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THE IMPACT OF BOARD OF DIRECTORS’ CHARACTERISTICS ON FINANCIAL STATEMENT FRAUD: THE MODERATING ROLE OF AUDIT COMMITTEE

Abstract

Board characteristics play a critical role in shaping corporate transparency and preventing financial misreporting in emerging markets. This study investigates how the independence, size, gender diversity, and meeting frequency of boards of directors influence the likelihood of financial statement fraud among listed firms in Vietnam, while also examining the moderating effect of audit committees. Using a balanced panel dataset of 2,584 firm-year observations from 323 non-financial companies listed on the Ho Chi Minh City and Hanoi Stock Exchanges during 2015–2022, logistic regression analysis (Stata 17) was used to test the proposed hypotheses. The results show that board independence and board size significantly reduce the likelihood of financial statement fraud, aligning with agency and resource dependence theories. Although gender diversity has no significant effect in the baseline model, it becomes negatively significant when the audit committee is included, indicating that effective oversight enhances the governance role of diverse boards. Additionally, the previously positive relationship between meeting frequency and fraud becomes insignificant when an audit committee is present, confirming its neutralizing effect. These findings highlight that the audit committee is a vital governance mechanism that enhances monitoring quality, reinforces accountability, and promotes ethical behavior. The study provides important insights for regulators and firms in Vietnam by emphasizing the need to strengthen audit committee independence, promote board diversity, and advance professional governance to reduce fraudulent reporting and support sustainable corporate integrity in emerging economies.

Keywords

board of directors, audit committee, fraud, financial reporting

JEL Classification

G32, G38, M14, M48

INTRODUCTION

Financial statements serve as critical instruments that accurately depict a company’s true financial state and supply vital information essential for stakeholders to make well-informed decisions. Once disseminated, these statements significantly contribute to enhancing market transparency and operational efficiency in capital markets. Despite their importance, numerous firms deliberately disseminate false information or conceal crucial details to distort perceptions of their genuine financial health, a malpractice referred to as financial statement fraud (Luo et al., 2025). Such misconduct generates severe detrimental consequences, including substantial reputational damage and adverse impacts on stakeholder welfare (Zahra et al., 2005) as well as compromised overall stock market efficiency (Free & Murphy, 2015). Therefore, preventing and detecting fraudulent financial reporting remains a key concern for investors, regulators, and academics alike.



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Corporate governance mechanisms play a vital role in safeguarding the quality and credibility of financial reporting. Among them, the board of directors is entrusted with supervisory responsibilities that support effective monitoring, reduction of opportunistic managerial behavior, and enhancement of transparency (Akinsola, 2025). Prior work has emphasized the board's monitoring role in mitigating misconduct, including through appointment and dismissal of executives, oversight of managerial actions, and ensuring alignment with organizational objectives (Anderson et al., 2004). A growing body of empirical research further highlights the board's contribution to reducing the likelihood of financial statement fraud (Popa et al., 2024). However, despite extensive investigation, empirical evidence remains mixed regarding the effects of specific board characteristics – such as independence, size, gender diversity, and meeting frequency – on fraudulent reporting. Some studies identify these attributes as effective deterrents, whereas others find neutral or even contradictory outcomes, underscoring the need for continued research in diverse institutional environments (Ebaïd, 2023).

This issue is particularly relevant in Vietnam, where corporate governance frameworks are still developing, and instances of financial reporting fraud have increased in frequency and magnitude (Dang & Khanh Dung, 2024). Recent evidence points that the quality of financial reporting by listed companies in Vietnam requires increased scrutiny, particularly in the wake of the COVID-19 pandemic (Tuan et al., 2023). A prominent case of financial statement fraud involves FLC Faros Construction Joint Stock Company, which engaged in market manipulation by deliberately misrepresenting its financial information. After investigative authorities alleged that during the initial public offering of 430 million shares under the stock code ROS, FLC Faros Company engaged in the sale and misappropriation of 3.6 trillion VND belonging to investors, such incidents erode investor trust and hinder the sustainable development of Vietnam's capital market. This underscores the urgent need to examine the internal governance mechanisms capable of enhancing the financial reporting integrity in emerging markets like Vietnam. Among governance mechanisms, the audit committee plays a pivotal role in overseeing financial reporting quality, reviewing internal controls, and supporting the board's monitoring function, particularly in contexts where external enforcement is weak (Xie et al., 2003). Therefore, this study also examines how the audit committee moderates the relationship between board characteristics and financial statement fraud in Vietnamese listed firms.

