audit Committee Independence, Audit Committee Meetings, and Audit Committee Expertise, on the dependent variable i.e. Fraud Risk Management. The results from the regression analysis were presented in three tables i.e. the Model Fit, the Goodness of Fit for the Direct Effect Model, and the Pseudo R-Square, which provide insights into the strength, significance, and direction of these relationships.

Table 4. 11: Model Fit

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	641.394			
Final	476.852	164.542	31	0.000

Source: Research Data (2025)

The fit statistics in Table 4.11 showed a substantial improvement between the intercept-only model (baseline) and the final model incorporating the independent variables. The intercept-only model reported a -2 Log Likelihood of 641.394, while the final model yielded a significantly lower value of 476.852. This reduction in deviance was associated with a Chi-Square of 164.542, with 31 degrees of freedom and a p-value of 0.000. This indicated that the inclusion of the audit committee attributes significantly improved the predictive power of the model. In other words, the explanatory variables jointly account for a statistically significant proportion of the variation in the ordinal outcome of fraud risk management.

From the results, the model was determined to be a good fit relative to a null model and confirmed that the predictors added meaningful information in explaining variations in fraud oversight practices.

Table 4.12 provided further confirmation of the model's adequacy by showing the goodness-of-fit indices as illustrated below:

Table 4. 12: Goodness of fit for the Direct Effect Model

	Chi-Square	df	Sig.
Pearson	908.937	1777	1.000
Deviance	454.744	1777	1.000

Source: Research Data (2025)

The goodness of fit for the direct effect model showed that both the Pearson Chi-Square test ($\chi^2 = 908.937$, $df = 1777$, $Sig. = 1.000$) and the Deviance statistic ($\chi^2 = 454.744$, $df = 1777$, $Sig. = 1.000$) resulted in high significance values. A non-significant result ($p > 0.05$) indicated that there was no substantial discrepancy between the observed and the predicted responses. This further confirmed that the current model fit the data well and did not violate key assumptions of the ordinal logistic regression approach. This reinforced the robustness of the selected predictors and affirmed the model's generalizability to the population of CGIAR organizations studied.

The pseudo R-square values indicated the model's explanatory power and was reported in Table 4.13 below:

Table 4. 13: Pseudo R-Square

Pseudo R-Square	
Cox and Snell	0.707
Nagelkerke	0.712
McFadden	0.246

Source: Research Data (2025)

The Cox and Snell R^2 value was 0.707, while the Nagelkerke R^2 , a scaled version of Cox and Snell's measure that adjusts for maximum possible value, was 0.712. These statistics suggested that approximately 71.2% of the variations in the ordinal dependent variable could be explained by the audit committee's attributes included in the model. The McFadden R^2 , resulted in a more conservative measure of 0.246. This suggested a moderate-to-strong model fit in the context of social science research where values above 0.2 was generally considered acceptable. Considered collectively, these indices demonstrated that the independent variables had substantial predictive validity in explaining variations in fraud risk management perceptions.

The ordinal regression model indicated that the audit committee characteristics significantly influenced the extent to which organizations managed fraud risks effectively. The model's fit, goodness-of-fit statistics, and pseudo R-square values collectively indicated that the audit committee's structural and procedural features played a critical role in defining organizational fraud risk management procedures and frameworks. These findings provided both statistical and theoretical support for enhancing governance practices in research organizations operating in similar institutional contexts.

These results are aligned with the Agency Theory which argues that strong oversight mechanisms such as audit committees are essential in guaranteeing that managers (agents) do not act contrary to the interests of the stakeholders (principles) and ensure that fraud risk is well managed. The results also support all the three aspects of the Fraud Triangle Model i.e. pressure, opportunity and

rationalization. Whilst the audit committee attributes may not entirely address personal pressure, they enable the committee to identify and address other organizational pressures that could lead to malpractice and eventually fraud. The attributes also enable the committee members address opportunities by providing oversight and ensuring that management institute strong controls which in turn seal loopholes for potential fraud. Finally, committee by its very presence and scrutiny acts as a deterrence for fraud and makes it difficult to rationalize or justify fraudulent activity.

These findings are consistent with the conclusions of a number of studies (Yu, 2013; Soltani, 2014; Bhagat & Bolton, 2019; Oussii et al., 2019; Velte, 2020; McLaughlin et al., 2021; Almahfor & Norton, 2021; Velte, 2023) that affirmed that audit committee attributes influenced fraud risk management. On the other hand, the findings differ with the several studies (Yin et al., 2012; Abdullah & Said, 2019; Nasir et al., 2019; Baatwah et al., 2019; Biswas et al., 2023; Biswas et al., 2023; Jibril et al., 2024) who established that there no correlation between the characteristics of audit committees and the management of susceptibility to fraudulent behavior.

4.6.2.2 Moderation Analysis

The study also conducted a moderated ordinal regression analysis to assess the moderating effect of the existence of an internal audit department on the relationship between audit committee attributes and fraud risk management within CGIAR organizations. This analysis preserved the ordered nature of the data on the dependent variable i.e. fraud risk management without assuming equal intervals between response levels. Importantly, this also aligned moderation model with the analytical strategy used to evaluate the direct effect, ensuring consistency across the inferential framework for the study. The results of the moderation analysis were also presented in three tables i.e. the Mode Fit, the Goodness of Fit for the Direct Effect Model, and the Pseudo R-Square, which provide insights into the strength, significance, and direction of these relationships.

Table 4. 14: Model Fit Information for the Moderation Model

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	650.159			
Final	241.939	408.219	53	0.000

Link function: Logit.

