FRAUD AS A MODERATING FACTOR IN THE RELATIONSHIP BETWEEN GOOD CORPORATE GOVERNANCE AND FIRM VALUE: EVIDENCE FROM INDONESIAN BANKING

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Abstract: *This study examines the effect of Good Corporate Governance (GCG) mechanisms, profitability, and dividend policy on firm value in Indonesian conventional commercial banks listed on the Indonesia Stock Exchange during 2021–2024, with fraud tested as a potential moderating variable. Two OLS regression models are estimated: Model 1 tests the direct effects of board independence, audit committee, managerial ownership, dividend payout ratio (DPR), and return on assets (ROA) on firm value (PBV) using 168 firm-year observations with logarithmic transformation, while Model 2 introduces fraud as a moderator using 105 observations after IQR-based outlier removal. The results are consistent across both specifications: board independence and ROA positively and significantly influence firm value, while the audit committee exerts a significant negative effect. Managerial ownership is insignificant in Model 1 and excluded from Model 2 due to collinearity, and DPR is insignificant in both models. Fraud, whether included as a direct predictor or through interaction terms, does not significantly moderate the governance–firm value relationship. These findings support agency theory, resource dependence theory, and signaling theory, confirming that profitability and board independence are the dominant determinants of firm value in emerging-market banking. The results carry practical implications for banking regulators and practitioners seeking to enhance firm value through governance enforcement and profitability management.*

Keywords*: Corporate Governance, Fraud, Profitability, Dividend Policy, Firm Value, Emerging Market.*

BACKGROUND

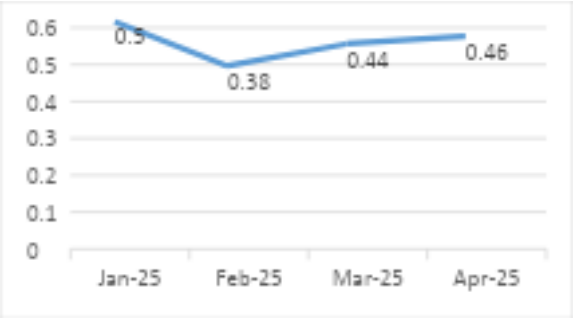
Background of The Study

Firm value remains one of the central themes in corporate finance and governance research, as it reflects both the tangible performance of a firm and the intangible perceptions of investors regarding sustainability, profitability, and ethical practices. In emerging markets such as Indonesia, the valuation of commercial banks is particularly crucial given their role as financial intermediaries, mobilizing deposits and allocating credit to productive sectors. The banking industry not only drives financial inclusion but also acts as a barometer of macroeconomic stability. However, the challenge of preserving firm value has become increasingly complex in the face of fraudulent practices, governance weaknesses, and heightened regulatory scrutiny.

Fraud cases in the Indonesian banking sector—such as embezzlement, fictitious lending, and manipulation of financial statements—have highlighted the vulnerability of governance structures and internal control systems. Various fraud cases within the Indonesian banking sector highlight the vulnerability of corporate governance and internal control systems. For example, a fraudulent fictitious loan case amounting to IDR 569.4 billion occurred in February 2025 at Bank Jatim. The perpetrator's modus operandi involved breaking down the loan into several smaller ones to circumvent strict supervision and evade approval from the board of directors. Even though Bank Jatim had an anti-fraud

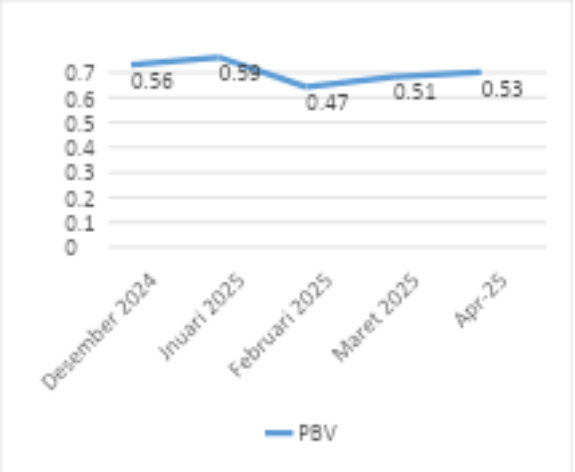
strategy in place, this case underscores weaknesses in its implementation (Infobanknews, 2025, Kompas, 2025). A similar phenomenon was observed at Bank BJB, where a corruption case involving the markup of advertising funds, allegedly causing state losses of up to IDR 222 billion, drew public attention in March 2025 (Tempo, 2025, n.d.) This incident reinforces the need to strengthen internal control and management oversight as a fundamental component of Good Corporate Governance (GCG) principles. Collectively, these cases emphasize the urgency of re-evaluating and reinforcing banking systems to prevent future financial and reputational losses.

These incidents not only erode profitability but also undermine stakeholder trust, leading to declines in market valuation. At the same time, firm value is influenced by dividend policy and profitability, which are closely monitored by investors as signals of corporate health (Gordon, 1963; Lintner, 1962). Dividend policy demonstrates management's confidence in future earnings, while profitability—often measured by Return on Assets (ROA)—reflects operational efficiency and financial resilience (Alfianita & Santosa, 2022).



Graph 1. PBV of Bank Jabar Banten in Q1 2025

In January 2025, the Price-to-Book Value (PBV) was recorded at 0.50, but it experienced a sharp decline to 0.38 in February 2025. This significant decrease likely reflects market concerns regarding the credibility and corporate governance of the institution. Although a modest recovery was observed in March and April, with PBV rising to 0.44 and 0.46 respectively, the value did not return to its initial level. This trend suggests that investors' negative perception of poor Good Corporate Governance (GCG) can directly impact market valuation and firm value within the banking sector.



Graph 2. PBV of Bank Jatim in Q1 2025

The role of Good Corporate Governance (GCG) is particularly significant in the Indonesian context. Regulatory bodies such as the Financial Services Authority (OJK) emphasize the implementation of GCG principles—including transparency, accountability, responsibility, independence, and fairness—as mechanisms to prevent fraud and safeguard stakeholders' interests (OECD, 2023; Putri & Putri, 2022). Prior studies suggest that board independence, audit committees, and managerial ownership positively contribute to firm value by enhancing monitoring and reducing agency conflicts (Hadisurya et al., 2025; Tumewang et al., 2025) Studies from (Darmawan et al., 2020; Putri & Putri, 2022) emphasize that board independence and

audit committees strengthen monitoring effectiveness, thereby contributing positively to firm value in Indonesian banks. Yet, despite regulatory emphasis, the persistence of fraud scandals reveals gaps in enforcement and effectiveness.

This study, therefore, examines the nexus between fraudulent practices, dividend policy, profitability, and GCG in determining firm value among Indonesian commercial banks listed on the Indonesia Stock Exchange (IDX) from 2021–2023. By focusing on this critical sector, the study provides empirical evidence relevant to both academic debates and practical policymaking. It contributes to the literature by addressing how the interaction of governance and financial performance in shaping firm value.