This study contributes to this imperative by examining how key board characteristics influence financial statement fraud among Vietnamese listed firms, with a specific focus on the moderating role of the audit committee, a governance mechanism often underexplored in the context of emerging economies. By focusing on a rapidly developing emerging market with evolving governance practices, this study contributes to deepening the understanding of internal governance mechanisms that influence financial reporting integrity.

1. LITERATURE REVIEW AND HYPOTHESES

Financial statements provide critical information that enables stakeholders to evaluate a company's financial standing and operational achievements. However, it is relatively easy to misrepresent or manipulate information in financial statements, thereby misleading users. The Association of Certified Fraud Examiners (ACFE) states that financial statement fraud constitutes the intentional act of providing false information or omitting critical information, which undermines the reliability of financial reporting and misleads decision-makers.

The ACFE report (2024) also highlights that financial statement fraud is ranked as one of the most damaging forms of fraud in terms of financial impact. Furthermore, the damage caused by financial statement fraud becomes more severe if it remains undetected for an extended period. Therefore, the most critical aspect is not detecting fraud after it has occurred but rather establishing internal control mechanisms to prevent it before it happens.

The board of directors (BOD), as the main governing body, is responsible for leading, supervising, and controlling the company's financial activities

to promote transparency and sustainable growth. According to Saleem et al. (2012), the BOD plays a key role in setting strategic goals, overseeing management, and ensuring the accuracy and reliability of financial statements. With its significant authority and duties within the organizational structure, the board of directors is seen as the most important mechanism for resolving conflicts of interest between shareholders and managers – often called the agency problem (Fama & Jensen, 1983). Based on agency theory, effective board governance is expected to decrease information gaps and monitor managerial misconduct. Empirical studies have looked at various board traits, including independence, size, gender diversity, and meeting frequency, as ways to improve oversight and prevent fraudulent reporting. However, the results are mixed and depend on the context.

Board independence (BDIN) is often seen as a key element of monitoring quality. The idea of board independence refers to board members who have no material relationship with the company other than their pay. These individuals are known as non-executive members. They are responsible for ensuring objective corporate decision-making, especially when conflicts of interest may arise between management and shareholders. In almost all countries, regulations require a minimum number of non-executive members on the board of directors of listed companies, which varies depending on the size of the board. This aims to improve transparency and strengthen corporate governance, thereby limiting management's opportunistic actions such as fraudulent financial reporting, as explained by agency theory. However, the research evidence is mixed on whether an independent board can effectively prevent corporate fraud. Liu et al. (2023) find that non-executive members can detect financial fraud risks and serve as effective monitors, reducing the chance of future financial fraud. According to Rostami and Rezaei (2022), having more non-executive members improves monitoring mechanisms and reduces fraudulent behavior. Many studies highlight the important role of BDIN in lowering financial statement fraud. Specifically, companies with a higher proportion of non-executive members are significantly less likely to commit financial statement fraud (Rostami & Rezaei, 2022; Liu et al., 2023; Ebaid, 2023; Anggraini et al., 2025).

However, some studies argue that board independence does not lead to better corporate governance. This is explained by the fact that independent directors may be overly reliant on the CEO (Kumar & Sivaramakrishnan, 2008), lack genuine independence (Zhi & Tong, 2005), and possess insufficient professional expertise (Jensen, 1993). This may explain why some studies find no significant link between BDIN and financial statement fraud, such as those of Yang and Buckland (2010), Yang et al. (2017), Girau et al. (2021), and Devaraja et al. (2022). It is suggested that the role of BDIN in preventing fraud might not be simple (Popa et al., 2024).

Similarly, board size (BDSIZE) also represents a fundamental characteristic that influences the effectiveness of organizational governance. While no universal standard exists for determining the optimal board size, firms establish an appropriate board composition based on factors such as company scale, ownership structure, regulatory requirements, governance frameworks, and corporate culture. Within the agency theory framework, BDSIZE emerges as a critical determinant of board effectiveness in monitoring management activities (Kiel & Nicholson, 2003). Theoretical perspectives suggest that larger boards enhance monitoring capacity through expanded oversight channels and reduced CEO dominance, thereby strengthening shareholder protection mechanisms (Singh & Vinnicombe, 2004). Empirical investigations support these propositions, demonstrating that smaller boards may facilitate earnings management practices (Girau et al., 2021), while larger board configurations improve financial reporting quality through enhanced advisory functions (Hsu & Yang, 2022). Substantial empirical evidence suggests that expanded board sizes enhance fraud detection and prevention capabilities (Girau et al., 2021; Arum & Wendry, 2024). Conversely, alternative research presents contradictory findings. Ibrahim and Yahaya (2024) document that streamlined boards demonstrate superior operational effectiveness through enhanced member coordination. Correspondingly, Ebaid (2023) identifies that enlarged boards may paradoxically increase fraud vulnerability due to diminished focus and reduced efficiency in deliberative processes and supervisory functions.

