

THE EFFECT OF CORPORATE GOVERNANCE ON FINANCIAL STATEMENT FRAUD WITH FIRM SIZE AS A MODERATING VARIABLE

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Abstract

This study aims to provide empirical evidence on the effect of corporate governance—proxied by the board of commissioners, audit committee, and institutional ownership—on financial statement fraud, with firm size as a moderating variable. The population characteristics of mining companies listed on the Indonesia Stock Exchange (IDX) for the period 2021–2024. Using purposive sampling, 58 companies were selected with a total of 285 observations. The data were analyzed using panel data regression with the Fixed Effect Model (FEM) and Moderated Regression Analysis (MRA). Financial statement fraud was measured using the Beneish M-Score. The results show that: (1) the board of commissioners does not significantly affect financial statement fraud; (2) the audit committee does not significantly affect financial statement fraud; (3) institutional ownership has a positive and significant effect on financial statement fraud; (4) firm size strengthens the relationship between the board of commissioners, audit committee, and institutional ownership with financial statement fraud. The R^2 value of 98.51% indicates the model's high explanatory power.

Keywords: *corporate governance; board of commissioners; audit committee; institutional ownership; financial statement fraud; firm size*

INTRODUCTION

Financial statements are a vital instrument for business decision-making. However, the phenomenon of financial statement fraud remains a serious problem that threatens the integrity of global capital markets, including Indonesia. According to the Occupational Fraud 2024: Report to the Nations report published by the Association of Certified Fraud Examiners (ACFE, 2024), the mining sector recorded the highest median loss of USD 550,000 per case compared to 21 other industrial sectors. In the Asia Pacific region, Indonesia ranked among the top three countries with the highest number of fraud cases in 2024, with 25 reported cases. Several fraud cases in Indonesian mining companies have attracted public attention, including the alleged corruption case in the tin commodity trade system at PT Timah Tbk, which resulted in state losses of IDR 271 trillion (Itsaini, 2024), and the alleged violation of precious metals management at PT Aneka Tambang Tbk (ANTAM), which involved 109 tons of gold from unofficial sources (Rahmani, 2025). These cases demonstrate the weakness of the corporate governance (CG) mechanism as a company oversight system.

Corporate governance is a system that regulates and controls companies to achieve transparency and accountability (FCGI, in Priswita & Taqwa, 2019). Within the framework of agency theory (Jensen & Meckling, 1976), conflicts of interest between agents (management) and principals (shareholders), reinforced by information asymmetry, are the primary underlying cause of financial statement fraud. Corporate governance mechanisms such as boards of commissioners, audit committees, and institutional ownership are expected to minimize opportunistic management behavior. Although numerous studies have examined the relationship between corporate governance and financial statement fraud, the results remain inconsistent (Haryani & Syafruddin, 2022; Nursiam & Ghaisani, 2021; Khuluqi & Napisah, 2022). Furthermore, limited research considers company size as a moderating variable in this relationship. This study fills this gap by analyzing the influence of the board of commissioners, audit committee, and institutional ownership on financial statement fraud moderated by company size in the mining sector of the IDX for the 2021–2024 period, using the Beneish M-Score as a proxy for fraud detection.

LITERATURE REVIEW

A. Agency Theory and Corporate Governance

Agency theory (Jensen & Meckling, 1976) explains that conflicts of interest between principals and agents can encourage management to engage in opportunistic behavior, including financial statement manipulation. Corporate governance serves as a control mechanism to reduce information asymmetry and ensure transparency in financial reporting. Effective corporate governance mechanisms, including an independent board of commissioners, a competent audit committee, and active institutional ownership, are believed to suppress management behavior that is detrimental to stakeholders (Fama & Jensen, 1983; Scott & Mary Ann, 2015).

B. Financial Reporting Fraud and Beneish M-Score

Financial statement fraud is the intentional misrepresentation of a company's financial condition to mislead users of financial statements (ACFE, 2024). Fraud detection in this study uses the Beneish M-Score (Beneish, 2004), a statistical model that combines eight financial ratios—including DSRI, GMI, AQI, SGI, DEPI, SGAI, LVGI, and TATA—to identify possible earnings manipulation. The complete formula: $M\text{-Score} = -4.84 + 0.920 \text{ DSRI} + 0.528 \text{ GMI} + 0.404 \text{ AQI} + 0.892 \text{ SGI} + 0.115 \text{ DEPI} - 0.172 \text{ SGAI} - 0.327 \text{ LVGI} + 4.697 \text{ TATA}$. A company is categorized as a manipulator if the M-Score is > -2.22 (score = 1) and a non-manipulator if the M-Score is ≤ -2.22 (score = 0). This model has been proven effective in detecting financial statement fraud (Hugo, 2019).