LITERATURE REVIEW

Agency Theory

Jensen & Meckling, (1979) describe agency relationships as contracts where shareholders (principals) delegate decision-making authority to managers (agents). In banking, this often leads to conflicts of interest due to information asymmetry. Fraudulent practices emerge when monitoring is weak and managers exploit resources for personal benefit. Strong governance mechanisms reduce agency costs by aligning managerial incentives with shareholder wealth (Irhamni, 2024). Institutional theory underlines the impact of regulatory and cultural environments on governance outcomes. In Indonesia, GCG adoption is often more symbolic than substantive (Patricia Sumar & Dwi Ratmono, 2024). Meanwhile, asymmetric information theory highlights how fraud exploits informational imbalances, reducing the credibility of financial signals (Njoku & Lee, 2024).

Fraud represents the most extreme manifestation of the agency problem. When monitoring is weak, managers may exploit resources for personal benefit, fabricate financial results, or conceal risk exposures—all of which erode shareholder value (Patricia Sumar & Dwi Ratmono, 2024). From this perspective, fraud is not merely a control variable but a contingency that may alter how governance mechanisms affect firm value. In a fraud-free environment, independent directors and audit committees function as preventive monitors; their presence reassures investors and reduces the cost of equity. In a fraud-exposed environment, however, two competing dynamics arise. On one hand, governance mechanisms may prove resilient—detecting and containing fraud before it destroys value. On the other hand, fraud may undermine investor confidence in the governance apparatus itself, rendering board independence or audit oversight less credible as signals of quality. This theoretical ambiguity motivates the inclusion of fraud as a moderating variable rather than a direct predictor: the question is not simply whether fraud reduces firm value, but whether fraud changes the channel through which governance mechanisms influence value.

Signaling Theory

Spence, 1978 argues that firms use financial policies to signal private information to the market. Dividend payments, for instance, serve as signals of profitability and future earnings stability. Profitability indicators such as ROA similarly function as market signals, reassuring investors about operational efficiency. Governance disclosures can also reduce uncertainty by signaling compliance and transparency (Bergh et al., 2018). Fraud disrupts this signaling equilibrium. When a bank is exposed to fraud, the credibility of its

financial signals deteriorates: reported profitability may be overstated, dividend payments may mask underlying weaknesses, and governance disclosures may reflect symbolic rather than substantive practices. Investors who learn of fraud exposure may discount all signals emanating from the firm, regardless of their actual accuracy.

Njoku and Lee (2024) note that asymmetric information theory highlights how fraud exploits informational imbalances, reducing the credibility of financial signals. This mechanism suggests that fraud could moderate the relationship between profitability (or dividend policy) and firm value: high ROA or stable dividends may boost valuation under normal conditions but lose their signaling power when the bank's integrity is questioned.

Resource Dependence Theory

While agency theory emphasizes the monitoring function of independent directors, resource dependence theory (Pfeffer & Salancik, 1978) offers a complementary perspective: boards serve not only as monitors but as conduits of valuable resources. Independent commissioners bring external expertise, professional networks, industry knowledge, and institutional legitimacy to bank governance. These resources improve the quality of strategic decision-making, facilitate access to capital markets, and strengthen the bank's relationships with regulators and external stakeholders.

In the Indonesian banking context, where regulatory complexity is high and institutional trust is still developing, the resource provision function of independent directors may be particularly important. A board composed of genuinely independent commissioners can bridge the gap between bank management and the external environment, providing advice on risk management, regulatory compliance, and strategic positioning that executives with internal perspectives alone may lack. Resource dependence theory thus predicts that board independence enhances firm value not only by reducing agency costs (the agency theory channel) but also by enriching the bank's resource base and adaptive capacity.

Good Corporate Governance (GCG)

GCG serves as a safeguard against managerial opportunism and fraudulent behavior. The Board Independence is expected to provide unbiased oversight, while audit committees strengthen the reliability of financial statements. Managerial ownership aligns the interests of managers and shareholders, potentially discouraging opportunistic fraud (Putri & Putri, 2022). However, the effectiveness of these mechanisms varies across institutional settings. Studies highlight that in Indonesian banks, governance structures are often symbolic rather than substantive, with audit committees lacking sufficient enforcement capacity (Darmawan et al., 2020; Hadisurya et al., 2025; Tumewang et al., 2025).

Dividend Policy

Dividend policy remains contested in the finance literature. The Miller & Modigliani, 1961 irrelevance theory suggests that dividends do not affect firm value under perfect market assumptions, while the bird-in-hand theory Gordon, (1963); Lintner, (1962) argues that investors prefer certain dividends over uncertain capital gains. Empirical research also supports this link,

where stable dividend payouts were found to positively influence valuation in Indonesian listed firms (Wardhana & Tandelilin, 2018).

Profitability

Profitability is a fundamental determinant of firm value. In the banking sector, ROA is widely used to assess management's ability to generate income from assets. Higher profitability generally correlates with higher market valuations, as investors interpret it as a sign of sustainable growth (Yoda et al., 2023). Nonetheless, profitability's impact can be mitigated by external shocks or governance failures, as seen in several Indonesian fraud cases where strong financial results failed to maintain investor trust. In this research, GCG is measured using three indicators:

a. Board Independence: A proportion of the board of commissioners who have no affiliation with company owners or management. They play a crucial role in objective supervision to prevent the abuse of authority and improve governance quality.

$$\text{Board Independence (KI)} = \frac{\textit{The number of independent commissioners}}{\textit{Total number of commissioners}} \quad (1)$$

b. Audit Committee: A committee formed by the board of commissioners to oversee financial reporting, audits, and internal controls. The number of members is used as the indicator. An effective audit committee enhances financial report quality and reduces information asymmetry.

$$\text{Audit committee} = \text{the number of audit committee members} \quad (2)$$

c. Managerial Ownership: The percentage of shares held by company management. A higher proportion is expected to align the interests of managers with shareholders, thereby reducing agency conflicts and increasing firm value.

d. $$\text{Managerial Ownership} = \frac{\textit{the percentage of shares owned by managers}}{\textit{total outstanding shares}} \quad (3)$$

Dividend Policy refers to a company's decision on distributing profits to shareholders or retaining them for future investment. Classical theories suggest irrelevance (Modigliani & Miller, 1958), while the bird-in-the-hand argument (Gordon, 1963; Lintner, 1962), views dividends as reducing uncertainty. According to Brigham & Houston, (2021), it involves the decision on the percentage of net profit paid out, known as the Dividend Payout Ratio (DPR), a consistent dividend policy is often seen as a signal of a company's stable finances and good management, which can influence stock prices and investor perception. A high DPR indicates a strategy of distributing profits to shareholders, which can lead to a rise in stock price. While a high DPR benefits investors, a low DPR strengthens the company's finances. This research uses DPR as the sole proxy for dividend policy. Key theories underpinning dividend policy include:

a. Dividend Irrelevance Theory: Developed by Merton Miller & Franco Modigliani (1961) this theory argues that a company's value is determined only by its earnings and business risk.
b. Bird-In-The-Hand Theory: Myro Gordon, 1963; John Lintner, 1962 argued that investors prefer high dividends because they are more certain and less risky than potential capital gains.
c. Tax Preference Theory: Brigham & Houston (2021) explain that investors may prefer low dividends to avoid higher tax burdens, as capital gains from

profit growth are often taxed at a lower rate.

