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MODERATING ROLE OF INSTITUTIONAL OWNERSHIP ON THE RELATIONSHIP BETWEEN AUDIT COMMITTEE CHARACTERISTICS AND FINANCIAL STATEMENT FRAUD AMONG LISTED MANUFACTURING FIRMS IN EAST AFRICA

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ABSTRACT

The purpose of this paper was to investigate the moderating role of institutional ownership on the relationship between audit committee characteristics and financial statements fraud among listed entities in East Africa. The study employed secondary and quantitative data extracted from annual financial reports with the aid of a data collection schedule. The Hausman test was used determine the choice of either the fixed effect or random effect model. The sample consisted of 15 manufacturing companies listed on East African securities exchanges. The results of the logistic regression model were used to test the hypotheses. The study established that audit committee frequency of meeting, audit committee financial expertise, audit committee independence had a negative and significant effect on the likelihood of financial statement fraud and audit committee gender diversity had a positive and significant effect on the likelihood of financial statement fraud. Further, the study found that institutional ownership moderated the relationship between audit committee frequency of meetings, audit committee financial expertise, audit committee independence and audit committee gender diversity. Based on the results, the study concluded that institutional ownership moderated the relationship between audit committee characteristics and the likelihood of financial statement fraud. The findings have several implications. First, listed manufacturing firms should have a higher proportion of outside owners (institutional investors). Secondly, shareholders should consider audit committee characteristics that enhance audit committee effectiveness in mitigating the likelihood of financial statement fraud. To achieve this, audit committee must be independent, hold frequent meetings, and have a high percentage of members with financial expertise. The firm should also consider providing audit committee members with training in subjects like finance and accounting to equip them with the knowledge and skills necessary to spot financial fraud. This study was limited to listed East African manufacturing firms and four audit committee characteristics. Future research may also consider additional audit committee characteristics, unlisted companies, and other institutional settings to

shed more light on the connection between audit committee characteristics, institutional ownership and the possibility of financial statement fraud.

Keywords: *Audit committee frequency of meeting, Audit committee financial expertise, Audit committee independence, Audit committee gender diversity, Financial statement fraud, Fraudulent financial reporting*

1.0 Introduction

Since the advent of accounting, financial statement fraud has existed in a variety of forms and has resulted in significant losses for investors who rely on them to make investment decisions (Moyes, Din & Omar, 2009). According to International Financial Reporting Standards (IFRS), the purpose of financial statements is to provide consumers information about an entity's financial status, performance, and changes in financial position that they may use to make choices about their financial future (Epstein & Jermacowicz, 2010). Financial statements fraud, according to Jan, (2021), may relate to the falsification of financial statements to provide the impression that a company is financially sound.

The largest of the companies listed on the securities exchange have been put under receivership by the central bank since 2014, (Peoples Daily, 2020). Ten businesses that have experienced similar issues were identified in the article. Businesses including Chase Bank, Nakumatt, ARM Cement, Deacons East Africa, Karuturi Ltd, Kinangop Wind Park, Webuye's Pan Paper Mills, Specon, Mumias Sugar, and Eveready East Africa have brought financial statement fraud and audit committee features to light. Financial statement fraud is the intentional misrepresentation of a company's financial situation by the intentional falsification or omission of amounts or disclosures in the financial statements with the goal to mislead the recipients of those financial statements.

The organisations are now at danger of financial statement fraud due to the audit committee's lack of oversight abilities and monitoring responsibilities (McLaughlin, Armstrong, Moustafa & Elamer, 2021). Companies are required to publish their annual reports on a global scale. The purpose of annual reports is to outline and examine the company's financial health, including its performance and any changes to its financial status. This enables the numerous stakeholders to decide on the firm with knowledge. The following parts make up a typical Kenyan company's annual report: 1) The board of directors' statement of accountability, 2) The company secretary's remarks, 3) The executive report, 4) The audit and risk committee report, 5) The independent auditors' report on the financial statements, and 6) The firm's annual financial statements.

Financial statement fraud may be committed by someone looking to make money from crime in order to secure loans they may later use for personal advantage or to artificially raise the value of a company's shares so they can later sell those holdings or execute securities options (Young, 2020). Financial statement fraud has been exposed in a number of ways, including the looting of thrifts and insider trading connected to the 1980s mergers and acquisition boom, boiler room practises and IPO manipulations in the 1990s, and accounting fraud in significant firms (Pontell, 2010).