Source: Research Data (2025)

The model fit result presented in Table 4.14 above showed a considerable improvement from the intercept-only model to the full model that incorporates the independent variables i.e. the audit committee attributes, the moderator variable i.e. the presence of internal audit function, and the interaction terms. In particular, the moderation model was highly significant, showing a considerable improvement over the intercept-only model with the -2 Log Likelihood of 650.159, while the final model yielded a significantly lower value of 241.939. This reduction in deviance was associated with a Chi-Square of 408.219, with 53 degrees of freedom and a p-value of 0.000. This suggests that the inclusion of both internal audit and its interactions with audit committee characteristics significantly enhanced the model's explanatory power.

When the results of the moderation model were compared with those of the direct effect model, there was a notable improvement in model fit. The direct effect model reported a -2 Log Likelihood of 476.852 with a Chi-Square of 164.542, while the moderation model achieved a -2 Log Likelihood of 241.939 and a Chi-Square of 408.219 ($p < 0.001$). This significant improvement suggested that the inclusion of the internal audit department as a moderating variable accounted for a substantial increase in the explanatory power of the model.

Table 4.15 provided further confirmation of the moderation model's adequacy by showing the goodness-of-fit indices as illustrated below:

Table 4. 15: Goodness of Fit for the Moderation Model

	Chi-Square	df	Sig.
Pearson	1553.007	1819	1.000
Deviance	368.668	1819	1.000

Link function: Logit.

Source: Research Data (2025)

The goodness of fit for the moderation model presented in Table 4.15 above showed that both the Pearson Chi-Square test ($\chi^2 = 1553.007$, $df = 1819$, $Sig. = 1.000$) and the Deviance statistic ($\chi^2 = 368.668$, $df = 1819$, $Sig. = 1.000$) resulted in high significance values. A non-significant result ($p > 0.05$) indicated that there was no substantial discrepancy between the observed and the predicted responses. This further confirmed that the current model fit the data well and did not violate key assumptions of the ordinal logistic regression approach. This reinforced the robustness of the selected predictors, the appropriateness of the moderator variable, and affirmed the model's generalizability to the population of CGIAR organizations studied.

Compared to the goodness of fit for the direct effect model, the moderation model's goodness of fit also showed a strong fit. Both models demonstrated non-significant p-values in the Pearson and Deviance tests, which indicated that there was no substantial discrepancy between the observed and predicted responses, confirming the adequacy of both models.

The pseudo R-square values indicated the moderating model's explanatory power and was reported in Table 4.16 below:

Table 4. 16: Pseudo R-Square for the Moderation Model

Pseudo R-Square	
Cox and Snell	0.952
Nagelkerke	0.959
McFadden	0.611
Link function: Logit.	

Source: Research Data (2025)

From the pseudo R-square values indicated in Table 4.16 above, the Cox and Snell R^2 value was 0.952, while the Nagelkerke R^2 , a scaled version of Cox and Snell's measure that adjusts for maximum possible value, was 0.959. These statistics suggested that approximately 95.9% of the variations in the ordinal dependent variable could be explained by the audit committee's attributes included in the model when the moderating effect of the presence of internal audit function was considered. The McFadden R^2 , resulted in a more conservative measure of 0.611. This suggested

a significant model fit in the context of social science research where values above 0.2 was generally considered acceptable. Considered collectively, these indices demonstrated that the independent variables i.e. the audit committee attributes, with the presence of internal audit as a moderator variable, had substantial predictive validity in explaining variations in fraud risk management perceptions.

When the pseudo R-square values for the direct effect model (in Table 4.13) and the moderated values model (in Table 4.16) were compared, notable differences emerged. For the direct effect model, the Cox and Snell R^2 value was 0.707 while for the moderation model it was a much larger value of 0.952. Similarly, the Nagelkerke R^2 for the direct model was 0.712, explaining 71.2% of the variance in fraud risk management; while for the moderated model the R^2 was 0.959, suggesting that 95.9% of the variance in fraud risk management is explained by the audit committee characteristics and the moderating effect of the internal audit function. The McFadden R^2 values for the direct effect model and for the moderation model were also notably different. This was demonstrated by the direct effect model yielding 0.246 which was deemed to be a moderate fit by social science standards, and the moderation model yielding 0.611, suggesting a stronger model fit when the moderating effect of internal audit was included. The stark contrast noted in explanatory powers of the direct effect model from those from the moderation model underscored the significant moderation role that internal audit functions played in enhancing the overall effectiveness of audit committees' attributes in fraud oversight.

The results from the moderation model affirmed the results from the direct effect model that indicated that audit committee attributes contributed to effect fraud risk management. In so doing the results also aligned with the Agency Theory as well as the Fraud Triangle Model. Importantly too, these findings confirming the moderation effect of the presence of an internal audit function in the relationship between audit committee attributes and fraud risk management was consistent with the findings by Power (2021), who highlighted that the interplay between internal and external audit functions had to be coordinated to avoid redundancy and maximize governance effectiveness. Similarly, the findings also validate the findings from Rae et al. (2017) and See et al. (2020), who argued that internal audit functions played a pivotal role in strengthening the audit committee's

oversight capacity by offering actionable insights that improve fraud detection and deterrence mechanisms.

4.7 Chapter Summary

This chapter presented the findings of the study through detailed tables, illustrating the key relationships between various audit committee characteristics and fraud risk management; as well as the moderating role of internal audit functions in this relationship. The analysis of the descriptive statistics showed that a majority of respondents agreed with the importance of audit committee independence, composition, and meeting frequency in enhancing fraud risk management, while also recognizing the importance of internal audit departments in moderating these relationships. The findings indicated that the Audit Committee Independence and Audit Committee Meetings were significant predictors of fraud risk management effectiveness, whereas Audit Committee Expertise showed limited impact in this context.