Empirical studies in Indonesia, including Wardhana & Tandelilin (2018); Yoda et al. (2023); Yuwono & Aurelia (2021) confirm that stable dividends enhance firm valuation. Nonetheless, international evidence suggests contextual variations: in highly regulated banking sectors, excessive payouts may undermine capital adequacy (H. N. Dang et al., 2021)

Profitability is a company's ability to generate profit over a specific period from its sales, assets, or equity. It is a critical indicator of management's effectiveness in utilizing resources to generate revenue and profit. This study uses Return on Assets (ROA) as the primary proxy for profitability. ROA measures how much net income is generated per dollar of total assets, reflecting the company's efficiency in using its assets to generate profit. Studies in Indonesia, Silfia et al. (2022); Yoda et al.,(2023) affirm this relationship. Yet, profitability as a signal is vulnerable to manipulation: fraud cases where banks overstated earnings reveal that investors may discount reported profitability when governance credibility. According to Maulani & Riani (2021), a higher ROA indicates greater net profit from total assets, while a negative ROA signifies a loss. ROA is calculated as follows:

$$\text{ROA} = \frac{Profit\ before\ tax}{Average\ of\ total\ asset} \times 100\% \quad (4)$$

Firm Value represents investors' perception of a company's success and is often reflected in its stock price. A high stock price indicates high firm value, attracting more investors and building confidence in the company's management and future prospects. Fraud introduces a disruptive force into the governance–performance–value nexus. Research demonstrates that fraud incidents significantly undermine investor confidence and diminish firm valuation (Park, 2022; Seifzadeh et al., 2021; Ye & Hu, 2025). While agency theory anticipates opportunistic behavior, few empirical studies systematically explore fraud's moderating effect. This gap is particularly evident in Indonesian scholarship, where most research focuses on GCG or profitability in isolation rather than their interaction with fraud.

Sustained growth in firm value is considered a significant achievement as it enhances shareholder wealth. This study uses the Price to Book Value (PBV) ratio as a proxy for firm value, which is a comparison between the market price per share and the book value per share. A higher PBV indicates that a company effectively manages investor funds to generate high returns. PBV is calculated as follows:

$$\text{PBV} = \frac{Market\ price\ per\ share}{Book\ value\ per\ share} \quad (5)$$

The reviewed literature reveals several insights: (1) profitability and dividends are key drivers of firm value, but their effectiveness depends on credibility; (2) GCG mechanisms provide oversight yet are often symbolic in practice; (3) fraud undermines both signaling and governance functions, but remains underexplored as a moderating factor. Previous research on the relationship between Good Corporate Governance (GCG), dividend policy, profitability, and firm value has yielded varied results, often influenced by the specific market and industry context. A study by Giang Tra Thi Dang et al., n.d. (2023) in Vietnam, for instance, found a positive impact of GCG on firm value, which aligns with Agency Theory. Similarly, multiple studies focusing on the Indonesian market, such as those by (Yoda et al., 2023) and Alfianita & Perdana

Wahyu Santosa (2022), consistently identified a significant positive effect of profitability on firm value. These findings provide a robust theoretical foundation for the present study, underscoring the importance of profitability as a signal of financial health and GCG as a governance mechanism.

However, several studies have reported different findings that are particularly relevant to this research. Njoku & Lee (2024) for example, found that cash dividends positively affect firm value in the Korean market, while Thauziad & Kholmi (2021) and Putri & Putri (2022) found that certain GCG proxies, like managerial ownership and the audit committee, did not have a significant impact on firm value. These contradictory results highlight a gap in the literature and the need for further investigation within the specific context of the Indonesian banking sector, given its unique characteristics and regulatory framework. Therefore, this study aims to bridge this gap by comprehensively analyzing how GCG, dividend policy, and profitability collectively and individually influence the firm value of Indonesian commercial banks.

Research Hypotheses

This study addresses that gap by pursuing two objectives. The first objective is to determine the direct effects of GCG mechanisms (board independence, audit committee, managerial ownership, and dividend payout ratio) and financial performance (return on assets) on firm value (price-to-book value) in Indonesian conventional commercial banks over the 2021–2024 period. The second objective is to examine whether fraud moderates the relationship between these governance mechanisms and firm value.

Based on the theoretical foundation and previous empirical research, the following hypotheses are proposed:

1. Good Corporate Governance on Firm Value

According to agency theory, effective corporate governance mechanisms are essential in mitigating conflicts of interest between management and shareholders, thereby enhancing investor confidence and increasing firm value as reflected in stock prices and the Price to Book Value (P/BV) ratio. Corporate governance in this context is assessed through three key indicators. First, the Board Independence serves as an oversight body that ensures objective decision-making and minimizes actions detrimental to shareholders. Second, the audit committee plays a critical role in monitoring financial reporting, ensuring transparency, and strengthening accountability. Third, managerial ownership aligns the interests of management with those of shareholders, thereby fostering value creation. Empirical studies support these relationships, demonstrating that the Board Independence (Alves, 2023; Putri & Putri, 2022), audit committees (Fariha et al., 2022; Hezabr et al., 2023; Putry & Murni, 2022) , and managerial ownership (Ben Fatma & Chouaibi, 2023; Nurhalisah & Trisnaningsih, 2024; Thauziad & Kholmi, 2021) each exerts a significant positive influence on firm value. In line with Al Amosh & Khatib (2022) Managerial ownership has a significant negative impact on ESG disclosure that affects the firm's value. This study measures GCG through three indicators:

H1a: Board Independence has a significant effect on firm value.

H1b: The audit committee has a significant effect on firm value.

H1c: Managerial ownership has a significant effect on firm value.

2. Dividend Policy on Firm Value

Dividend policy represents a strategic corporate decision concerning the allocation of earnings between dividend distribution to shareholders and retained earnings for future investment. The Bird in the Hand theory Gordon (1963) posits that investors place greater value on current dividends than on uncertain future capital gains, as dividends provide immediate and more predictable returns. Firms that consistently distribute dividends thereby offer income certainty, which enhances investor interest and subsequently increases firm value. From the perspective of agency theory, dividend distribution also functions as a mechanism to mitigate agency conflicts. By reducing the amount of free cash flow under managerial control, dividend payments limit the potential for managerial opportunism, thereby strengthening shareholder trust and enhancing firm value. Empirical studies support this theoretical foundation, with evidence showing that dividend policy positively influences firm value (Eryomin et al., 2021; Hung et al., 2018; Kapons et al., 2023; Kusumawati et al., 2021; Seth & Mahenthiran, 2022a):

H2: Dividend policy has a significant effect on firm value.