Beyond BDIN and BSIZE, gender diversity on the board has emerged as a significant factor influencing board decisions and contributing to improved governance outcomes. Among those outcomes, mitigating financial statement fraud is a typical example that has been proven by many studies (Wahid et al., 2019; Wang et al., 2022; Xu et al., 2025). This positive effect is explained by the change in the group dynamics of the board when adding women to the BOD or due to the women's characteristics, particularly their heightened ethical sensitivity and risk-averse nature (Wahid et al., 2019). Contemporary research has increasingly emphasized the pivotal role of women in corporate governance, particularly their participation in boardroom decision-making processes. The extant literature provides substantial evidence that female board representation confers significant risk mitigation benefits. Specifically, corporations with gender-diverse boards demonstrate reduced exposure to operational and financial risks (Mohsni et al., 2021). This phenomenon has garnered considerable attention from both academic researchers and practitioners, particularly in the post-2008 financial crisis era, which witnessed a marked increase in female board appointments globally (Mohsni et al., 2021). The conceptualization of board gender diversity has been typically operationalized through the proportion of women on the board relative to total board membership.

Empirical research consistently indicates that female representation on corporate boards is positively associated with enhanced corporate governance quality and improved firm performance outcomes (Mohsni et al., 2021; Adams & Ferreira, 2009). Drawing from behavioral finance theory, Sundén and Surette (1998) posit that women generally exhibit greater risk aversion in decision-making contexts and demonstrate stricter adherence to ethical standards compared to their male counterparts. This behavioral tendency is attributed to women's heightened sensitivity to unethical conduct and their proactive approach to questioning strategic decisions while demanding greater transparency (Luo et al., 2020). Furthermore, substantial empirical evidence suggests that having more women on the board enhances the effectiveness of internal control, improves financial reporting

quality, and serves as a deterrent to fraudulent activities (Ghaleb et al., 2021; Wang et al., 2022). The underlying mechanisms include enhanced monitoring capabilities, improved oversight of managerial actions, and stronger ethical governance frameworks. However, conflicting evidence exists in the literature. Ebaid (2023) did not observe a meaningful connection between board diversity and financial statement fraud, suggesting that the relationship may be context-dependent or influenced by moderating factors. Over the recent period, female participation in senior leadership roles in the Vietnamese corporate landscape has seen a notable rise, underscoring the need for context-specific research to elucidate the role of gender diversity in this emerging market environment.

Publicly traded corporations convene board meetings to review financial statements, evaluate organizational performance, and discuss strategic initiatives. The optimal frequency of board meetings lacks universal standardization, varying according to organizational characteristics and contextual factors. Meeting frequency serves as an indicator of board members' dedication and commitment to their oversight responsibilities, thereby reflecting the board's effectiveness in ensuring transparency and regulatory compliance (Zahid et al., 2024). Kaituko et al. (2023) documented that board meeting frequency influences the prevention of fraudulent financial reporting. However, empirical findings remain inconclusive across the literature, presenting divergent perspectives on this relationship. Proponents argue that increased meeting frequency enhances fraud detection capabilities, particularly in identifying manipulative practices involving revenue recognition and expense timing to distort profitability metrics (Arum & Wendry, 2024). This perspective suggests that regular board engagement facilitates early identification of anomalous financial activities. Conversely, alternative research suggests a positive association concerning the link between financial statement fraud and how often the board meets, indicating that higher meeting frequency is correlated with an increased incidence of fraud (Obigbemi et al., 2016). This counterintuitive relationship may be attributed to board member deficiencies in expertise or independence, re-

sulting in inadequate detection or prevention of fraudulent activities. Agency theory considerations, as acknowledged by Beasley et al. (2000), suggest that when boards lack independence or experience CEO dominance, frequent meetings may inadvertently create opportunities for collusive behavior or financial manipulation, rather than preventing it. Additionally, substantial research indicates board meeting frequency is not correlated with financial statement fraud in a statistically significant way. Studies by Kjærland et al. (2020) and Ebaid (2023) support this null hypothesis, suggesting that meeting frequency alone may not be a determining factor in fraud prevention.