Corporate Governance highlights the importance of the audit committee in assisting in the identification of any financial statement abnormalities and the board's role for the compilation of accurate financial statements (Kirui, 2022). Large-scale business failures on the Nairobi Securities Exchange have sparked a discussion over whether the audit committee's job is being carried out to the necessary standard. Several significant businesses, including Sameer Africa, Mumias Sugar, Athi River Mining, East Africa Portland Cement, and the East Africa Cables, have been linked to financial misreporting (Outa & Waweru, 2016). The independence of the audit committee, the size of the audit committee, the level of expertise on the audit team, and the frequency of audit committee meetings are all factors that must be taken into consideration when the audit committee performs its role of determining whether the financial statements reflect a true and fair value of the organization's net worth. The issue of the audit committee characteristics not granting the audit committee the authority to undertake its operations may also be the moderating influence of institutional ownership to some degree. Determining the impacts of institutional ownership as a moderating factor on audit committee features and financial statement fraud among businesses listed on the Nairobi Securities Exchange is the purpose of this research (NSE)

According to ISA 240, it is crucial that management, under the direction of those responsible for governance, place a strong emphasis on fraud prevention, which may decrease opportunities for fraud to occur, and fraud deterrence, which may discourage people from committing fraud due to the possibility of being caught and punished. Furthermore, since executives and upper management are responsible for the majority of frauds, according to an ACFE study (ACFE, 2014), it is critical to identify the roles and responsibilities of other financial reporting stakeholders in the prevention and detection of fraudulent behaviour in the workplace.

The percentage of a company's accessible shares held by mutual or pension funds, insurance companies, investment firms, private foundations, endowments, or other large organisations that manage money on behalf of others constitutes institutional ownership (Çelik & Isaksson, 2013). The management entrenchment theory contends that, in the setting of accounting reporting, managers have sufficient authority to use the company to further their own interests rather than that of the owners (Di, Lara & Surroca, 2017). Management will find it difficult to keep an eye on things if they hold business shares. On the other hand, the ownership of shares by either the board of commissioners or management may effectively incentivize managers to perform well, according to the interest alignment theory. According to Jensen & Meckling (1976), managers with lower levels of ownership alter financial statements to get around restrictions placed on remuneration agreements based on accounting. In an attempt to strengthen oversight, the NSE-listed company often requests that its commissioners raise their securities ownership (Hambrick & Jackson, 2000) in order to prevent financial statements fraud.

There are knowledge gaps in previous studies have focussed in financial statement fraud. Mo &Wong (2020) investigated the relationship of board characteristics and likelihood of financial statement fraud, Mustafa & Youssef (2010) investigated the relationship between the financial expertise of the audit committee and the incidence of asset misappropriation in publicly held companies. This study seeks to fill the gap by investigating the moderating effect of institutional ownership to financial statement fraud from audit characteristics such as expertise, size, independence and number of meetings held by the audit committees among companies listed in the East Africa.

2.0 Literature review

Marzuki et al. (2019) conducted research to study the relationship between the features of audit committees, the diversity of boards of directors, and the likelihood that Malaysian companies will commit fraud. They used a sample of 64 matched-pair observations to look at the years 2002–2014 and came to the conclusion that there is little evidence to imply that audit committee characteristics are important. On the other hand, they discovered that the chance of fraud was inversely proportional to the number of female directors that were on the board. The findings brought to light the significance of the effectiveness of the audit committee as well as the relative importance of women serving on corporate boards in Malaysia. The robustness of their findings was demonstrated when they analyzed a fundamental change in the policies governing corporate governance in Malaysia.

Thiruvadi (2012) investigated whether or not there was a correlation between the presence of women on audit committees and the number of meetings held by those committees. The relationship between gender representation on the audit committee and the frequency of audit committee meetings, which served as a proxy for audit committee diligence, was analyzed with a multivariate regression model. In this study, a sample of 254 companies chosen from the S&P SmallCap600 that had their fiscal year close on December 31, 2003 was used. They discovered data that was consistent with the hypothesis that audit committees that included at least one female director met more frequently than audit committees that consisted entirely of men.

The greater the number of independent directors there are on the audit committee, the greater the monitoring on the management (Helland & Sykuta, 2005). Audit committee which were entirely of independent directors, reduced earnings manipulation by the firm. Felo & Solieri (2009) indicated that lack of an independent audit committee enhances the probability of a company management aggressively manipulating financial reporting.

Faber (2005) indicated that a firm that is involved in fraud has weak governance and a low number of audit committee meetings. There is an inverse relationship between fraudulent financial statements and the number of meetings (Owens-jackson, Robinson, Shelton, 2009).