3. Profitability on Firm Value

A high level of profitability indicates a company's ability to generate earnings, which can be reinvested or distributed to shareholders. According to Signaling Theory, high profitability is a positive signal for investors. From an Agency Theory perspective, high profitability reflects good managerial performance, which reduces conflicts between management and owners. Empirical studies support this theoretical foundation, with evidence showing that profitability positively influences firm value Eryomin et al., (2021) Alfianita & Perdana Wahyu Santosa, (2022; Dang et al., (2021); Fadilah & Febrianti, (2024); Thauziad & Kholmi, (2021), and Fadilah & Febrianti, (2024). However, contradicts to Kusumawati et al., (2021).

H3: Profitability has a significant effect on firm value.

4. The Simultaneous Effect of Variables on Firm Value

GCG, dividend policy, and profitability are all crucial factors that influence firm value. Sound GCG signals transparency and accountability, increasing investor confidence and reducing risk. A stable dividend policy signals a company's ability to consistently generate and distribute profits, while high profitability shows its ability to create long-term value. When these three factors work together, they are expected to significantly enhance investor appeal and firm value.

H4: GCG, dividend policy, and profitability simultaneously have a significant effect on firm value

5. Fraud as a moderator variable

GCG increases PBV partly by improving the credibility of financial reports and management signals; if a firm is subject to financial fraud (or perceived as fraud-prone), investor trust collapses and the market discounts any governance signals — reducing the valuation premium that GCG would otherwise generate. Fraud increases information asymmetry and hides the true quality of governance or makes governance appear ineffective (Junus et al., 2025). When information asymmetry rises, the market cannot reward governance improvements because it cannot verify them; agency-cost

theory explains why governance only raises value when it credibly reduces managerial opportunism (Jensen & Meckling, 1979). If a firm is associated with fraud (or weak accounting integrity), investors will discount dividend signals — they may suspect dividends are being paid from manipulated earnings or one-off items — so the signaling effect on PBV is weakened (Tanushev, 2020).

H5: Fraud has a significant moderating effect on the relationship between GCG and firm value, and on the relationship between dividend policy and firm value.

METHODOLOGY

This study applies a quantitative approach using panel data to explore the influence of dividend policy, profitability, and Good Corporate Governance (GCG) on firm value. The research adopts a panel data framework covering 42 conventional commercial banks listed on the Indonesia Stock Exchange (IDX) over the 2021–2024 period, yielding 168 firm-year observations (42 banks × 4 years). Two regression models are estimated sequentially: Model 1 examines the direct effects of GCG mechanisms, profitability (ROA), and dividend policy (DPR) on firm value (PBV), while Model 2 extends the analysis by introducing fraud as a moderating variable through interaction terms.

Data Sources

The dataset was constructed from multiple secondary sources:

1. Annual reports and financial statements published by banks.
2. Corporate Governance disclosures mandated by the Financial Services Authority (OJK).
3. IDX publications and filings for dividend distributions and market valuation.
4. Fraud events documented through OJK reports and credible financial news outlets such as Kontan and Tempo.

This study applies a quantitative approach using panel data to explore the influence of dividend policy, profitability, and Good Corporate Governance (GCG) on firm value. The research population comprises commercial banks listed on the Indonesia Stock Exchange (IDX) during 2021–2024. A purposive sampling technique was used to select banks that consistently disclosed annual financial statements, governance reports, and dividend distributions, and for which reliable information on fraud incidents could be obtained.

Variable Definitions

1. Firm Value (Dependent Variable): Measured by Price-to-Book Value (PBV), reflecting the ratio of market value to book equity.
2. Independent Variables:
3. Dividend Policy: Dividend Payout Ratio (DPR), calculated as total dividends divided by net income.
4. Profitability: Return on Assets (ROA), defined as net income to total assets.
5. GCG Indicators:
   a. (i) Proportion of Board Independence,
   b. (ii) Existence and size of audit committees,
   c. (iii) Managerial ownership.
6. Fraud as a moderator variable in model 2. a binary variable (1 = the bank received regulatory sanctions, financial restatements, or reported fraud incidents in a given year; 0 = otherwise).

Econometric Model

Our panel regression, applying Multiple Linear Regression Analysis, was

chosen after the classical assumption test was confirmed.

The regression analysis employed a model that passed the classical assumption tests: normality, multicollinearity, autocorrelation, and heteroscedasticity. In model 1, the initial normality test using Kolmogorov-Smirnov showed that the data were not normally distributed, leading to a natural logarithmic (LN) transformation of the variables PBV, ROA, and Audit Committee. The analysis proceeds in two stages, each addressing a distinct research question. Model 1 tests the direct effects of GCG mechanisms, ROA, and DPR on PBV without the fraud variable. Model 2 extends this by incorporating fraud as a moderator through interaction terms (Board_Independence×Fraud, Audit_Committee×Fraud, Managerial_Ownership×Fraud, DPR×Fraud). Because each model faced different distributional challenges in its residuals, the data treatment strategies differ between the two stages, as described below.

The baseline model is specified as:

Model 1: Direct Effects (N = 168)

Model 1 retains all 168 firm-year observations. An initial ordinary least squares (OLS) estimation revealed that the unstandardized residuals violated the normality assumption, as indicated by the Kolmogorov-Smirnov test (test statistic = 0.262, Asymp. Sig. = 0.000). To address this, a natural logarithm (LN) transformation was applied to three variables that exhibited pronounced right-skewness: PBV, Audit Committee (AC), and Managerial Ownership (MO). The remaining variables (Board Independence, DPR, and ROA) were left in their original scale because their distributions were approximately symmetric.

Model 1:

$PBV_{it} = \beta0 + \beta1BI_{it} + \beta2AC_{it} + \beta3MO_{it} + \beta4DPR_{it} + \beta5ROA_{it} + it$

After transformation, the Kolmogorov-Smirnov test yielded an Asymptotic Significance of 0.012. Because the Lilliefors correction can be overly conservative at larger sample sizes, a Monte Carlo simulation (10,000 replications, starting seed = 926214481) was conducted, producing a Monte Carlo Significance of 0.226 (99% CI: 0.216–0.237). This value comfortably exceeds the 0.05 threshold, confirming that the residuals of the transformed model satisfy the normality assumption.

The transformed Model 1 specification is:

$$LN\_PBV = a + \beta_1 Board\_Independence + \beta_2 LN\_AC + \beta_3 LN\_MO + \beta_4 DPR + \beta_5 ROA + \varepsilon$$

Classical assumption tests on the transformed model confirmed that multicollinearity was absent (all VIF values below 2.0: Board Independence = 1.075, Audit Committee = 1.369, Managerial Ownership = 1.050, DPR = 1.631, ROA = 1.292). The Glejser test indicated no heteroscedasticity, with all independent variables producing significance values above 0.05 (Board Independence = 0.098, Audit Committee = 0.637, Managerial Ownership = 0.183, DPR = 0.676, ROA = 0.300). The Durbin-Watson statistic was 1.007, suggesting potential positive autocorrelation; however, given that this study uses panel data with a cross-sectional dominant structure (42 banks, 4 years), low DW values are common and do not necessarily indicate model misspecification.