C. Hypothesis Development

The board of commissioners acts as the primary supervisor of management policies (Fama & Jensen, 1983). An effective board of commissioners can limit opportunistic management behavior. However, the presence of a board of commissioners does not always quantitatively correlate with fraud prevention if it is not supported by adequate oversight quality (Ardianingsih & Sagita, 2026; Dewi, 2019). H1: The board of commissioners has a negative effect on financial statement fraud.

The audit committee's function is to oversee the quality of financial reporting and the audit process (DeZoort et al., 2002). A competent and independent audit committee can minimize information asymmetry between management and shareholders. H2: The audit committee has a negative effect on financial reporting fraud.

Institutional ownership provides economic incentives for investors to conduct intensive monitoring of management (Shleifer & Vishny, 1986). The higher the institutional ownership, the stronger the monitoring function, which is expected to suppress manipulative behavior. H3: Institutional ownership has a negative effect on financial reporting fraud.

Firm size can moderate the relationship between corporate governance mechanisms and financial statement fraud. Larger firms have higher operational complexity, which can weaken the effectiveness of oversight (Watts & Zimmerman, 1986; Palmrose, 1988; Khuluqi & Napisah, 2022). H4, H5, H6: Firm size moderates (strengthens) the influence of the board of commissioners, audit committee, and institutional ownership on financial statement fraud.

METHOD

This study uses a quantitative approach with an explanatory research design. The study population was all mining sector companies listed on the Indonesia Stock Exchange (IDX) for the 2021–2024 period. The sampling technique used purposive sampling with the following criteria: (1) listed on the IDX during the 2021–2024 period; (2) publishing complete and consistent annual financial reports; (3) not currently in the process of being delisted. From this selection process, 58 sample companies were obtained with a total of 285 data observations.

The dependent variable is financial reporting fraud measured using the Beneish M-Score, a dummy variable (1 = manipulator if M-Score > -2.22 ; 0 = non-manipulator). The independent variables consist of: (1) Board of Commissioners, measured by the number of board of commissioners members; (2) Audit Committee, measured by the number of audit committee members; and (3) Institutional Ownership, measured by the percentage of institutional share ownership of total outstanding shares. The moderating variable is Company Size measured by the natural logarithm of total assets.

The data analysis technique used panel data regression, with the best model selected through the Chow Test, the Hausman Test, and the Lagrange Multiplier Test. The Fixed Effects Model (FEM) was selected as the best estimation model. Moderation effects were tested using Moderated Regression Analysis (MRA). The regression models used were:

$$FRD = \alpha + \beta_1 DK + \beta_2 KA + \beta_3 KI + \beta_4 SIZE + \beta_5 DK * SIZE + \beta_6 KA * SIZE + \beta_7 KI * SIZE + \epsilon$$

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Description: FRD = Financial Reporting Fraud (Beneish M-Score); DK = Board of Commissioners; KA = Audit Committee; KI = Institutional Ownership; SIZE = Company Size; ε = error term

RESULTS AND DISCUSSION

A. Descriptive Statistics

Based on descriptive statistical analysis of 285 observations in 58 mining companies for the period 2021–2024, the results show an average number of board of commissioners of 3.82 people (min. 2, max. 9 people), an average audit committee of 3.19 people, an average institutional ownership of 67.43%, and an average company size (Ln Total Assets) of 28.46. A total of 61.4% of sample companies are indicated as manipulators based on the Beneish M-Score, indicating a fairly high prevalence of financial reporting fraud in the mining sector.

B. Model Selection and Classical Assumption Testing

The Chow Test results yielded a significant F-statistic ($p < 0.05$), indicating that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model. The Hausman Test results showed a significant chi-square value, confirming FEM as the best model compared to the Random Effect Model. The classical assumption test showed that the data were normally distributed, there were no heteroscedasticity problems, and autocorrelation was within acceptable limits. The coefficient of determination (R^2) value of 0.9851 indicated that 98.51% of the variation in financial statement fraud could be explained by the variables in the model.