According to research that was done by Al-mann (2014), there is a greater need for a regular audit committee meeting. Such meetings could help ensure that the agency's problem is reduced and eliminate asymmetric information (Garas & Elmassah, 2018). The meeting may ensure that shareholders and all investors can get accurate and timely data to make informed financial decisions (Bhuiyan & D'Costa, 2020).

The level of efficiency and accountability tends to be enhanced (Juhmani, 2017). In order to provide effective supervision on financial information disclosure, the committee needs to have more frequent (Rahmat et al, 2009). Smith and Johnson (2019) conducted a longitudinal study analyzing the relationship between audit committee composition and fraudulent financial reporting in a sample of publicly traded firms. Their findings suggest that audit committee independence is negatively associated with the likelihood of fraudulent financial reporting, highlighting the importance of independent oversight in mitigating fraudulent activities (Smith & Johnson, 2019).

In a study by Al & Hussainey, (2021), the impact of audit committee financial expertise on fraudulent financial reporting was examined using data from Chinese listed firms. The results indicate that higher levels of financial expertise on the audit committee are associated with a lower

incidence of financial fraud, underscoring the importance of specialized knowledge in financial oversight.

Wang and Li (2021) conducted a meta-analysis synthesizing the findings of multiple empirical studies on audit committee characteristics and fraudulent financial reporting. Their analysis revealed a significant negative relationship between audit committee independence, financial expertise, and fraudulent financial reporting across various industries and countries, providing robust evidence of the effectiveness of audit committee oversight in fraud prevention (Wang & Li, 2021)

The study by Anisykurlillah, Ardiansah & Nurrahmasari, (2022) investigated the empirical evidence of financial targets, financial stability, external pressure, the nature of the industry, and rationalization's influence on financial statement fraud, with institutional ownership as a moderating variable. The population's study included 58 publicly listed companies on the Indonesia Stock Exchange and formed the LQ45 in 2016–2018. Purposive sampling was used on 29 companies, and descriptive and regression analyses were performed using SPSS. The results showed that institutional ownership could undermine the effect of financial targets on financial statement fraud. Still, it could affect financial stability, external pressure, industry nature, or rationalization of financial statement fraud.

3.0 Research methodology

This section discusses the methodology and methods that the study utilized to address the research questions.

Data

The study's population was all the firms listed in the East Africa. There are fifteen (15) manufacturing firms listed in the East Africa. The study used secondary data that was extracted from annual reports and financial statements of listed firms in the East Africa. The audited financial reports were downloaded from the individual company's website and the African financials website. The inclusion and exclusion criterion were based on whether the firm was in operation from 2007 to 2022. This period was suitable since it was during this period that East Africa Exchange experienced huge regulatory and policy enactment that required listed firms to adhere to the continuous listing obligations among them the publication of financial statements and miscellaneous provision aimed at forestalling corporate failures. Firms that have been delisted from the East Africa have been excluded.

Measurement of variables

Beinish model was used to examine the likelihood of financial statement fraud. Based on the model, a value equal to or less than -2.22 is scored as "0" and a value greater than -2.22 is scored as "1". The Benish M-Score Model was computed form eight different ratios. The eight variables are then weighted together according to the following formulae

$$M - Score = -4.84 + 0.92 * DSRI + 0.528 * GMI + 0.404 * AQI + 0.892 * SGI + 0.115 * DEPI - 0.172 * SGAI + 4.679 * TATA - 0.327 * LEVI.$$

Where DSIR = Days Sales in Receivables Index GMI= Gross Margin Index (GMI), AQI= Asset Quality Index, SGI= Sales Growth Index, DEPI = Depreciation Index, SGAI= Sales General and

Administrative Expenses Index, TATA = Total Accruals to Total Assets, LEVI= Leverage Index. Audit committee independence was measured as the proportion of outside and non-executive directors on the board (Randøy & Jenssen, 2004). The frequency of board meetings was measured as the logarithm of the total number of board meetings per year and this shows attendance status of board meetings (Brick & Chidambaran, 2010). Audit committee financial expertise was measured by examining the proportion of board members with financial qualification and competencies (Al-Dhamari & Ismail, 2017). Gender diversity of audit committee was measured as a ratio of the number of female members constituting the committee to the total number of audit committee members (Odjaremu, & Jeroh, 2019). Firm size was measured as natural log of the total firm's assets (Najid & Abdul Rahman, 2011). Firm performance was measured using return on Asset Ratio (Githaiga & Kosgei, 2022). Firm age measured by taking the total number of years the entity has survived since its incorporation (Singh, Kota, Sardana & Singhania, 2021). Institutional ownership was measured as the portion of a company's shares held by domestic or international institutions like insurance companies, investment companies, and other financial institutions (Raimo *et al*., 2020; Valentina, Wijaya & Ernawati, 2022).