Model 2

In model 2 Moderating Effects of Fraud (N = 105), we involved Fraud as a moderating variable to see how Fraud's role impacts can quantify its interaction effect on the relationships between GCG, mechanism, and firm value. Because the interaction terms (e.g., Board_Independence×Fraud) create products between continuous and binary variables, applying a logarithmic transformation to the constituent variables would distort the multiplicative interaction structure. The study therefore adopted an alternative strategy: outlier removal using the Interquartile Range (IQR) method.

Outliers were identified across six continuous variables: PBV, ROA, Board Independence, Audit Committee, Managerial Ownership, and DPR. For each variable, the first quartile (Q1) and third quartile (Q3) were computed, the IQR was calculated as Q3 – Q1, and observations falling below Q1 – 1.5×IQR or above Q3 + 1.5×IQR were flagged. Any observation that qualified as an outlier on at least one of the six variables was removed. This process identified 63 outlier observations, reducing the sample from 168 to 105 firm-year observations.

One additional adjustment was necessary. After outlier removal, the interaction term Managerial_Ownership×Fraud produced undefined (NaN) coefficients due to perfect collinearity: in the cleaned subset, all observations with non-zero managerial ownership had Fraud = 0, eliminating the variation needed to estimate the interaction. Managerial Ownership and its interaction term were therefore excluded from Model 2. The final specification is:

$PBV = \alpha + \beta_1 BI + \beta_2 AC + \beta_3 DPR + \beta_4 ROA + \beta_5 Fraud + \beta_6 BI{\times}Fraud + \beta_7 AC{\times}Fraud + \beta_8 DPR{\times}Fraud + \varepsilon$

Y = Firm value

α = intercept of the model

β_1, β_2, β_3, β4, β5 = regression coefficient in each variable

BI = Board Independence

AC = Audit committee

MO = Managerial Ownership

DPR = Dividend Payout Ratio

ROA = Return on Assets

ϵit= Standard error (error term in regression model)

Multicollinearity diagnostics on the cleaned data confirmed acceptable VIF values for all retained variables (Board Independence = 1.090, Audit Committee = 1.432, DPR = 1.714, ROA = 1.265, Fraud = 1.107). The model yielded $R^2 = 0.310$ (Adj. $R^2 = 0.253$) with a significant F-statistic of 5.394 ($p < 0.001$), indicating that the overall model is statistically meaningful.

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive Statistics

Table 1. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
BI	168	0.250	1.000	0.57338	0.109381
Audit	168	2.000	8.000	3.73214	1.201163
Man Own	168	0.000	0.432	0.00793	0.049699
DPR	168	0.000	0.859	0.17143	0.251501
ROA	168	-0.137	0.058	0.01177	0.024299
PBV	168	0.142	35.472	1.98253	3.658222
Valid N (Listwise)	168				

Source: Author's calculations using SPSS

The Board Independence variable has a mean of 0.574, indicating that, on average,

Board Independence makes up approximately 57.4% of the board. The minimum value of 0.250 occurred at Bank Bumi Artha in 2021, while the maximum value of 1.000 was recorded at Bank Victoria in 2021 and 2022. For the Audit Committee variable, the average number of members is 3.73, with a range from 2 to 8. The minimum value was observed at Bank MNC Internasional (2021-2023), Bank of India Indonesia (2021), Bank China Construction (2023), and Bank Pembangunan Daerah Banten (2021-2023). The maximum value was found at Bank Rakyat Indonesia in 2021.

Managerial Ownership has a very low mean of 0.008 and a maximum of 0.432, indicating minimal ownership by management. The maximum value was observed at Bank Mayapada in 2023. The Dividend Payout Ratio (DPR) has an average of 0.171. Its maximum value of 0.859 occurred at Bank Rakyat Indonesia in 2021. The Return on Assets (ROA) variable has a mean of 0.011, with a minimum of -0.137 (Bank Neo Commerce, 2021) and a maximum of 0.058 (Krom Bank Indonesia, 2021). Finally, the dependent variable, Price to Book Value (PBV), shows a large standard deviation (3.658).

Classical Assumption Test

Normality Test: The Kolmogorov-Smirnov test resulted in an Asymp. Sig. (2-tailed) value of 0.012, which is below the 0.05 threshold, indicating the data are not normally distributed. However, the Monte Carlo method was then used, which showed a significance value of 0.226, exceeding the 0.05 threshold and confirming that the residuals are normally distributed.

Table 2. Normality test

			Unstandardized Residual
N			168
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.83917171
Most Extreme Differences	Absolute		.079
	Positive		.079
	Negative		-.060
Test Statistik			.079
Asymp. Sig. (2-tailed)			.012[c]
Monte Carlo Sig. (2-tailed)	Sig.		.226[d]
	99% Confidence Interval	Lower Bound	.216
		Upper Bound	.237

Source: Author's calculations using SPSS

Multicollinearity Test: All independent variables had tolerance values above 0.10 and Variance Inflation Factor (VIF) values below 10, indicating that the regression model is free from multicollinearity issues. For example, the tolerance value for the Board Independence was 1.08978 (VIF: 1.103), and for ROA it was 0.790 (VIF: 1.266).

Table 3. VIF Results

Independent Var.	VIF
BI	1.103
AC	1.39
Man Own	1.061
DPR	1.633
ROA	1.266

Source: Author's calculations using SPSS

Heteroscedasticity Test: Based on the Glejser method, all independent variables showed significance values with Monte Carlo Sig. (2-tailed) showed a value of 0.169, greater than 0.05. This confirms that the regression model does not exhibit symptoms of heteroscedasticity.

Table 4. Heteroscedasticity test

Independent Var.	Sig.
BI	0.098
AC	0.637
Man Own	0.183
DPR	0.676
ROA	0.300

Source: Author's calculations using SPSS

Autocorrelation Test: The Durbin-Watson value was 1.007, which falls within the acceptable range of -2 to +2. This indicates that the regression model is free

from autocorrelation, satisfying the assumption of residual independence.

Model 1 results

PBV (Y) = –0.336 + 1.842 BI – 0.510 LN_AC – 2.579 LN_MO + 0.060 DPR + 6.481 ROA+ ε

Table 5. ***OLS Regression Results — Model 1 (Dependent Variable: LN_PBV, N = 168)***

Variable	B	Std. Err.	Beta	t	Sig.
(Constant)	–0.336	0.420		–0.800	0.425
BI	1.842	0.607	0.236	3.034	**0.003*** **
LN_AC	–0.510	0.252	–0.177	–2.023	**0.045** **
LN_MO	–2.579	1.557	–0.127	–1.657	0.100
DPR	0.060	0.321	0.018	0.188	0.851
ROA	6.481	2.925	0.185	2.216	**0.028** **

Source: Author's calculations using SPSS

Table 6. Coefficient of Determination test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.34[a]	.116	.088	0.81622

Table 7. Result F-test

Model	Regression	F	Sig.	Number of obs
	Regression	4.206	0,001	168

***p < 0.01, **p < 0.05, *p < 0.10*

Source: Author's calculations using SPSS

Model 2 results

Table 8. Coefficient of Determination test

R-squared:	Adj. R-squared:	F-statistic:	Prob (F-statistic):
0.31	0.253	5.394	1.30E-05

Source: Author's calculations using Python statsmodels.