The direct effect ordinal regression analysis confirmed that all audit committee characteristics significantly influenced fraud risk management, supporting the importance of strong governance practices in mitigating fraud risk. However, more notably, the moderation analysis using ordinal regression demonstrated that the presence of an internal audit department significantly enhanced the overall model, explaining approximately 95.9% of the variance in fraud risk management outcomes (as compared to 71.2% for the direct effect model). This revealed that the internal audit function strengthened, rather than diminished, the predictive influence of audit committee attributes for fraud risk management.

Overall, the findings underscored the prominent influence the audit committee attributes on fraud risk management as well as the moderating effect of the presence of internal audit functions. These results were supported by both theoretical frameworks, such as the Agency Theory and the Fraud Triangle Model; as well as empirical literature as initially anticipated.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study along with a comprehensive discussion of the findings. It further outlines the study's conclusion, highlights both theoretical and practical implications, acknowledges the limitations faced during the research, and suggests directions for future investigations

5.2 Summary of the Study

This study aimed to examine the level of influence of audit committee attributes on fraud risk management within CGIAR organizations in Kenya and to establish whether or not the presence of internal audit functions moderated that relationship. The independent variables included Audit Committee Composition, Audit Committee Independence, Audit Committee Meetings, and Audit Committee Expertise; the moderator variable was the presence of Internal Audit Function; and the dependent variable was Fraud Risk Management. The research was grounded in Agency Theory and the Fraud Triangle Model, and employed a pragmatism research paradigm. The study targeted 9 CGIAR organizations in Kenya, selecting a sample of 185 professionals, including director generals, heads of corporate services, accountants, heads of research, and internal auditors.

A total of 134 completed questionnaires were returned, yielding a response rate of 72.4%. The analysis of the demographic data indicated that the majority of respondents were male, with substantial professional experience of over 10 years, and all possessed at least a bachelor's degree with the majority having post-graduate degrees. Descriptive statistics revealed that respondents were largely in agreement regarding the significant level of influence of audit committee composition, audit committee independence, and the frequency of audit committee meetings in

influencing fraud risk management. Audit committee expertise was however noted to have less significant level of influence on fraud risk management. Findings from correlation analysis revealed that Audit Committee Independence and Audit Committee Meetings had strong, significant positive correlations with fraud risk management, while Audit Committee Composition and Audit Committee Expertise showed moderate positive correlations. The direct effect ordinal regression analysis confirmed that all audit committee attributes explained a significant amount of the variance in fraud risk management outcomes. Notably, the moderation analysis using ordinal regression established that the presence of an internal audit department enhanced the model's power, to more substantially explain the variance in fraud risk management outcomes as compared to the direct effect model. This signified that the internal audit function strengthened, rather than diminished, the predictive influence of audit committee attributes for fraud risk management.

These findings underlined the critical role of audit committee attributes in ensuring effective fraud risk management strategies in CGIAR organizations. The study contributed to the growing body of literature on corporate governance and fraud risk management particularly in the context of international organizations.

5.3 Discussion of Findings

This section delves into the analysis and interpretation of the findings, offering insights into how the results relate to the study's objectives. The discussion is structured according to the actual objectives of the research.

5.3.1 Audit Committee Composition on Fraud Risk Management

The first specific objective of this study was to establish the level of influence of the composition of the audit committee on fraud risk management of CGIAR organisations. Descriptive statistics revealed that the majority of respondents agreed that the composition of the audit committee comprised of members from different age groups, genders, and individuals with high ethical standards and that this played a crucial role in managing fraud risks. Inferential statistics,

specifically the Pearson correlation, also highlighted a moderate positive relationship between audit committee composition and fraud risk management. These findings suggested that CGIAR organizations in Kenya are intentional about ensuring ethical, criminal-free, and demographically diverse representation within their audit committees to enhance their risk management processes.

This study's findings resonated with the Agency Theory, which emphasizes the need for effective oversight structures to bridge the gap between agents (management) and principals (stakeholders). A well-composed audit committee, particularly one composed of members with integrity and independence, enhances the credibility of this oversight. From the lens of the Fraud Triangle Model, the strong ethical standing and clean backgrounds of committee members may reduce the opportunity and rationalization components of fraud, thereby minimizing the risk of fraudulent behavior occurring and/or being justified or overlooked.

Further, the findings supported studies by Raghunandan et al. (2001) who affirmed that an ideal audit committee's composition ought to reflect gender parity; Salterio (2001) added that the members of the committee must be persons of integrity whose reputations and character were beyond reproach; Méndez and García (2007) who established that committee membership should comprise of persons with varied ages and gender, and that their membership should be based on meritocracy; Malik (2014) who concluded that members of the committee ought to be recruited competitively from various backgrounds and ideally be independent directors; McLaughlin et al. (2021) who in fact defined the composition of the audit committee as constitution of the members of this committee in terms of their demographic features e.g. age and gender, as well as personal attributes such as their standing in society; and Mardessi (2022) who opined that the composition of an audit committee significantly impacts fraud risk management because the committee's members, with their specific skills and experience, directly influence the oversight and scrutiny of financial reporting practices, which can either deter fraudulent activities or enable them to occur if not properly constituted.

On the other hand, the findings of this study went against the conclusions by Nasir et al. (2019) who found that there was no compelling evidence that an audit committee's composition influences an organisation's fraud risk management.