The audit committee (AC) serves as a key oversight body within corporate governance structures. The audit committee plays a key role in ensuring the quality of financial statements, overseeing internal auditing processes, and assisting the BOD in assessing the transparency of financial activities (Law, 2011). As mandated by the Sarbanes-Oxley Act, listed firms are required to establish an audit committee to enhance independence and transparency in financial reporting. Several studies have also acknowledged that an effective audit committee can help prevent earnings manipulation, enhance financial reporting quality, and facilitate the timely detection and resolution of financial statement fraud. In emerging markets, such as Vietnam, the audit committee serves as a key safeguard against financial statement fraud (Thi Lien et al., 2023; Vo & Hung, 2024).

In summary, existing theoretical and empirical studies underscore the vital function of board governance mechanisms in safeguarding the integrity of financial reporting and in preventing fraudulent activities. Nonetheless, the evidence concerning the influence of particular board characteristics on financial statement fraud remains inconclusive, especially within emerging economies where governance frameworks and enforcement protocols are still evolving. Additionally, the moderating role of the audit committee – a crucial yet insufficiently examined component of internal control in the Vietnamese context – has not been adequately investigated.

Therefore, this study seeks to examine how board features – such as independence, size, gender diversity, and meeting frequency – affect financial statement fraud among Vietnamese listed companies, while also exploring how the audit committee influences these relationships. Using agency theory and resource dependence perspectives, the study develops the following hypotheses to guide empirical analysis.

- H1: *The board independence has a negative impact on financial statement fraud.*
- H2: *The board size has a negative impact on financial statement fraud.*
- H3: *Board gender diversity has a negative impact on financial statement fraud.*
- H4: *The frequency of board meetings has a negative impact on financial statement fraud.*
- H5: *The presence of the audit committee mitigates financial statement fraud.*

2. RESEARCH METHOD

This study utilizes data drawn from the annual reports and audited financial statements of non-financial firms listed on HOSE and HNX between 2015 and 2022. The final dataset used for regression analysis and modeling includes 323 firms with a total of 2,584 observations, after excluding samples with insufficient or invalid data.

To identify financial statement fraud (the dependent variable), the adjusted M-score model by Beneish (1999) was applied, as presented in Table 1. If a firm exhibits signs of potential financial statement fraud, it is assigned a value of “1”; otherwise, if no such signs are present, the value is “0”.

The model to identify financial statement fraud (FRAUD) is as follows:

$$\begin{aligned}
 M - score = & 0.002 + 0.665 \cdot TATA \\
 & + 0.257 \cdot LVGI + 0.024 \cdot SGAI \\
 & - 0.641 \cdot DEPI + 0.19 \cdot SGI + 0.004 \cdot AQI \\
 & - 0.032 \cdot GM + 0.061 \cdot DSRI,
 \end{aligned} \tag{1}$$

where

$$TATA = \frac{\text{Operating Profit}_t - \text{Operating Cash Flow}_t}{\text{Total Assets}_t}, \quad (2)$$

TATA (Total Accruals to Total Assets) measures the level of accruals relative to total assets.

$$LVGI = \frac{(\text{Long Term Debt}_t + \text{Current Liabilities}_t)}{\text{Total Assets}_t} \bigg/ \frac{(\text{Long Term Debt}_{t-1} + \text{Current Liabilities}_{t-1})}{\text{Total Assets}_{t-1}}, \quad (3)$$

LVGI (Leverage Index) captures the change in leverage from year $t - 1$ to t .

$$SGAI = \frac{\text{Sales and Administrative Expense}_t / \text{Sales}_t}{\text{Sales and Administrative Expense}_{t-1} / \text{Sales}_{t-1}}, \quad (4)$$

SGAI (Sales, General and Administrative Expenses Index) reflects changes in operating expenses relative to sales.

$$DEPI = \frac{\text{Depreciation}_{t-1} / \text{Property, Plant \& Equipment}_{t-1}}{\text{Depreciation}_t / \text{Property, Plant \& Equipment}_t}, \quad (5)$$