Table 9. OLS Regression Results — Model 2 (Dependent Variable: PBV)

Variable	Coef.	Std. Err.	t	p-value	Sig.
Intercept	0.191	0.411	0.464	0.644	
Board Independence	2.308	0.734	3.146	0.002	***
Audit Committee	–0.193	0.089	–2.183	0.031	**
DPR	–0.708	0.453	–1.563	0.121	
ROA	27.988	6.985	4.007	0.000	***
Fraud	–1.057	1.363	–0.775	0.440	
BI × Fraud	2.890	2.283	1.266	0.209	
AC × Fraud	–0.181	0.194	–0.932	0.354	
DPR × Fraud	1.059	0.719	1.473	0.144	
R^2 = 0.310; Adj. R^2 = 0.253; F = 5.394 (p < 0.001); N = 105					

*Note: *** p < 0.01, ** p < 0.05, * p < 0.10.*

Source: Author's calculations using Python statsmodels.

Model 2 results

PBV = 0.191 + 2.308 BI – 0.193 AC – 0.708 DPR + 27.988 ROA – 1.057 Fraud + 2.890 BI×Fraud – 0.181 AC×Fraud + 1.059 DPR×Fraud

The findings confirm that simultaneously profitability, dividend policy, and Good Corporate Governance (GCG) mechanisms significantly influence the firm value of Indonesian commercial banks. Regardless of direct or moderating influence,

the fraud remains significantly irrelevant in the relationships, with none of the interaction terms proving relevant, and with the main component of fraud also being inconsequential.

The results underscore the importance of GCG mechanisms, particularly the roles of the Board Independence and audit committees. These governance structures significantly enhance firm value, consistent with agency theory (Jensen & Meckling, 1979), and supported by Indonesian evidence (Putri & Putri, 2022; Putry & Murni, 2022; Thauziad & Kholmi, 2021). In H1a, the findings reveal that the Board Independence has a significant effect on Firm Value (PBV). This is supported by a significance value of 0.003 in Model 1 and 0.002 in Model 2, which is lower than the α = 0.05 threshold. This suggests that the quantitative proportion of the Board Independence is a strong positive signal for investors in forming a perception of firm value.

Having a greater percentage of the Board Independence on a bank's board typically leads to a higher firm value, which can be seen in a higher Price to Book Value (PBV) ratio. This is because these commissioners have important oversight responsibilities, especially regarding decisions that involve spending public funds, which are important and especially risky in this highly regulated sector. There is a relationship that can be explained in two ways. Firstly, in signaling theory, the Board Independence members signal to entities that a bank practices transparency and accountability, which increases confidence in the market, effectively increasing the bank's stock value. Secondly, in Agency Theory, Board Independence members protect shareholders by conflict of interest mitigation, ensuring that management acts in the interests of the shareholders, and therefore protecting their investments.

The constraints of information, the domineering influence of management, or the little knowledge of the bank's detailed industry may lead to ineffectiveness. If the market perceives the Board Independence as not credible evidence of the enhancement of transparency and value-adding resolutions, then there will be no favorable response in regard to the stock price. This aligns with the arguments of Alves, (2023); Permana et al., (2024); Putri & Putri, (2022) with regard to the positive impact of good corporate governance on firm value. Conversely, this study contradicts the findings of Amaliyah & Herwiyanti, (2019); Ben Fatma & Chouaibi, (2023); Faradilla Purwaningrum & Haryati, (2022); Ferriswara et al., (2022) found that some aspects of corporate governance do not always have a significant effect on firm value. Such contrast may be attributed to the used proxies, periods, or even industry sectors in the respective studies.

The hypothesis 1b test results show that the audit committee has a significant effect on firm value. This is evidenced by a t-statistic of -2.023 and a significance value of 0.045 in Model 1 and 0.031 in Model 2, which is less than the α = 0.05 threshold. This finding supports the acceptance of the hypothesis that a significant effect exists. This supports the hypothesis that a significant effect exists. This aligns with Agency Theory, which states that the Audit Committee acts as a key monitoring entity to alleviate interest conflicts between management (agents) and the owners (principals) of the company. The negative correlation implies several reasons. First, a larger audit committee may signal existing

governance problems: banks facing regulatory scrutiny or internal control weaknesses may expand their committees reactively, and the market may interpret this expansion as a symptom rather than a cure (Altin, 2024). Second, coordination costs increase with committee size; beyond a threshold, additional members may slow decision-making and dilute individual accountability without proportionally improving oversight quality.

This finding does not imply that audit committees are harmful. Rather, it suggests that in Indonesian banking, the quantity of committee members matters less than the effectiveness and independence of their monitoring function. Regulators and practitioners should focus on audit committee competence, meeting frequency, and financial expertise rather than on numerical expansion.

Empirical data from several commercial banks in this study's sample support this finding. Bank CIMB Niaga, for instance, raised the count of Audit Committee members from 3 in 2021 to 6 in 2023. Simultaneously with this rise, its firm value increased from 0.55 to 0.86. Likewise, Bank of India Indonesia saw a rise in firm value from 1.20 to 1.35 following an expansion in its audit committee size. This information indicates that a bigger audit committee size is linked to an increased firm value. The study's findings are in line with those of studies by Purwaningrum & Haryati, (2022); Fariha et al., (2022); Hezabr et al., 2023; Putry & Murni, (2022); Solikah et al., (2020), which discovered that the audit committee significantly affects the value of the firm.

The H1c test in Model 1 results indicate that managerial ownership does not significantly influence firm value. negative but falls short of conventional significance (B = –2.579, p = 0.100), while DPR is positive but far from significant (B = 0.060, p = 0.851). These results indicate that neither insider ownership nor dividend policy independently drives firm value in Indonesian banking.

Consequently, the assumption in model 1 claiming a notable impact is dismissed. In contrast, the outcome of Model 2 was excluded. due to perfect collinearity with the fraud interaction term. This limitation carries substantive meaning: managerial ownership in Indonesian banks is overwhelmingly close to zero. Bank regulations and ownership structure requirements limit the scope for insider shareholding, making managerial ownership a weak governance lever in this context. The managerial entrenchment hypothesis (Chen & Yu, 2012) is difficult to test empirically in a sample where insider ownership lacks meaningful variation.

The empirical data from this study support this finding. Allo Bank had low managerial ownership but recorded the highest firm value in 2021. Conversely, Bank Mayapada, despite a substantial increase in managerial ownership (up to 43.2% in 2023), experienced a low and declining firm value. This strengthens the argument that in the Indonesian banking sector, high managerial ownership does not necessarily lead to a positive impact on firm value.