5.3.2 Audit Committee Independence and Fraud Risk Management

The second aim of the study focused on determine the level of influence of the independence of the audit committee on fraud risk management of CGIAR organisations. Descriptive statistics revealed that while most respondents agreed that audit committee members should be independent from management, a significant portion also indicated challenges in achieving complete independence. The study took note of the relatively lower mean score in the descriptive analysis for the statement regarding associations with management and employees which underscored a potential agency problem in these organizations. The fact that nearly a third of the respondents disagreed with the assertion that audit committee members were free from associations with management suggested that relational ties between audit committee members and management may have influenced decision-making. This in turn could have compromised the committees' ability to scrutinize management's actions without bias, therefore weakening their oversight role and increasing the risk of fraud. That said, there was a relatively strong belief, as expressed by the descriptive statistics, that the audit committee's independence had a relatively strong influence on fraud risk management. This was reinforced by the correlation analysis which showed a strong, positive relationship between audit committee independence and fraud risk management.

These findings affirmed the Agency Theory which requires clear division between management and governance oversight bodies such as internal audit committees. The findings also aligned with the Fraud Triangle Model because independent committees effectively reduce opportunities of fraud by ensuring institution of strong control systems; as well as minimize rationalization for fraud because the oversight contributes to deterring potential perpetrators altogether.

The study's findings resonated with various studies by Lee et al. (2004) who defined an audit committee's independence as the lack of any association with the management and staff of an entity; Koh et al. (2007) who established that the committee's independence was enhanced by including non-executive and non-related members; Chan et al. (2013) who found that should disputes arise between assurance providers and management, an independent audit committee would be a reliable arbiter in ensuring that corrective action is taken aligns with the interests of the organization; Bédard et al. (2014) who indicated that audit committee independence ultimately

resulted in better oversight over fiscal reporting, processes of control and monitoring systems; Almakhor and Norton (2021) who opined that because the audit committee oversees the providers of independent assurance i.e. auditors, it was crucial that the audit committee is and is seen to be independent from management; Almakhor and Norton (2021) who found that it was crucial that the audit committee ensures that it remains and is seen to be independent from management who it oversees; and Mardessi (2022) who indicated that the independence of the audit committees as demonstrated by their lack of ties to management allows them to objectively assess potential fraudulent activities, scrutinize financial reporting practices more thoroughly, and effectively challenge management decisions that might be susceptible to fraud, ultimately reducing the risk of fraudulent activities.

However, this study's findings opposed the findings of Biswas et al. (2023) who in studying family owned businesses established that that directors related to management and with a shareholding in the company were more diligent in their oversight role than independent directors in non-family owned companies.

While CGIAR organizations in Kenya appear to have established strong procedural independence for their audit committees, there was a noticeable concern regarding relational independence. Ensuring full independence, both procedural and relational would be critical for enhancing the audit committees' effectiveness in overseeing organizational governance and mitigating fraud risk, as advocated by Agency Theory and supported by empirical research on audit committee practices.

5.3.3 Audit Committee Meetings and Fraud Risk Management

The third objective of the study was to assess the level of influence of the meetings of the audit committee on fraud risk management of CGIAR organisations. Respondents affirmed that frequent, structured meetings facilitated in-depth discussions on emerging risks and fraud prevention measures. The results indicated that CGIAR organizations ensured regular meetings for their audit committees, which was essential for effective governance and fraud risk management. The high percentage of respondents who agreed that meetings were held at least four times a year and that in-camera sessions were included suggested that these committees were

making a concerted effort to engage actively with audit findings and oversight activities. However, the findings also highlighted gaps in meeting preparation, with over a third of respondents indicating that agendas and reports were not always shared well in advance of the committee meetings. This posed a potential risk to the effectiveness of meetings, as timely access to reports was crucial for audit committee members to adequately review and prepare for discussions. Nonetheless, there was still a strong conviction expressed by the descriptive statistics that audit committee meetings had a substantial influence on fraud risk management. In support of this, the correlation analysis also revealed an exceptionally strong positive correlation between audit committee meetings and fraud risk management.

In the context of the Agency Theory, proper meeting preparation was a critical mechanism for ensuring that the audit committee could effectively challenge management and provide informed oversight. Without sufficient preparation, audit committee members would not be able to fully engage with the complexities of financial reports or internal control systems, potentially leading to missed opportunities for fraud detection. The findings also resonated with the Fraud Triangle Model. Regular oversight and confidential discussions with auditors help mitigate the opportunity for fraud to occur and provide a platform for auditors to challenge any rationalizations for unethical behavior.

These study's findings affirm the outcomes from Stewart and Munro (2007) who found that the audit committee should develop a suitable charter which will spell out the manner in which it will carry out its meeting deliberations; Sharma et al. (2009) who added that such conferences should be well-timed and held routinely, and the emerging deliberations and recommendations be well minuted alongside the emanating action points; Compennolle & Richard (2018) emphasized that it is the chairperson's responsibility to include in-camera meetings on every audit committee meeting agenda and ensure that auditors have sufficient time is set aside to communicate privately and candidly with the committee; Oussii et al. (2019) who recommended that in addition to the regular agenda items that review financial statements and internal control reports with related parties and auditors, the committee meetings ought to include in-camera sessions with all auditors away from managers; Free et al. (2021) state that in camera sessions also provide the committee with the opportunity for candid questioning of auditors; and Mardessi (2022) found that audit committee

meetings are directly linked to fraud risk management because frequent meetings allow them to actively monitor the entity's systems of internal controls and processes of risk assessment and address emerging concerns, thereby reducing the probability of fraud occurring.

The findings of this study however contradicted the conclusions from Yin et al. (2012) determined that there was an insignificant correlation between the meetings of the committee and fraud risk management.

These findings suggested that audit committees within CGIAR organizations held regular and structured meetings, with positive practices such as in-camera sessions with auditors, minuted deliberations, and documented action plans. However, the variability in meeting frequency and the gaps in the timeliness of information dissemination pointed to areas for improvement.