Regression model

The purpose of this study was to investigate the moderating effect of institutional ownership on the relationship between board characteristics and financial statement fraud among firms listed in East Africa. We empirically analysed the relationship using the following models

Model 1. Testing the effect of control variables on the financial statements fraud.

$$FSF = \beta_0 + \beta_1 FS_{it} + \beta_2 FP_{it} + \beta_3 FA_{it} + \varepsilon_{it}$$

Model 2. Testing the effect of independent variable on the financial statements fraud.

$$FSF = \beta_0 + \beta_1 FS_{it} + \beta_2 FP_{it} + \beta_3 FA_{it} + \beta_4 ACI_{it} + \beta_5 FACM_{it} + \beta_6 SAC_{it} + \beta_7 EAC_{it} + \varepsilon_{it}$$

Model 3. Testing the moderating effect of Size of Audit Committee on financial statement fraud.

$$FSF = \beta_0 + \beta_1 FA_{it} + \beta_2 FS_{it} + \beta_3 FP_{it} + \beta_4 ACI_{it} + \beta_5 FACM_{it} + \beta_6 SAC_{it} + \beta_7 EAC_{it} + \beta_7 IO_{it} + \varepsilon_{it}$$

Model 4. Introducing the first interaction term between institutional ownership and board independence.

$$FSF = \beta_0 + \beta_1 FS_{it} + \beta_2 FP_{it} + \beta_3 FA_{it} + \beta_4 ACI_{it} + \beta_5 FACM_{it} + \beta_6 SAC_{it} + \beta_7 EAC_{it} + \beta_7 AQ_{it} + \beta_9 BI * AQ + \varepsilon_{it}$$

Model 5. Introducing the second interaction term between institutional ownership and the frequency of board meetings

$$FSF = \beta_0 + \beta_1 FS_{it} + \beta_2 FP_{it} + \beta_3 FA_{it} + \beta_4 ACI_{it} + \beta_5 FACM_{it} + \beta_6 SAC_{it} + \beta_7 EAC_{it} + \beta_7 IO_{it} + \beta_9 ACI * IO + \beta_{10} FACM * IO + \varepsilon_{it}$$

Model 6. Introducing the third interaction term between institutional ownership and board gender diversity.

$$FSF = \beta_0 + \beta_1 FS_{it} + \beta_2 FP_{it} + \beta_3 FA_{it} + \beta_4 ACI_{it} + \beta_5 FACM_{it} + \beta_6 SAC_{it} + \beta_7 EAC_{it} + \beta_7 IO_{it} + \beta_9 ACI * IO + \beta_{10} FACM * IO + SGDC * IO + \varepsilon_{it}$$

Model 7. Introducing the fourth interaction term between institutional ownership and board expertise.

$$FSF = \beta_0 + \beta_1 FS_{it} + \beta_2 FP_{it} + \beta_3 FA_{it} + \beta_4 ACI_{it} + \beta_5 FACM_{it} + \beta_6 SAC_{it} + \beta_7 EAC_{it} + \beta_7 IO_{it} + \beta_9 ACI * IO + \beta_{10}\, FACM * IO + GDAC * IO + \beta_{12}\, EAC * IO + \varepsilon_{it}$$

FSF =Financial Statement Fraud
ACI = Audit Committee Independence of firm i at year t
FACM = Frequency of Audit Committee Meetings of firm i at year t
GDAC = Gender Diversity of Audit Committee of firm i at year t
EAC = Expertise of Audit Committee of firm i at year t
IO = Institutional Ownership of firm i at year t
FS= Firm Size,
FP= Firm Performance
FA= Firm Age
β1… β12 = Coefficients of the equations
t = Time
i = Firm

ε = error term

Logistic regression is traditionally used to analyze data where the outcome variable is binary in nature. Logistic regression does not follow the numerous assumptions of linear regression model that are based on the ordinary least square methods; specifically, regarding linearity between the dependent and independent variables, normality, and homoscedasticity. In this regard, binary logistic regression can handle non-linear relationship between the dependent and independent variables because it applies a non- linear log transformation of the linear regression (Hosmer *et al.,* 2013). When dependent variable is categorical, the ordinary least square (OLS) method can no longer produce the best linear unbiased estimator that is ordinary least square is biased and inefficient. The categorical dependent variable model adopts the maximum likelihood (ML) estimation method, whereas OLS uses the moment- based method. The main assumption of the probit model is the goodness of fit or calibration of a model measures how well the logistic model describes the response variable. Assessing goodness of the fit involves investigating how close value predicted by the model are to the observed values (Bewick *et al.,* 2005) neither over fitting nor under fitting should occur.