DEPI (Depreciation Index) measures changes in the rate of depreciation.

$$SGI = \frac{\text{Sale}_t}{\text{Sale}_{t-1}}, \quad (6)$$

SGI (Sales Growth Index) reflects the firm's revenue growth.

$$AQI = \frac{[1 - (\text{Current Asset} + \text{Property, Plant \& Equipment})] / \text{Total Asset}}{[1 - (\text{Current Assets}_{t-1} + \text{Property, Plant \& Equipment}_{t-1})] / \text{Total Assets}_{t-1}}, \quad (7)$$

AQI (Asset Quality Index) measures the proportion of less reliable assets

$$GMI = \frac{(\text{Sale}_{t-1} - \text{Cost of good sold}_{t-1}) / \text{Sale}_{t-1}}{(\text{Sale}_t - \text{Cost of good sold}_t) / \text{Sale}_t}, \quad (8)$$

GMI (Gross Margin Index) captures changes in gross profit margins.

$$DSRI = \frac{\text{Accounts Recievable}_t / \text{Sale}_t}{\text{Accounts Recievable}_{t-1} / \text{Sale}_{t-1}}, \quad (9)$$

DSRI (Days Sales Receivable Index) reflects changes in the ratio of accounts receivable to sales.

According to the adjusted M-score model, if a firm has an M-score greater than 0.5, its financial statements are deemed to have a higher likelihood of fraud, and the firm is classified as fraudulent.

In this study, the board characteristics are measured through four key dimensions:

(i) board independence;

(ii) board size;

(iii) gender diversity on the board; and

(iv) frequency of board meetings (Table 1).

The following model is proposed to analyze how board characteristics affect financial statement fraud, with the audit committee serving as a moderator.

Table 1. Board of directors' characteristics measurement

| Independent variable | Acronym | Measurement |
|-------------------------------|---------|--|
| Board independence | BDIN | The percentage of independent directors on the board |
| Board size | BDSIZE | The total number of independent board members |
| Gender diversity on the board | BDGEN | The ratio of women to total board size |
| Frequency of board meetings | BDMEET | Number of board meetings per year |

Model 1:

$$\begin{aligned}
 FRAUD = & \beta_0 + \beta_1 BDIN + \beta_2 BDSIZE \\
 & + \beta_3 BDGEN + \beta_4 BDMEET \\
 & + \beta_5 AC + \beta_6 LEV + \beta_7 SIZE + \beta_8 ROA + \varepsilon,
 \end{aligned} \quad (10)$$

Model 2:

$$\begin{aligned}
 FRAUD = & \beta_0 + \beta_1 BDIN + \beta_2 BDSIZE \\
 & + \beta_3 BDGEN + \beta_4 BDMEET + \beta_5 AC \cdot BDIN \\
 & + \beta_6 AC \cdot BDSIZE + \beta_7 AC \cdot BDGEN \\
 & + \beta_8 AC \cdot BDMEET + \beta_9 LEV + \beta_{10} SIZE \\
 & + \beta_{11} ROA + \varepsilon,
 \end{aligned} \quad (11)$$

where the *FRAUD* variable is a binary indicator set to 1 if the calculated fraud probability, based on Beneish's M-score model in equation (1), exceeds 0.5, signaling potential financial statement fraud; otherwise, it is 0.

Alongside the board characteristic variables, several control variables are included to address potential endogeneity issues stemming from omitted variables. These include firm size (*SIZE*), financial leverage (*LEV*), and return on assets (*ROA*). Furthermore, this study evaluates the moderating role of the audit committee (*AC*) in the relationship between board characteristics and financial statement fraud.

3. RESULTS

The descriptive statistics presented in Table 2 indicate that, out of a total of 2,584 observations, 372

exhibit a likelihood of financial statement fraud, accounting for approximately 14.4%. This implies that, according to the adjusted M-score model, around 15% of firms were potentially involved in financial statement fraud during the period from 2015 to 2022. Among the 2,584 observations, 124 firms did not have an audit committee, representing 4.8% of the sample.

Table 3 summarizes the descriptive statistics for the variables in the research model, based on 2,584 observations. The average proportion of independent directors (15.9%) suggests that, on average, listed companies in Vietnam exhibit a relatively low level of board independence. This indicates that most boards are still dominated by insider or affiliated members rather than truly independent directors. The substantial variation in *BDIN*, ranging from 0% to 83%, highlights significant differences in board independence across Vietnamese firms. Some companies have no independent directors at all (0%), while others demonstrate a high degree of independence (up to 83%).