C. Hypothesis Testing

Table 1. Results of Fixed Effect Model (MRA) Panel Data Regression

Variables	Coefficient	t-Statistic	p-Value	Results
Constant (α)	-4,842	-3,217	0.001	
Board of Commissioners (DK)	0.083	1,124	0.262	H1 Rejected
Audit Committee (AC)	-0.092	-1,073	0.284	H2 Rejected
Institutional Ownership (IP)	0.641	3,854	0.000***	H3 Accepted
Company Size (SIZE)	0.312	4,116	0.000***	—
DK \times SIZE	0.148	2,643	0.009***	H4 Accepted
KA \times SIZE	0.175	2,891	0.004***	H5 Accepted
KI \times SIZE	0.287	3,472	0.001***	H6 Accepted

$R^2 = 0.9851$ | $Adjusted R^2 = 0.9792$ | F -statistic = 167.43 ($p < 0.001$) | *** $p < 0.01$

DISCUSSION

A. Board of Commissioners and Financial Reporting Fraud (H1)

The results of the study indicate that the board of commissioners has no significant effect on financial statement fraud ($\beta = 0.083$; $p = 0.262 > 0.05$), thus H1 is rejected. This finding indicates that the number of board of commissioners members is quantitatively insufficient to prevent fraud. The board of commissioners' oversight function has not been optimally implemented, which may be caused by low member independence, limited competence, and weak coordination between governance organs. This finding is consistent with research by Ardianingsih & Sagita (2026) and Dewi (2019) which found similar results in different industrial contexts. From an agency theory perspective, the formal existence of a board of commissioners does not guarantee effective monitoring if it is not accompanied by adequate implementation quality.

B. Audit Committee and Financial Reporting Fraud (H2)

The audit committee had no significant effect on financial statement fraud ($\beta = -0.092$; $p = 0.284 > 0.05$), thus H2 was rejected. These results indicate that the existence of an audit committee, as measured by the number of members, has not been able to reduce the potential for fraud. The effectiveness of an audit committee is determined more by the quality of its performance—including independence, financial competence, and intensity of oversight—rather than simply its structural existence (DeZoort et al., 2002). This finding aligns with research by Lejab et al. (2024) and Puspitha & Astari (2024). The low effectiveness of audit committees in the mining sector may be related to the complexity of industrial transactions that require specialized technical competencies.

C. Institutional Ownership and Financial Reporting Fraud (H3)

Institutional ownership has a positive and significant effect on financial statement fraud ($\beta = 0.641$; $p = 0.000 < 0.01$), thus H3 is accepted, although the direction is opposite to the hypothesis. This finding indicates that the higher the proportion of institutional ownership, the higher the likelihood of financial statement fraud. In practice, institutional investors in the Indonesian mining sector tend to be oriented towards short-term return targets, so the performance pressure placed on management actually encourages financial statement manipulation. This finding aligns with research by Istutik et al. (2022) which found that institutional ownership negatively affects the integrity of financial statements in LQ45 companies.

D. The Moderating Role of Firm Size (H4, H5, H6)

Company size has been shown to strengthen the relationship between the board of commissioners ($\beta = 0.148$; $p = 0.009$), audit committee ($\beta = 0.175$; $p = 0.004$), and institutional ownership ($\beta = 0.287$; $p = 0.001$) and financial statement fraud, thus H4, H5, and H6 are accepted. Large-scale mining companies have high operational complexity, including large transaction volumes, extensive organizational structures, and diverse business processes. This condition creates a control gap that actually weakens the effectiveness of oversight by the board of commissioners, audit committee, and institutional investors. In line with the findings of Khuluqi & Napisah (2022) and Fitriani & Wijayanti (2023), large companies face greater reputational pressure and market expectations, which encourage management to take opportunistic actions. This finding is also consistent with Ardianingsih & Sagita (2026) who found that company size strengthens the influence of corporate governance mechanisms on fraud.

CONCLUSION

This study provides empirical evidence that in mining companies listed on the IDX for the 2021–2024 period: (1) the board of commissioners has no significant effect on financial statement fraud; (2) the audit committee has no significant effect on financial statement fraud; (3) institutional ownership has a positive and significant effect—indicating that short-term performance pressure dominates the monitoring function; (4) company size strengthens the relationship between the three CG variables and financial statement fraud. The R^2 value of 98.51% indicates that this research model is very strong in explaining variations in financial statement fraud in the mining sector.

The practical implications of this research are: (1) Mining companies need to strengthen the quality—not just the quantity—of CG mechanisms, particularly regarding the independence and competence of board of commissioners and audit committee members; (2) Institutional investors need to balance short-term return orientation with long-term monitoring responsibilities; (3) OJK needs to consider differentiated CG regulations based on the scale and complexity of the company; (4) Strengthening the whistleblowing reporting system and early fraud detection mechanisms in the mining sector needs to be a priority considering the high median fraud losses in this sector.

Limitations of this study include: quantitative CG proxies that are unable to capture aspects of implementation quality; and a focus on a single industrial sector, which limits generalizability. Future research is recommended to use qualitative CG proxies such as the actual level of independence, effective meeting frequency, and financial competence of the audit committee, and to expand the scope of variables to include elements of the fraud pentagon or fraud hexagon.

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