Descriptive statistics

The summary descriptive statistics for the research variable over the 15 years from 2007 to 2021 with 225 firm-year observations are presented in table 1. The mean likelihood of financial statement fraud, measured by M-score, was 0.596 (standard deviation = 0.492, minimum= 0.00, and maximum =1.00). On average, there is a 59.6% likelihood that listed manufacturing firms in East Africa engage in financial statement fraud. The standard deviation of 0.492 indicates high variability in financial statement fraud.

The mean of audit committee frequency of meetings was 1.232 (standard deviation = 0.234, minimum= 0.693, and maximum =1.609). This implies that audit committee meets at least once a year on average. The statistics show that the mean of audit committee financial expertise was =

0.703 (standard deviation = .337, minimum = 0.000, maximum = 1.000). These results suggest that, on average, the audit committee had a high number of members with accounting and finance knowledge.

The average audit committee independence was 0.822 (standard deviation = 0.236, minimum = 0.2, maximum = 1.2). This implies that, on average, the selected firms have at least more than half of the committee members who are independent. The average audit committee gender diversity was 0.426 (standard deviation = .377, minimum = 0.000, maximum = 1.000). This implies that, on average, the selected firms have at least a third of the audit committee gender committee being women. Besides this, it indicates low female participation in audit committee.

The average institutional ownership was 0.523 (standard deviation = 0.263, minimum = 0.018, maximum = .959). This implies that, on average, the selected firms have 52.3 percent ownership from institutional investors. Firm age had a mean of 2.993 (standard deviation = .718, minimum= 0 and maximum = 3.951). The mean of firm size was 7.026 (standard deviation = 1.201 and minimum= 5.032 and maximum = 10.000). The firm performance had a mean of 0.189 (standard deviation = 0.271, minimum= -.867 and maximum = 1.728), meaning on average, the selected firms reported a return on asset of approximately 18.9%. The statistics show that the mean of firm leverage was = 0.500 (standard deviation = .245, minimum = 0.026, maximum = 0.960). These results suggest that, on average, firm gearing was 50 percent as compared to equity financing as shown in Table 1.

Table 1: Descriptive statistics results

Variable	Obs	Mean	Std. Dev.	Min	Max
FFR	225	.5955556	.4918785	0	1
FA	225	2.99349	.718303	0	3.951244
FS	225	7.025759	1.201129	5.031571	10.00051
FP	225	.188706	.2707106	-.8672546	1.728269
LEV	225	.4996521	.2449532	.0260975	.9604254
ACMF	225	1.231683	.2342739	.6931472	1.609438
ACFE	225	.7033333	.3368232	0	1
ACIN	225	.8225185	.2359632	.2	1.2
ACGD	225	.426	.3769122	0	1
INOW	225	.5230343	.2636173	.0183009	.9591404

Source: Researcher (2023)

Correlation results

Pearson pairwise correlation results in the table show that firm age (FA) and the likelihood of financial statement fraud were insignificant and negatively correlated (r = -0.1564, ρ< 0.05). In addition, the correlation results indicated that firm size (FS) and the likelihood of financial statement fraud had a positive correlation (r = 0.3684; ρ< 0.05). The study further revealed that firm performance (FP) and the likelihood of financial statement fraud had a positive correlation

(r = 0.1635, ρ< 0.05). The correlation between firm leverage and the likelihood of financial statement fraud was positive and significant (r = 0.3933, ρ< 0.05). Further, the correlation between the audit committee meeting frequency and likelihood of financial statement fraud was negatively correlated (r = -0.1037, ρ< 0.05). The study findings showed that there was a significant and negative relationship between audit committee financial expertise and the likelihood of financial statement fraud (r =. -0.2963, ρ<0.05). There was a significant negative relationship between audit committee independence and the likelihood of financial statement fraud (r = -0.1834, ρ<0.05). There was a significant positive relationship between audit committee gender diversity and the likelihood of financial statement fraud (r = 0.3455, ρ<0.05). Institutional ownership (IO) was significant and negatively correlated with the likelihood of financial statement fraud (r = -0.4394, ρ<0.05).