5.3.4 Audit Committee Expertise and Fraud Risk Management

The fourth goal of this research was to investigate the level of influence of the expertise of the audit committee on fraud risk management of CGIAR organisations. The descriptive statistics illustrated that while respondents generally agreed that audit committee members should possess relevant expertise in finance, accounting, and auditing, the impact of this expertise on fraud risk management was not as significant as the other audit committee characteristics in this study. The high level of agreement regarding the merit-based recruitment of audit committee members suggested that CGIAR organizations placed significant emphasis on selecting individuals with the appropriate skill set and experience for the role. The correlation analysis illustrated a moderate positive relationship between audit committee expertise and fraud risk management, suggesting that knowledgeable committees contributed to better fraud oversight.

The finding aligned with the Agency Theory as well as the Fraud Triangle Model. This is because with the requisite expertise, the audit committee is able to offer oversight over financial information. Further, expertise enables the audit committee to ensure effective controls which in turn could deter fraud opportunities and discourages rationalization.

These findings validated findings by Ferreira (2008) who stated that the audit committee should be made up of members with sufficient financial training and experience; Mustafa and Ben (2010) who found that the expertise of members of the committee does not only comprise of academic and professional qualifications, but also of relevant experience in accounting and auditing; Salleh and Stewart (2012) who concluded that that interpersonal skills are also critical for the audit committee members, especially when they would have to mediate between management and auditors; Ghafran and O'Sullivan (2017) who established that members of the audit committee with financial and accounting academic and professional qualifications are effective in in their role in the audit committee; Abad and Bravo (2018) stated that the audit committee members deliver on their mandate by ensuring the performance of dual key tasks i.e. monitoring and oversight over the entity's management on one hand, and audit advisory on the other; Velte (2020) who established that financial and industry know-how and skill of audit committee members was crucial in their ability to comprehend key audit matters and hence fraud risk management; Moyo (2021) who argued that audit committee members must possess both financial and operational know-how and expertise, to enable them contribute towards shaping adaptive strategies; selecting leaders with relevant 21st-century expertise; and safeguarding organizational ethics, culture and values; and Mardessi (2022) who concluded that an audit committee's collective know-how and skill is connected with fraud risk management because a well-informed committee with relevant financial and accounting knowledge is better equipped to identify potential fraud risks, oversee internal controls designed to prevent fraud, and effectively respond to any fraudulent activity detected within a company.

This study's findings however controverted the results from Baatwah et al. (2019) who found that for as long as the audit committee's chairperson had the requisite expertise, it was not important for the other members to have financial or industry expertise to effectively manage the risk of fraud.

5.3.5 Internal Audit Department and Fraud Risk Management

The final goal of the study was to assess the moderating effect of the existence of an internal audit department on the relationship between audit committee attributes and fraud risk management

within CGIAR organizations. Descriptive statistics revealed that most respondents confirmed the presence of an internal audit function in their organizations, underscoring the importance of this department in managing organizational risks. The moderation model provided stronger predictive validity than the direct effect model, as evidenced by the significantly higher Pseudo R² values. These findings underscored the importance of internal audit functions as a critical moderating force in organizational fraud risk management. They reinforced the notion that audit committees, while crucial, needed internal audit support to optimize their effectiveness in fraud oversight. Therefore, both structures i.e. audit committees and internal audits must work synergistically for optimal fraud prevention, as supported by the combined frameworks of Agency Theory and Fraud Triangle Theory.

The results provide strong evidence for integrating internal audit functions into the broader governance structures, emphasizing the need for clear coordination between internal audits and audit committees to enhance organizational resilience against fraud.

5.4 Conclusion

This study aimed to explore the level of influence of audit committee attributes on fraud risk management and the moderating effect of internal audit departments of the CGIAR organizations in Kenya. The study was based in Kenya and therefore bridged the geographical and contextual gaps occasioned by past studies. Additionally, the study contributed a methodology that was replicable across various sectors and geographical environments. The study revealed that the attributes of audit committees had a positive influence on fraud risk management. The study also established that the internal audit function had a significant moderating effect on the relationship between the audit committee attributes and fraud risk management.

Overall, the research concluded that audit committees that had well constituted and inclusive memberships; that were functionally relationally, and structurally independent; that held frequent and well-structured meetings; and that had committee members with adequate financial know-how were critical in achieving effective fraud risk management. Further, the study also concluded that

the presence of internal audit functions enhanced the effectiveness of audit committees in enhancing fraud risk management.

5.5 Recommendations

Drawing from the results of this study, a number of proposed actions were made to enhance fraud risk management in CGIAR organizations, specifically targeting both management practices and policy frameworks.

5.5.1 Regulatory and Policy Recommendations

The study recommends that the Kenyan government policymakers and regulators such as the Capital Markets Authority (that regulates publicly listed companies and enforces the Code of Corporate Governance Practices for Issuers of Securities); the Institute of Certified Public Accountants (that regulates the accounting and auditing profession and sets ethical and technical guidelines for accountants and auditors); the State Corporation Advisory Committee (that advises on governance of state owned corporations) should enhance the guidance on the constitution of audit committees ensuring gender and age inclusivity; enhancing the procedural and relational independence of the audit committee; stipulating the nature and quality of audit committee meetings; as well as ensuring that the audit committee members possess requisite financial and industry expertise.

Further, policymakers and regulators should enhance fraud risk management policies for organizations in Kenya as provided by the ACFE (2023) framework. This should include establishment of a fraud risk management programme demonstrating dedication to high ethical and integrity principles; availability of a comprehensive fraud risk assessment; deployment of preventative and detective fraud control activities; establishment of a communication process on potential fraud, investigation and corrective action; and performance of evaluations on the effectiveness of risk management.