This finding of Model 1 aligns with research from Fuadah et al. (2022); Karim et al. (2020); Ngatno et al. (2021); Saragih & Tampubolon, (2023); Yuwono & Aurelia, (2021). Yet, the comparatively limited impact of managerial ownership indicates that ownership alignment is not as effective in a heavily regulated and institutionally concentrated banking sector, reflecting findings from regional studies (Dang et al., 2023). When we took out the outlier data, the managerial ownership effect could potentially reduce the firm value in the

banking industry. The findings from the H2 test indicate that the Dividend Payout Ratio (DPR) in Model 1 and Model 2 do not significantly influence Firm Value. The t-statistic of 0.188, paired with a significance level of 0.851 and 0.121 (> α = 0.05), indicates that the hypothesis is dismissed. This result aligns with the Dividend Irrelevance Theory proposed by Miller and Modigliani, which asserts that dividend policy has no impact on a firm's value since investors prioritize the company's growth potential and underlying performance. Moreover, the Tax Preference Theory indicates that investors might shy away from dividends as they are subject to a higher tax rate compared to capital gains. In this scenario, substantial dividend distributions might not appeal to investors and therefore do not significantly influence firm value.

In contrast, in Model 2, there exists a negative correlation between the Dividend Payout Ratio (DPR) and Price-to-Book Value (PBV), which differs from Lintner's bird in the hand theory studies (1962). Investors favor present dividends instead of potential future capital gains due to the higher certainty of present dividends. A minimal dividend payout could be seen favorably by investors, indicating that the company is investing in growth, resulting in a high PBV. Nonetheless, a substantial payout may also be interpreted favorably as an indicator of financial stability and assurance, ultimately resulting in a high PBV (Gordon, 1963).

Our finding is supported by Fama's (1970) Efficient Market Hypothesis (EMH), particularly its semi-strong variant, which posits that information such as dividend distribution policies is rapidly and accurately reflected in stock prices. This means that the market has already reacted to this information before investors made decisions, so it is not possible to get abnormal returns just from this public information. This clarifies why the dividend policy in this research does not significantly influence company value, as dividend information is already deemed "normal" by the market.

Data gathered from this research validate this conclusion. Bank Permata, although regularly offering substantial dividends, experienced a downward trend in its corporate value. On the other hand, Bank Panin Indonesia demonstrated a rise in firm value despite not paying out dividends in some years. This indicates that dividend policy is not consistently a main factor influencing firm value in the banking industry. The results of this research align with the conclusions of Fadilah & Febrianti, (2024); Thauziad & Kholmi, (2021) and Sujono et al., (2024), who determined that the dividend payout ratio did not significantly affect business value

The results of the hypothesis 3 test indicate that Return on Assets (ROA) significantly impacts Firm Value. The t-statistic in model 1 is 2.216 with a significance level of 0.028 (< α = 0.05), while in model 2 it is 4.007 ($p < 0.001$), both indicating substantial positive effects on firm value, thus supporting the hypothesis that claims a significant effect is accepted. ROA serves as a crucial measure of how effectively a company utilizes its total assets to produce net income. A greater ROA indicates improved efficiency. Within the banking sector, ROA is an essential indicator of profitability since assets serve as the basis for a bank's activities, especially in terms of lending and producing interest revenue (Kohlsheen et al., 2018). As a result, investors closely monitor ROA when evaluating a bank's sustainability and future potential.

This result supports Signaling Theory, which posits that a high ROA indicates a company is effectively managed and able to produce consistent profits. In a developing nation, this indication boosts investor trust, draws in additional stock acquisitions, and ultimately raises company's worth. Data from Bank Mandiri and Bank Rakyat Indonesia reveal a distinct trend: a rise in ROA is reliably succeeded by a rise in firm value (Hasan et al., 2025).

Return on Assets (ROA) emerged as the most consistent predictor of firm value, in line with prior studies emphasizing profitability's role in banking valuation (Silfia et al., 2022; Yoda et al., 2023). From a signaling point of view, profitability tells investors about how well managers are running the business and how long it can last, which makes them want to pay more for the stock (Spence, 1978). Profitability metrics provide tangible reassurance in developing nations like Indonesia, where investors face greater levels of uncertainty. However, this positive effect is contingent upon the reported earnings' credibility. Examples of fraud involving exaggerated profits (such as hypothetical loan scandals) show that when governance trust erodes, profitability's signaling function is diminished.

The results of this research are aligned with prior research from Alfianita & Perdana Wahyu Santosa, (2022); H. N. Dang et al. (2021); Fadilah & Febrianti, (2024); Thauziad & Kholmi (2021), which indicated that return on assets has a considerable impact on firm value.

The empirical findings validate that profitability, dividend policy, and Good Corporate Governance (GCG) mechanisms concurrently have a significant impact on the value of firms within Indonesian commercial banks. Nonetheless, neither the main effect of fraud nor any of the interaction terms were statistically significant, indicating that the fraud, whether considered directly or as a moderator, does not significantly alter these relationships in the sample.

The Simultaneous Effect of GCG, Dividend Policy, and Profitability on Firm Value

Based on the F-test results in H4, the variables Board Independence, audit committee, managerial ownership, dividend payout ratio, and return on assets collectively have a significant effect on firm value. This is evidenced by an F-statistic of 4.206, and a significance value of 0.001, which is less than the $\alpha = 0.05$ threshold. Therefore, the hypothesis asserting a simultaneous effect is accepted.

This finding implies that the variations in firm value can be explained by the sum of these five independent factors. Effective corporate governance (Board independence, audit committee, managerial ownership), dividend policy (DPR), and profitability (ROA) all interact to affect how investors and the market view a company's value, even though none of the factors alone were significant. This is in line with the principles of Good Corporate Governance and Signaling Theory, emphasizing the importance of the interactions between various internal components in building stakeholder trust and creating long-term value for a company.

The Moderating Effect of Fraud

In H5, Fraud does not meaningfully change the impacts of Good Corporate Governance (measured by Board Independence and Audit Committees) or Dividend Payout Ratio (DPR) on firm value (PBV), as shown by non-significant interaction terms (p-values > 0.10), unlike previous findings that markets respond intensely to wrongdoing (Njoku & Lee, 2024). This suggests that fraud has no effect on the effectiveness of dividend policy or

governance mechanisms in determining valuation in the sample under analysis. One theory is that fraud might have a more direct impact on company value (Richardson et al., 2022), or as a mediator of poor governance, instead of serving as a moderator. Another plausible explanation concerns measurement challenges: Financial-statement metrics and other fraud indicators usually only show extreme cases (Shahana et al., 2023). The effects of dividend signaling are recognized to differ based on institutional contexts, like investor protection (Deng et al., 2024).

Incidents of banking fraud in Indonesia usually garner a lot of media attention, which exacerbates reputational harm and undermines investor confidence. This finding supports criticisms that Indonesian banks typically have symbolic governance, with structures in place but insufficiently enforced (Patricia Sumar & Dwi Ratmono, 2024). This reflects findings from research indicating that governance structures in Indonesian banks tend to be more symbolic than meaningful, as ineffective enforcement reduces their impact (Darmawan et al., 2020; Hadisurya et al., 2025; Tumewang et al., 2025). None of the fraud interaction terms reaches statistical significance, indicating that the presence of fraud does not meaningfully alter the relationship between governance mechanisms and firm value. This null finding warrants careful interpretation rather than dismissal.