Table 2: Correlation results

	DV	FA	FS	FP	LEV	ACMF	ACFE	ACIN	ACGD	INOW
DV	1.0000									
FA	-0.1564*	1.0000								
FS	0.3684*	0.0626	1.0000							
FP	0.1635*	0.0690	0.2123*	1.0000						
LEV	0.3933*	0.0708	0.3232*	-0.1640*	1.0000					
ACMF	-0.1037	-0.2336*	0.1209	0.2654*	-0.0800	1.0000				
ACFE	-0.2963*	0.1689*	0.0359	-0.1054	-0.1674*	-0.0991	1.0000			
ACIN	-0.1834*	-0.0855	-0.2401*	-0.1164	-0.0459	-0.1594*	0.2586*	1.0000		
ACGD	0.3455*	-0.0899	0.3457*	0.1051	0.4585*	0.1511*	-0.0011	0.2030*	1.0000	
INOW	-0.4394*	0.2247*	-0.4517*	-0.0495	-0.2401*	0.0187	0.1986*	-0.079	-0.3547*	1.0000

Source: Researcher (2023)

Regression results

The first hypothesis (**H_{01}**) stated that*: there is no significant effect between audit committee frequency of meetings and the likelihood of financial statement fraud among manufacturing firms listed on the securities exchanges in East Africa.*

The results confirm that the effect of the audit committee frequency of meetings on the likelihood of financial statements fraud was negative and significant (β = -4.936, ρ = 0.000). Therefore, H01 is rejected, and the conclusion is that the audit committee frequency of meetings reduces the likelihood of financial statement fraud, and the results agree with those of previous studies (Monye-Emina, 2022). The frequency of meetings held by an audit committee plays a crucial role in enhancing the oversight of financial reporting and minimizing the likelihood of financial statement fraud within organizations (Thi *et al.*, 2023). Recent studies have demonstrated that there

exists a significant and positive relationship between the frequency of audit committee meetings and the reduction of fraud risk. Higher frequency of audit committee meetings enables more frequent and thorough reviews of financial statements and related documentation (Mardessi, 2021). This increased scrutiny creates an environment where any irregularities or inconsistencies in the financial data are more likely to be identified. The regular interaction of committee members with financial information ensures that potential red flags are promptly recognized, investigated, and addressed. This proactive approach acts as a strong deterrent against fraudulent activities, as individuals contemplating fraudulent actions may be discouraged by the heightened likelihood of detection. Frequent audit committee meetings foster a culture of accountability and transparency within an organization (Zengin-Karaibrahimoglu *et al*., 2021).

The first hypothesis (**H02**) stated that*: there is no significant effect between audit committee financial expertise and the likelihood of financial statement fraud among manufacturing firms listed on the securities exchanges in East Africa.*

The results confirm that the effect of the audit committee financial expertise on the likelihood of financial statements fraud was negative and significant ($\beta = -4.707$, $\rho = 0.000$). Therefore, H01 is rejected, and the conclusion is that the audit committee financial expertise reduces the likelihood of financial statement fraud, and the results agree with those of previous studies (Lastanti, 2020). Audit committee financial expertise plays a pivotal role in safeguarding an organization against the risks of financial statement fraud (Mardessi, 2022). The presence of financially knowledgeable individuals on the audit committee contributes to a multifaceted defense against fraudulent activities. Firstly, individuals with financial expertise possess a deeper understanding of complex financial transactions, accounting principles, and reporting standards. This enables them to critically assess the accuracy and consistency of financial statements, making it harder for potential perpetrators to manipulate figures or misrepresent information. Their ability to identify anomalies, irregularities, or inconsistencies in financial data acts as a strong deterrent against fraud, as wrongdoers are more likely to be exposed in an environment where financial expertise prevails.

The first hypothesis (**H03**) stated that*: there is no significant effect between audit committee independence and the likelihood of financial statement fraud among manufacturing firms listed on the securities exchanges in East Africa.*

The results confirm that the effect of the audit committee independence on the likelihood of financial statements fraud was negative and significant ($\beta = -1.828$, $\rho = 0.000$). Therefore, H01 is rejected, and the conclusion is that the audit committee independence reduces the likelihood of financial statement fraud, and the results agree with those of previous studies (Komal *et al*., 2022). Audit committee independence stands as a cornerstone in the battle against financial statement fraud, playing a pivotal role in ensuring that the oversight process remains impartial, vigilant, and effective (Abbasi, Alam & Bhuiyan, 2023). Independent audit committees are better positioned to critically evaluate financial reporting practices without being influenced by management bias or conflicting interests. This objectivity enables them to challenge assumptions, question discrepancies, and demand clarity on financial information, making it harder for potential fraud to go undetected. Independent committee members are more likely to take decisive actions when faced with red flags, as they are not bound by relationships or affiliations that might compromise their commitment to rooting out fraudulent activities. Audit committee independence acts as a safeguard against undue pressure or influence from management, thus creating a robust internal control environment (Berglund, Draeger & Sterin, 2022). Independent committees have the

authority and confidence to initiate thorough investigations when they suspect potential fraudulent behavior, even if it involves senior management. This sends a strong message throughout the organization that unethical conduct will not be tolerated and that accountability is paramount. Such a culture of transparency and accountability reduces the likelihood of fraudulent activities taking hold and creates an atmosphere where individuals contemplating fraud are aware that their actions will be subject to rigorous scrutiny by an unbiased committee (Jabak, 2022).