5.5.2 Recommendations to CGIAR Headquarters Management

The study proposes that the management of the CGIAR headquarters enhance governance policies that ensure that the CGIAR organizations under their ambit achieve both procedural and relational independence of their audit committee. Further there should be policies stipulating the mandatory requirement to hold audit committee meetings at least four (4) times a year; and to ensure that the meeting agenda and supporting documents are distributed to the audit committee members, at the very least three (3) weeks prior to meetings.

Additionally, the management of the CGIAR headquarters should strengthen fraud risk management policies that ensure that the CGIAR organizations under their umbrella put in place succinct procedures towards achieving good communication on potential fraud, investigation and corrective action; and performance of evaluations on the effectiveness of risk management.

5.5.3 Recommendations to Management of the CGIAR Organizations

The study recommends that the management of each of the thirteen (13) CGIAR organizations adopt policies that safeguard the procedural and relational independence of their respective audit committees. Additionally, the management of the CGIAR organizations implement policies ensuring that meetings of the audit committee are held at the very least four (4) times annually; and the meeting agenda and supporting documents for these meetings are distributed to the audit committee members, at the very least three (3) weeks prior to meetings.

The management of the CGIAR organizations should also implement the risk management framework in its entirety by implementing policies and procedures that ensure clear and efficient communication on potential fraud, investigation and corrective action; and performance of evaluations on the effectiveness of risk management programme in their respective organizations.

5.5.4 Recommendations for Future Research Studies

The scope of the study could be broadened to incorporate more organizations in both the for-profit and non-profit sectors, and public entities both within Kenya and internationally. This would allow researchers to assess whether the relationships identified in this study hold true across various organizational contexts and geographical regions.

Further, while the study demonstrated that generally the audit attributes had a positive effect on fraud risk management and that the internal audit function had a moderating influence on the relationship between the audit committee attributes and fraud risk management, the effect of the individual attributes on fraud risk management should be subject to further investigations. Further, the other moderating variables should be researched.

5.6 Limitations of the Study

The scope as per organizations investigated, the restrictions of the research methodology applied, and the research tool deployed were limitations of this study. Data collected from CGIAR organizations in Kenya proved sufficient to effectively inform the study's conclusions and recommendations. This was substantiated by diagnostic tests measuring the reliability of the models employed in the study. However, had the data collection been extended beyond the CGIAR organizations to cover other organizations and sectors, the study would have been more enriched.

The study was based on quantitative methodology which provided statistical rigor and generalizability. However, combining this quantitative approach with qualitative insights could have provide a more comprehensive analysis of dynamic or evolving trends in corporate governance, and restricted potential response biases. Further, as described and illustrated in Chapter Three on Research Methodology, the study employed physical and self-completed questionnaires to obtain responses. While studies have demonstrated the popularity of this approach in research, it is potentially limited by poor response rates. Consequently, additional outreach through phone calls and emails was necessary to encourage greater participation. Fifty-

one (51) individuals out of the target one hundred and eight-five (185), remained unresponsive to the questionnaire at the time of writing, despite assurances of participation. Nevertheless, over 72% of participants filled out the questionnaire, enabling valuable conclusions to be drawn.

Related to the above, whilst the study sought to employ quantitative methods, the feedback from respondents based on 5-point Likert scale could have infiltrated respondents' biases. Further, the study's respondents excluded members of the audit committees and were limited to categories of staff who had direct and indirect reporting lines to their audit committees. Including the perspectives from the audit committee members would have further enriched the study. However, the inclusion of audit committee members as respondents could have also introduced self-reporting biases.



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APPENDICES

APPENDIX 1: LETTER OF INTRODUCTION

Phoebe Awuor Omondi Owiti
Strathmore University,
Strathmore Business School
P.O. Box 59857 – 00200,
Nairobi, Kenya

Dear Respondent,

RE: REQUEST FOR COLLECTION OF RESEARCH DATA

I am pursuing a Master of Commerce degree with a specialization in Forensic Accounting at Strathmore University – Strathmore Business School.

I hope to conduct research on the Audit committee attributes, Internal Audit Function, and fraud risk management: A Case of CGIAR Organizations in Kenya. This research is being conducted to partially fulfill the requirements for the master's degree. I therefore respectfully request your involvement in responding to the study's questionnaire.

I guarantee you that any information that you will share in this study will be treated in strict confidence and only utilized only for this study. I humbly appeal to you not to indicate information that would identify you on the questionnaire. I sincerely appreciate your participation in this research.

Yours sincerely,



Phoebe Owiti

APPENDIX 2:

QUESTIONNAIRE TO THE CGIAR ORGANIZATIONS

Introduction

The objective of this questionnaire is to obtain data on the Audit committee attributes, Internal Audit Function, and fraud risk management: A Case of CGIAR Organizations in Kenya. Your entity was one of the selected CGIAR units. Please follow instructions provided and respond to the questions as honestly as possible. As indicated in the accompanying letter of introduction, your response will be kept confidential and only applied for academic reasons.

Instructions

1. Please tick inside the appropriate box to indicate your choice.
2. Kindly give further relevant information to the research in the provided spaces.