Regarding board size (*BDSIZE*), the average is 5.53 members, with a range of 2 to 12 members. This significant variation (from 2 to 12 members) underscores substantial differences in governance approaches among listed companies in Vietnam. Additionally, Table 4 reveals a relatively low level of gender diversity, with an average female representation of 16.4% on boards. The substantial variation in gender diversity, ranging from 0% to 80%, highlights considerable heterogeneity in gender diversity practices among Vietnamese firms. The

Table 2. Frequency distribution of financial statement fraud and audit committee presence

| Fraud | Frequency | Percentage |
|---|-----------|------------|
| Non-Fraudulent | 2,212 | 85.6% |
| Fraudulent | 372 | 14.4% |
| Total | 2,584 | 100% |
| Audit Committee | Frequency | Percentage |
| Firms without an Audit Committee (0 = without AC) | 124 | 4.8% |
| Firms with an Audit Committee (1 = with AC) | 2,460 | 95.2% |
| Total | 2,584 | 100% |

average frequency of board meetings in Vietnam, at 10.32 meetings per year, reflects a reasonable level of oversight. However, the significant variation (from 2 to 72 meetings) indicates diverse governance practices among listed companies.

The control variables also exhibit substantial heterogeneity: the average debt-to-asset ratio (*LEV*) is 39.5%, with considerable variation ranging from 0.13% to 97.9%; firm size (*SIZE*) averages 12.049, demonstrating moderate variability; ROA averages 7.2%, with extreme values ranging from -82.2% to 99.4%. These descriptive statistics reveal significant diversity in the financial characteristics and operational profiles of listed companies, establishing a robust empirical foundation for examining causal relationships in subsequent regression analyses.

The logistic regression findings are summarized in Table 4. The regression analysis reveals that multicollinearity is not present, as all pairwise correlation coefficients fall below the commonly accepted threshold of 0.4.

This confirms the stability and reliability of the regression results. A Pseudo R^2 of 0.156 is reported from the model, and a likelihood ratio test statistic with a p-value (Prob > LR) of 0.000 indicates that the independent variables collectively account for

approximately 15% of the variation.

Table 5 presents the effects of board characteristics and control variables in two regression models predicting financial statement fraud:

- (i) Model 1 (without the moderating role of the audit committee); and
- (ii) Model 2 (with the moderating role of the audit committee).

In the absence of the audit committee as a moderating variable, the regression analysis results show that board independence (*BDIN*) is negatively associated with financial statement fraud. However, this relationship is marginally significant at the 10% level ($p < 0.1$), suggesting that higher board independence may lower the probability of fraud, though the evidence does not reach strong statistical significance. Board size (*BDZISE*) also exhibits a statistically significant negative effect on financial statement fraud at the 1% significance level. This finding suggests that larger boards are associated with lower levels of financial statement fraud. These results provide support for Hypothesis *H1* and Hypothesis *H2*, which propose that board independence and board size may mitigate financial statement fraud in listed firms in Vietnam. Notably, while board gender diversity (*BDGEN*) is associ-

Table 3. Descriptive statistics

| Variable | Observations | Mean | Standard Deviation | Minimum | Maximum |
|----------|--------------|--------|--------------------|---------|---------|
| BDIN | 2,584 | 0.159 | 0.172 | 0.000 | 0.830 |
| BDSIZE | 2,584 | 5.529 | 1.297 | 2.000 | 12.000 |
| BDGEN | 2,584 | 0.164 | 0.169 | 0.000 | 0.800 |
| BDMEET | 2,584 | 10.319 | 8.144 | 2.000 | 72.000 |
| LEV | 2,584 | 0.395 | 0.236 | 0.0013 | 0.979 |
| SIZE | 2,584 | 12.049 | 0.669 | 10.396 | 14.761 |
| ROA | 2,584 | 0.072 | 0.093 | -0.822 | 0.994 |