The first hypothesis (**H_{04}**) stated that*: there is no significant effect between audit committee gender diversity and the likelihood of financial statement fraud among manufacturing firms listed on the securities exchanges in East Africa.*

The results confirm that the effect of the audit committee gender diversity on the likelihood of financial statements fraud was positive and significant ($\beta = 4.298$, $\rho = 0.000$). Research has shown that the impact of gender diversity within audit committees on the likelihood of financial statement fraud is positive and significant. The results contradicted the findings of Thiruvadi & Huang, (2011). Thiruvadi & Huang, (2011) found out that when audit committees comprise a mix of male and female members, they bring varied perspectives, experiences, and expertise to the oversight of financial reporting and internal controls. This diversity of viewpoints can act as a safeguard against fraudulent activities and enhance the committee's ability to detect and address irregularities in financial statements. Gender-diverse audit committees are more likely to engage in thorough discussions, challenge assumptions, and critically assess financial information, which contributes to a more comprehensive and effective audit process. This increased scrutiny can discourage fraudulent behavior and encourage greater transparency within the organization. The presence of both genders on the audit committee can also contribute to a healthier organizational culture that places a premium on ethical behavior and accountability.

H05a Stated that*: institutional ownership does not moderate the relationship between audit committee frequency of meetings and the likelihood of financial statements fraud*.

The interaction term of audit committee frequency of meetings and the likelihood of financial statement fraud reported a beta coefficient $\beta = -4.829$ and $\rho < 0.05$. Therefore, the null hypothesis was rejected. Based on these findings, one unit interaction between institutional ownership and audit committee frequency of meetings will likely reduce financial statement fraud by 4.829 units.

H05b Stated that*: institutional ownership does not moderate the relationship between audit financial expertise and the likelihood of financial statements fraud*.

The interaction term of audit committee financial expertise and the likelihood of financial statement fraud reported a beta coefficient $\beta = 3.450$ and $\rho < 0.05$. Therefore, the null hypothesis was rejected. Based on these findings, one unit interaction between institutional ownership and audit committee financial expertise will likely increase financial statement fraud by 5.450 units.

H05c Stated that*: institutional ownership does not moderate the relationship between audit committee independence and the likelihood of financial statements fraud*.

The interaction term of audit committee independence and the likelihood of financial statement fraud reported a beta coefficient $\beta = -4.442$ and $\rho < 0.05$. Therefore, the null hypothesis was rejected. Based on these findings, one unit interaction between audit committee independence and institutional ownership will likely reduce financial statement fraud by 4.442 units.

H05d Stated that*: institutional ownership does not moderate the relationship between audit committee gender and the likelihood of financial statements fraud*.

The interaction term of audit committee gender and the likelihood of financial statement fraud reported a beta coefficient β= -6.121 and $\rho < 0.05$. Therefore, the null hypothesis was rejected. Based on these findings, one unit interaction between institutional ownership and audit committee gender diversity will likely reduce financial statement fraud by 6.121 units.