SECTION A: THE DEMOGRAPHIC PROFILE

1. Please indicate your job category

- | | |
|----------------------------|--------------------------|
| Director general | <input type="checkbox"/> |
| Head of corporate services | <input type="checkbox"/> |
| Accountant | <input type="checkbox"/> |
| Head of research | <input type="checkbox"/> |
| Internal auditor | <input type="checkbox"/> |

2. Please indicate your gender

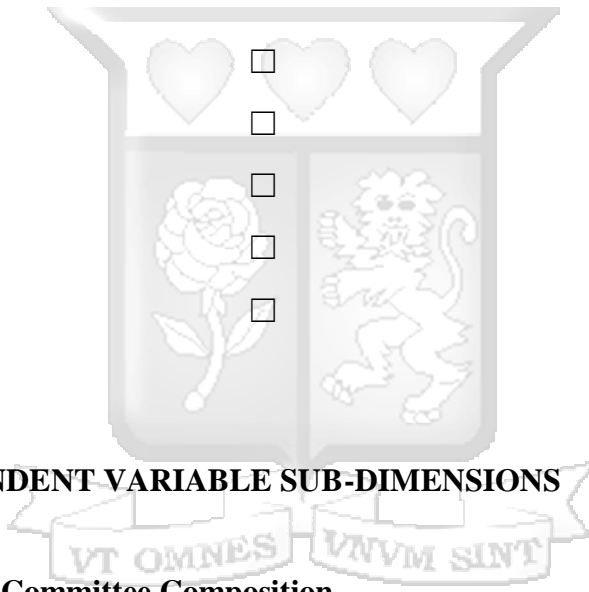
- | | |
|--------|--------------------------|
| Male | <input type="checkbox"/> |
| Female | <input type="checkbox"/> |

3. Please indicate your highest level of education

- Doctorate Degree
- Master's Degree
- Bachelor's Degree
- Diploma
- Certificate

4. Kindly indicate the number of years of Professional Experience

- 1 – 5
- 6 – 10
- 11 – 15
- 16 – 20
- Over 20



SECTION B: INDEPENDENT VARIABLE SUB-DIMENSIONS

Component One: Audit Committee Composition

5. This section assesses the composition of your audit committee. Please mark (x) in the box which best describes the degree to which you agree with the statements that follow where:

(1) - Strongly Disagree; (2) - Disagree; (3) - Neutral; (4) - Agree; (5) - Strongly Agree

Statement	(1)	(2)	(3)	(4)	(5)
Our audit committee consists of members from different age groups.					
The audit committee can be said to be diversified in terms of gender					
Members of our audit committee do not have past criminal records.					
Members of our audit committee have unquestionable ethical standing in the society					

Component Two: Audit Committee Independence

6. This section assesses the independence of your audit committee. Please mark (x) in the box which best describes the degree to which you agree with the statements that follow where:

(1) - Strongly Disagree; (2) - Disagree; (3) - Neutral; (4) - Agree; (5) - Strongly Agree

Statement	(1)	(2)	(3)	(4)	(5)
Our audit committee members review our reports and policies objectively.					
Our audit committee members have declarations of no conflicts of interest.					
Our audit committee members serve on a rotational basis with no member allowed to serve for more than three (3) years.					
Our audit committee members do not have association with our management and employees					

Component Three: Audit Committee Meetings

7. This section assesses the quality of meetings of your audit committee. Please mark (x) in the box which best describes the degree to which you agree with the statements that follow where:
(1) - Strongly Disagree; (2) - Disagree; (3) - Neutral; (4) - Agree; (5) - Strongly Agree

Statement	(1)	(2)	(3)	(4)	(5)
Our audit committee holds meetings at least four (4) times in a year.					
The agenda and reports to be reviewed by our audit committee are shared at least three (3) weeks in advance of the meeting.					
Our audit committee meetings include in-camera sessions with internal and external auditors					
Deliberations and action plans from our audit committee meetings are minuted.					

Component Four: Audit Committee Expertise

8. This section assesses the expertise of your audit committee. Please mark (x) in the box which best describes the degree to which you agree with the statements that follow where:
(1) - Strongly Disagree; (2) - Disagree; (3) - Neutral; (4) - Agree; (5) - Strongly Agree

Statement	(1)	(2)	(3)	(4)	(5)
Members of our audit committee are recruited on merit.					
Members of our audit committee have audit, financial management, or accounting qualifications					
Members of our audit committee are members in good standing of relevant professional bodies					

Statement	(1)	(2)	(3)	(4)	(5)
Members of our audit committee have work experience in audit, financial management, or accounting					

SECTION C: DEPENDENT VARIABLE SUB-DIMENSIONS

Fraud Risk Management

9. This section assesses your organization’s fraud risk management. Please mark (x) in the box which best describes the degree to which you agree with the statements that follow where:

(1) - Strongly Disagree; (2) - Disagree; (3) - Neutral; (4) - Agree; (5) - Strongly Agree

Statement	(1)	(2)	(3)	(4)	(5)
The organization establishes and communicates a Fraud Risk Management Program that demonstrates the expectations of the board of directors and senior management and their commitment to high integrity and ethical values regarding managing fraud risk.					
The organization performs comprehensive fraud risk assessments to identify specific fraud schemes and risks, assess their likelihood and significance, evaluate existing fraud control activities, and implement actions to mitigate residual fraud risks.					
The organization has deployed preventive and detective fraud control activities to mitigate the risk of fraud events occurring or not being detected in a timely manner.					
The organization has established a communication process to obtain information about potential fraud and deploy a coordinated approach to investigation and corrective action to address fraud appropriately and in a timely manner					

Statement	(1)	(2)	(3)	(4)	(5)
The organization performs ongoing evaluations to ascertain whether each of the five principles of fraud risk management is present and functioning and communicates Fraud Risk Management Program deficiencies in a timely manner to parties responsible for taking corrective action, including senior management and the board of directors.					

SECTION D: MODERATING VARIABLE SUB-DIMENSIONS

Audit Committee Remuneration

10. This section assesses whether or not your organization has an internal audit function. Please mark (x) in the box which best describes the degree to which you agree with the statements that follow where:

Statement	Yes	No	I am not sure
Our audit organization has an internal audit function.			