Table 4. Correlation analysis of variables

| Variables | FRAUD | BDIN | BDSIZE | BDGEN | BDMEET | AC | LEV | SIZE | ROA |
|-----------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| FRAUD | 1.000 | - | - | - | - | - | - | - | - |
| BDIN | -0.049 | 1.000 | - | - | - | - | - | - | - |
| BDSIZE | -0.089 | 0.078 | 1.000 | - | - | - | - | - | - |
| BDGEN | -0.013 | 0.051 | 0.021 | 1.000 | - | - | - | - | - |
| BDMEET | 0.018 | 0.080 | 0.043 | 0.051 | 1.000 | - | - | - | - |
| AC | -0.006 | -0.141 | -0.023 | -0.041 | -0.057 | 1.000 | - | - | - |
| LEV | -0.083 | 0.059 | 0.157 | -0.014 | -0.003 | -0.050 | 1.000 | - | - |
| SIZE | -0.103 | 0.163 | 0.365 | 0.013 | 0.294 | -0.098 | 0.189 | 1.000 | - |
| ROA | -0.006 | 0.063 | 0.107 | 0.068 | -0.094 | -0.014 | -0.001 | 0.022 | 1.000 |

Table 5. Regression results for Model 1 and Model 2

| FRAUD | Model 1 | | Model 2 | |
|-----------|------------------|---------|------------------|---------|
| | Beta coefficient | P-value | Beta coefficient | P-value |
| BDIN | -0.577* | 0.098 | -2.568* | 0.085 |
| BDSIZE | -0.136** | 0.010 | -0.321 | 0.173 |
| BDGEN | -0.257 | 0.445 | -5.732*** | 0.007 |
| BDMEET | 0.018** | 0.013 | -0.019 | 0.554 |
| AC | -0.322 | 0.222 | -3.082** | 0.038 |
| LEV | -0.750*** | 0.003 | -0.790*** | 0.002 |
| SIZE | -0.395*** | 0.000 | -0.399*** | 0.000 |
| ROA | 0.331 | 0.580 | 0.478 | 0.425 |
| AC*BDIN | - | - | 2.092 | 0.172 |
| AC*BDSIZE | - | - | 5.713*** | 0.008 |
| AC*BDGEN | - | - | 0.040 | 0.238 |
| AC*BDMEET | - | - | 0.185 | 0.444 |
| _Cons | 4.188*** | 0.000 | 6.918*** | 0.000 |

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

ated with a negative impact on financial statement fraud, this relationship is not statistically significant ($p = 0.445$). This suggests no meaningful association between gender diversity and fraud risk, thereby failing to support Hypothesis *H3*, which posits that gender diversity on the board has a negative impact on financial statement fraud.

Contrary to Hypothesis *H4*, the findings reveal a positive and statistically significant relationship between the frequency of board meetings (*BDMEET*) and financial statement fraud at the 1% level ($p < 0.01$). This suggests that boards that meet more often are more likely to be involved in fraudulent reporting practices. Consequently, Hypothesis *H4* is rejected based on these results.

When the audit committee is included as a moderating variable, the regression analysis reveals several notable changes in the relationships between board characteristics and financial statement fraud. The relationship between board size and financial statement fraud becomes statistically insignificant ($p = 0.173$) when the audit committee is included as a moderator. This suggests that the presence of an audit committee may partially substitute or complement the oversight function traditionally provided by larger boards, thereby reducing the direct impact of board size on fraud prevention. Notably, board gender diversity demonstrates a substantial transformation in its statistical significance. While not statistically significant in the baseline model, the variable becomes significant at the 1% level ($p = 0.007$) when the au-

dit committee is included as a moderator. The negative coefficient of -5.732 indicates that gender diversity plays a crucial role in reducing fraud risk when combined with effective audit committee oversight, providing strong support for Hypothesis *H3* in the moderated model.

Furthermore, the frequency of board meetings exhibits an interesting reversal in its relationship with financial statement fraud. The previously positive and significant relationship becomes statistically insignificant ($p = 0.554$) when the audit committee is included as a moderator. This suggests that the audit committee effectively mitigates any potential negative effects of excessive board meetings on fraud risk, leading to the acceptance of Hypothesis *H4* in the moderated context. Regarding the audit committee variable itself, it exhibits a negative and statistically significant effect on financial statement fraud ($p = 0.038$), confirming its substantial role in enhancing corporate governance effectiveness. The control variables, including debt-to-asset ratio and firm size, maintain their consistent negative relationships with financial statement fraud across both models, remaining highly significant at the 1% level.

These findings highlight the critical moderating role of audit committees in enhancing the effectiveness of board characteristics in reducing financial statement fraud, particularly emphasizing the positive impact of gender diversity and the neutralizing effect on meeting frequency when proper oversight mechanisms are in place within the Vietnamese context.