One explanation is measurement sensitivity. The binary fraud indicator captures only whether a bank experienced a fraud event in a given year; it does not capture severity, financial impact, or duration. Mild administrative sanctions and large-scale financial fraud receive the same coding, which may weaken the moderating signal. Future research could construct a continuous fraud severity level based on financial losses, regulatory penalty amounts, or the number of incidents per year.

A second explanation relates to market expectations. In a banking sector where governance failures are not uncommon, investors may have already assessed fraud risk into their valuations structurally. If the market anticipates some baseline level of fraud exposure, individual fraud events may not generate sufficient information to alter the governance–value relationship. This is consistent with the finding that fraud as a direct predictor is also insignificant ($\beta = -1.057$, $p = 0.440$).

A third possibility is governance resilience. Board independence and audit committee oversight may function as deterrent or detection mechanisms regardless of whether fraud occurs, maintaining their governance value without being disrupted by fraud events. If governance structures are sufficiently robust, the moderating effect of fraud would be mentioned into the direct effects already captured in the model.

CONCLUSION

The empirical results demonstrate that firm value in Indonesian commercial banking is shaped primarily by financial performance and specific corporate governance mechanisms. Across two complementary models—one testing direct effects on the full sample (N = 168) and another testing fraud moderation on an outlier-cleaned sample (N = 105)—the core findings are consistent. Return on assets (ROA) and board independence emerge as the only variables that positively and significantly affect firm value (PBV) in both specifications. ROA carries the largest

coefficient in each model (Model 1: B = 6.481, p = 0.028; Model 2: β = 27.988, p < 0.001), confirming that profitability remains the dominant driver of market valuation and a reliable indicator of managerial efficiency in emerging-market banking (Handayani & Ibrani, 2023; Kohlscheen et al., 2018). Board independence likewise improves firm value in both models (Model 1: B = 1.842, p = 0.003; Model 2: β = 2.308, p = 0.002), supporting the view that effective independent oversight lowers agency costs, improves decision-making transparency, and raises investor confidence (Rodríguez Valencia, 2025; Souther, 2019).

The audit committee's negative and significant effect on firm value in both models (Model 1: B = –0.510, p = 0.045; Model 2: β = –0.193, p = 0.031) suggests that a larger committee may signal existing governance problems rather than stronger oversight. This counterintuitive finding is consistent with prior studies documenting a negative relationship between audit committee size and firm performance in emerging markets (Altin, 2024), and points to the importance of committee quality and competence over numerical expansion.

Managerial ownership is negative and statistically insignificant in Model 1 (B = –2.579, p = 0.100) and could not be retained in Model 2 due to perfect collinearity between the Managerial_Ownership×Fraud interaction term and the binary fraud indicator in the cleaned dataset. This statistical constraint itself reflects a substantive reality: insider ownership in Indonesian banks is overwhelmingly close to zero, limiting its relevance as a governance mechanism in this sector and making it difficult to test the managerial entrenchment hypothesis (Chen & Yu, 2012). The dividend payout ratio (DPR) is statistically insignificant in both models (Model 1: B = 0.060, p = 0.851; Model 2: β = –0.708, p = 0.121), indicating that dividend policy does not significantly determine firm value in Indonesian banking. This likely reflects the constraints imposed by capital adequacy requirements and post-pandemic capital rebuilding pressures, which reduce the signaling power of dividends in this industry (Njoku & Lee, 2024; Seth & Mahenthiran, 2022).

A central finding of this study is that fraud, whether included as a direct predictor or as a moderating variable, does not significantly alter the governance–firm value relationship. None of the interaction terms (BI×Fraud, AC×Fraud, DPR×Fraud) reaches statistical significance, and fraud as a direct effect is likewise insignificant (β = –1.057, p = 0.440). This null result does not diminish the importance of fraud risk; rather, it suggests that the governance mechanisms tested here operate independently of fraud exposure, and that the binary fraud indicator used in this study may lack the sensitivity to capture variation in fraud severity. The finding also raises the possibility that investors in Indonesian banking have already priced a baseline level of fraud risk into their valuations structurally, reducing the incremental information content of individual fraud events.

Together, these results carry clear implications for practitioners and regulators. For bank managers and boards of directors, the most effective levers for enhancing firm value are strengthening board independence—by appointing commissioners with genuine external expertise rather than meeting minimum regulatory quotas—and improving operational efficiency to raise ROA. For regulators such as OJK (Otoritas Jasa Keuangan), these findings support policies that enforce meaningful board independence requirements and evaluate audit committee effectiveness based on oversight outcomes

rather than committee size alone. From a broader policy standpoint, bolstering profitability management, transparency, and governance enforcement in banking institutions can increase investor confidence and support long-term value creation in emerging-market economies.

LIMITATIONS AND RECOMMENDATIONS

Like most empirical research, this study has several limitations that should be acknowledged honestly and transparently. First, this study relies on secondary data from annual reports of Indonesian commercial banks, where the quality and completeness of governance and fraud-related disclosures may vary across institutions. Second, the use of different data treatment strategies across models—logarithmic transformation for Model 1 (N = 168) and IQR-based outlier removal for Model 2 (N = 105)—introduces a trade-off between methodological consistency and analytical appropriateness. The 37.5% sample reduction in Model 2 may limit the statistical power to detect moderate moderating effects, which could partly explain the non-significance of the fraud interaction terms.

Third, the binary fraud indicator (1 = fraud event; 0 = no fraud) does not distinguish between the severity, financial magnitude, or nature of fraud incidents, potentially attenuating the moderating signal. Fourth, managerial ownership in Indonesian banking is overwhelmingly close to zero, which created perfect collinearity with the fraud interaction term and required its exclusion from Model 2—a structural feature of the sector that limits the assessment of insider ownership within the moderation framework. Fifth, the OLS approach cannot fully address potential reverse causality between governance quality and firm value, as more profitable banks may adopt stronger governance practices rather than governance driving value.

Based on these limitations, future research should pursue several directions. Subsequent studies should develop a continuous fraud severity measure—incorporating regulatory penalty amounts, financial losses, or forensic accounting indices—to replace the binary indicator, providing greater statistical power to detect moderating effects. Extending the observation period beyond four years would increase the sample size and enable the use of dynamic panel techniques such as system-GMM, which can better address endogeneity and capture the lagged effects of governance reforms on firm value.

Additionally, future studies could incorporate governance quality variables that go beyond numerical measures, such as audit committee financial expertise, board meeting frequency, or ESG reporting adoption. These qualitative dimensions may help explain why audit committee size negatively affects firm value in the current study: if the quality of monitoring matters more than its quantity, measures capturing committee effectiveness could reveal a more nuanced governance–value relationship. Comparative studies across multiple emerging-market banking sectors (e.g., ASEAN or BRICS economies) would also strengthen external validity and inform regional harmonization of banking governance standards.

Finally, researchers should consider alternative firm value proxies such as Tobin's Q or market-adjusted returns alongside PBV to test the robustness of the

governance–valuation relationship across different performance measures. This would address the concern that PBV, while widely used in banking research, captures book value dynamics that may not fully reflect investor perceptions of governance quality.

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