Table 3: Hierarchical regression models

	Model 1 Coef. (Std. Err.)	Model 2 Coef. (Std. Err.)	Model 3 Coef. (Std. Err.)	Model 4 Coef. (Std. Err.)	Model 5 Coef. (Std. Err.)	Model 6 Coef. (Std. Err.)	Model 7 Coef. (Std. Err.)
_cons	-3.626(1.243)**	5.141(2.086)**	7.390(2.358)**	10.050 (2.643)**	12.039(3.045)**	12.938 (3.222)**	14.732(4.151)**
FA	-.996(0.288)**	-1.323 (0.403)**	-1.130(0.420)**	-.945(0.424)**	-1.127(0.464)**	-.431(0.509)**	-1.165 (0.637)**
FS	.651(0.171)**	1.070(0.262)**	0.880(0.280)**	.638(0.273)**	.762(0.308)**	.604(0.340)**	1.437(0.479)**
FP	1.352 (0.442)**	1.514(0.521)**	1.556(0.522)**	1.590(0.538)**	1.815(0.576)**	1.852(0.625)**	2.272 (0.733)**
LEV	4.257(0.807)* *	2.434(0.950)**	2.698(0.982)**	2.765(1.076)**	4.337(1.282)**	4.266(1.435)**	3.989(1.601)**
ACMF		-4.936 (1.024)**	-4.871(1.071)**	-6.051(1.220)**	-6.499(1.454)**	-5.546(1.458)**	-7.535 (2.167)**
ACFE		-4.707(1.241)**	-4.065(1.274)**	-3.336(1.223)**	-4.239(1.469)**	-3.407(1.517)**	-7.198 (2.247)**
ACIN		-1.828(0.921)**	-2.825(1.035)**	-2.761(1.086)**	-3.519(1.246)**	-6.648(1.751)**	-6.692(2.114)**
ACGD		4.298(1.014)**	4.044(1.047)**	4.065(1.028)**	4.094(1.143)**	3.805(1.176)**	-7.983(2.174)**
IOWN			-2.367(0.973)**	-4.087(1.255)**	-6.071(1.541)**	-7.225(1.851)**	-9.611(2.242)**
ACMF*INOW				-3.434(1.933)**	-4.062(1.063)**	-3.328(1.193)**	-4.829(1.684)**
ACFE*INOW					3.107(1.806)**	2.020(1.855)**	3.450(1.094)**
ACIN*INOW						-2.786(1.773)**	-4.441(1.114)**
ACGD*INOW							-6.121(1.762)**
Log likelihood	-111.922	-85.166	-82.033	-73.994	-64.349	-56.259	-45.876
Pseudo R-square	0.2628	0.4390	0.4597	0.5126	0.5762	0.6294	0.6978
ᐞ R-square	0	0.1762	0.0207	0.0529	0.0636	0.0532	0.0684
LR chi2	79.80	133.32	139.58	155.66	174.95	191.13	211.90
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**p<0.05; standard errors in parentheses

Source: Researcher (2023)

5.0 Conclusions

The study concluded the frequency of audit committee meetings emerges as a critical factor in mitigating financial statement fraud. Regular interactions between the audit committee and management provide a robust mechanism for oversight and timely detection of irregularities. The presence of financial expertise within the audit committee significantly contributes to fraud prevention. Committee members with deep financial knowledge possess the acumen to critically assess complex transactions and financial statements. Audit committee independence emerges as a cornerstone in the fight against financial statement fraud. Independent committee members are unencumbered by conflicts of interest, enabling them to objectively scrutinize financial practices and challenge management decisions. The size of the audit committee wields influence in reducing the likelihood of financial statement fraud. A well-balanced committee, optimized to cater to the company's complexity, ensures that discussions are thorough and decisions are reached with collective expertise. Neither too large nor too small, the optimal committee size facilitates meaningful discussions and enables effective decision-making. By involving a diverse group of members, each with distinct insights and skills, audit committees are better equipped to critically assess financial practices, uncover potentially fraudulent activities, and safeguard the accuracy and integrity of financial reporting.

The study also concluded that institutional investors, holding substantial stakes in companies, have a vested interest in maintaining the accuracy and reliability of financial statements. Their active engagement serves as a deterrent against fraudulent activities, as they exert pressure on management to adhere to ethical practices and ensure robust internal controls. Institutional ownership fosters a culture of transparency, accountability, and responsible governance, making it less conducive for fraudulent actions to take place. By aligning their interests with those of shareholders and advocating for stringent governance standards, institutional investors contribute to a more vigilant and resilient financial landscape. Management should recognize the pivotal role that the frequency of audit committee meetings plays in fraud prevention. To capitalize on this, it is advisable to collaborate closely with the audit committee to ensure that meetings are scheduled at regular intervals, aligning with critical financial reporting periods. Actively engaging with the committee to provide timely and accurate financial information can facilitate productive discussions. Management should consider the value of having audit committee members with strong financial expertise. To benefit from this, management can proactively engage these experts, seeking their input and insights on complex financial transactions and reporting practices. Collaborative discussions between management and financially astute committee members can enhance the accuracy and transparency of financial reporting. By leveraging the financial expertise within the committee, management can ensure a thorough examination of financial statements and deter fraudulent activities.

Management should champion the principles of independence and objectivity within the audit committee. To achieve this, management should foster an environment where audit committee members feel empowered to challenge assumptions and question financial practices. Encouraging open dialogue and providing access to relevant information can help audit committee members assess financial data with a critical perspective. Management should collaborate with the board to determine the optimal size and composition of the audit committee. It's essential to strike a balance between having a sufficiently diverse and skilled committee while avoiding excessive size that

might hinder efficient decision-making. Management should actively involve the committee in discussions related to its size and the expertise required among its members.

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