Model 1 presents the regression results without the audit committee (AC) as a moderating variable, while Model 2 includes its moderating effect.

4. DISCUSSION

The evidence of a marginally significant negative association between board independence and financial statement fraud in Model 1 provides partial support for agency theory (Meckling & Jensen, 1976), which holds that independent directors serve as a governance mechanism to align managerial and shareholder interests. This result corroborates studies by Liu et al. (2023) and Rostami and Rezaei (2022), suggesting that independent directors, particularly those with financial expertise, enhance fraud detection capabilities. However, the marginal significance ($p < 0.10$) indicates that while independence may contribute to fraud prevention in the Vietnamese context, its impact might be nuanced or influenced by other unobserved factors. The lack of strong significance could reflect challenges specific to the Vietnamese market, such as the limited capacity of independent directors to exercise effective oversight consistent with the mixed findings reported by Popa et al. (2024) and Yang and Buckland (2010).

Besides that, the statistically significant negative effect of board size on fraud in Model 1 supports the resource dependency and agency theory perspectives. This finding is consistent with empirical evidence from Hsu and Yang (2022) and Arum and Wendry (2024). However, the loss of significance in Model 2, when the AC is included, suggests that the audit committee may partially substitute or complement the monitoring function traditionally attributed to larger boards. This interaction underscores the significance of examining how governance mechanisms interact, as suggested by the literature (Ibrahim & Yahaya, 2024), rather than assessing board characteristics in isolation.

The most intriguing finding relates to board gender diversity (BDGEN) in developing countries such as Vietnam. While it shows no significant link with fraud in Model 1, it becomes highly significant ($p < 0.01$) and negative in Model 2 when the audit committee is added. This change highlights the important moderating role of the audit committee (AC). The result supports the behavioral finance arguments of Sunden and Surette (1998) and the empirical findings of Ghaleb et al. (2021) and Wang et al. (2022), which connect gender diversity to risk aversion, ethical behavior, and better monitoring. The moderating effect of the audit committee in Vietnam, a typical developing country, suggests that the advantages of women on the board, like better oversight and ethical governance, are more effectively achieved when supported by a strong, independent monitoring body such as the audit committee. This finding contributes to the literature by highlighting the conditional nature of the relationship between gender diversity and governance outcomes, aligning with Ebaid's (2023) view that context and moderating factors are crucial.

Notably, the research results indicate that the audit committee plays a vital role in mitigating potential negative effects of high meeting frequency, possibly by ensuring the quality and effectiveness of oversight during these meetings. This supports the argument that governance mechanisms must be evaluated within a broader framework, as highlighted by Kjærland et al. (2020) and Ebaid (2023), who found no significant standalone effect of meeting frequency.

These results highlight the AC's function not just as a standalone control but as a mechanism in a developing country that enhances or clarifies the effectiveness of other board characteristics, reinforcing the interconnected nature of corporate governance.

CONCLUSION

This study aims to examine how board characteristics influence financial statement fraud in Vietnamese listed firms, with particular attention to the moderating role of the audit committee.

The empirical results demonstrate that the independence of the board and its size mitigate the probability of financial statement fraud, thereby lending partial support to agency and resource dependence

theories. However, upon the introduction of the audit committee as a moderating variable, the significance of board size diminishes, while gender diversity exhibits a strong and negative correlation with fraud, indicating that audit committees bolster the governance effectiveness of gender-diverse boards. Furthermore, the previously observed positive relationship between meeting frequency and fraud becomes statistically insignificant in the presence of the audit committee, thereby affirming its role in enhancing the overall oversight mechanism.

Taken together, these findings highlight that board effectiveness in reducing financial statement fraud depends on the interaction between governance mechanisms rather than on individual board attributes. The audit committee stands out as a key institutional safeguard that improves transparency, accountability, and ethical governance within Vietnamese firms. Therefore, policymakers and regulators should continue to strengthen audit committee independence and capacity while promoting gender diversity and board professionalism to enhance corporate governance and decrease fraudulent financial reporting in emerging markets.

This study has limitations. Using a specific fraud detection model (M-Beneish score) and concentrating on a particular period and market (Vietnam) restricts how broadly the findings can be applied. Future research could examine these relationships with different fraud measures, over a longer timeframe, or through comparative studies involving other emerging markets. Additionally, exploring the specific mechanisms behind how the audit committee influences moderation would be beneficial.

AUTHOR CONTRIBUTIONS

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