I APPRECIATE YOUR PARTICIPATION

PARTICIPANT INFORMATION AND CONSENT FORM

AUDIT COMMITTEE ATTRIBUTES, INTERNAL AUDIT FUNCTION, AND FRAUD RISK MANAGEMENT: A CASE OF CGIAR ORGANIZATIONS IN KENYA

SECTION 1: INFORMATION SHEET

Investigator: Phoebe Awuor Omondi Owiti

Institutional affiliation: Strathmore Business School (SBS)

SECTION 2: INFORMATION SHEET–THE STUDY

2.1: Why is this study being carried out?

This study is a research project and is in partial fulfillment of the award of the Masters of Commerce (MCOM) degree.

2.2: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information on the influence of the audit committee of the board of directors on fraud risk management and the moderating effect of internal audit departments in CGIAR organizations in Kenya. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.3: Who is eligible to take part in this study?

Staff of the nine (9) CGIAR Organizations in Kenya [i.e. The Africa Rice Center (AfricaRice); The Alliance of Bioversity International and International Center for Tropical Agriculture (International Bioversity – CIAT); The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF); The International Center for Agricultural Research in the Dry Areas (ICARDA); The International Institute of Tropical Agriculture (IITA); The International Livestock Research Institute (ILRI); The International Maize and Wheat Improvement Center (CIMMYT); The International Potato Center (CIP); and The International Rice Research Institute (IRRI)] who have a direct and/or indirect reporting lines to the Audit Committees of their respective Boards. Specifically, the following staff categories are eligible to participate in this study:

- Director Generals;
- Heads of Corporate Services;
- Accountants;
- Heads of Research; and
- Internal Auditors.

2.4: Who is not eligible to take part in this study?

Persons who are not staff of the nine (9) CGIAR Organizations with operations in Kenya (Africa Rice, International Bioversity-CIAT, CIFOR-ICRAF, ICARDA, IITA, ILRI, CIMMYT, CIP and IRRI) and who are not in the following categories:

- Director Generals;
- Heads of Corporate Services;
- Accountants;
- Heads of Research; and
- Internal Auditors.

2.5: What will taking part in this study involve for me?

You will be approached by the investigator i.e. Phoebe Owiti and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

2.6: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.7: Are there any benefits of taking part in this study?

The information provided will be used to contribute towards stronger governance and oversight offered by the audit committees over fraud risk management.

2.8: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.9: Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.10: Who can I contact in case I have further questions?

You can contact me, Phoebe Awuor Omondi Owiti at the Strathmore Business School Nairobi, or by e-mail through omondi.awuor@strathmore.edu, or by phone on either 0729-947289 or 0783-947289. You can also contact my supervisor, Dr. Maria Mumbi at the Strathmore Business School, Nairobi, or by e-mail through MWachira@strathmore.edu.

If you want to ask someone independent anything about this research, please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

- I AGREE to take part in this research
- I DO NOT AGREE to take part in this research

Storage of information on the completed questionnaire

- I AGREE to have my completed questionnaire stored for future data analysis
- I DO NOT AGREE to have my completed questionnaire stored for future data analysis

Participant's Signature: _____

Date: __/__/____
DD/MM/YYYY

Participant's Name: _____

(Please print name)

Time: ____/____
HH/MIN

I, **Phoebe Awuor Omondi Owiti**, certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature: _____

Date: 28 / 03 / 2025
DD/MM/YYYY

Investigator's Name: Phoebe Awuor Omondi Owiti

(Please print name)

Time: ____/____
HH/MIN

APPENDIX 4:

LIST OF CGIAR ORGANIZATIONS IN KENYA

1. The Africa Rice Center (AfricaRice)
2. The Alliance of Bioversity International and International Center for Tropical Agriculture (International Bioversity – CIAT)
3. The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF)
4. The International Center for Agricultural Research in the Dry Areas (ICARDA)
5. The International Institute of Tropical Agriculture (IITA)
6. The International Livestock Research Institute (ILRI)
7. The International Maize and Wheat Improvement Center (CIMMYT)
8. The International Potato Center (CIP)
9. The International Rice Research Institute (IRRI)

APPENDIX 5: LETTER OF ETHICAL APPROVAL TO CONDUCT RESEARCH



19th March 2025

Mrs Owiti Phoebe,
omondl.awace@strathmore.edu

Dear Mrs Owiti,

RE: Influence of the Audit Committee of the Board of Directors on Fraud Risk Management and the Moderating Effect of Internal Audit Departments in CGIAR Organizations in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above SU-masters proposal. Your application reference number is **SU-ISERC2765/25**. The approval period is from **19th March 2025 to 18th March 2026**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-pcsti.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ambrose Rachler".

Mr Ambrose Rachler,
Chairperson; SU-ISERC

APPENDIX 6: PERMISSION TO CONDUCT RESEARCH FROM NACOSTI

 <p>REPUBLIC OF KENYA</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>
<p>Ref No: K19624</p>	<p>Date of Issue: 27/March/2025</p>
<p>RESEARCH LICENSE</p>	
	
<p>This is to certify that Ms. Phoebe Gnanadi Ainsie Ochwiri of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu, Machakos, Nairobi on the topic: Influence of the Audit Committee of the Board of Directors on Fraud Risk Management and the Moderating Effect of Internal Audit Departments in CGIAR Organizations in Kenya for the period ending : 27/March/2026.</p>	
<p>License No: NACOSTI/P/25/417467</p>	
<p>K19624</p>	
<p>Applicant Identification Number</p>	<p>Director General</p>
<p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>	
<p>Verification QR Code</p>	
	
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