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The Governance Shield: Rethinking Investment Resilience in Financially Distressed Indonesian Banks A Moderating Regression Analysis Perspective on Agency Theory and Corporate Governance

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ABSTRACT

Financial distress episodes in the Indonesian banking sector generate investment suppression dynamics whose severity is conditioned by the institutional quality of the distressed firm's governance architecture. This study investigates corporate governance as an active "crisis shield" that attenuates the negative relationship between financial distress and investment decisions in the Indonesian banking sector. Employing Moderated Regression Analysis (MRA) on panel data from 30 IDX-listed banking companies (2019-2022; N = 120 firm-year observations), and proxying financial distress by the Altman Z-Score and investment decisions by Tobin's Q, this study finds that financial distress exerts a significant negative effect on investment decisions ($\beta = -0.412$, $p < 0.001$), consistent with agency theory's underinvestment hypothesis. Corporate governance (composite of independent commissioner proportion and institutional ownership) exerts a significant positive direct effect ($\beta = 0.341$, $p < 0.001$) and, critically, significantly moderates the distress-investment relationship ($\beta = 0.287$, $p < 0.01$), such that the negative effect of distress on investment is meaningfully weaker in well-governed banks. The model explains 61.4% of investment decision variance. It should be noted, however, that the pooled cross-sectional design precludes strictly causal inference, and these findings are best interpreted as consistent with, rather than proof of, the proposed buffering mechanism. Notwithstanding this observational caveat, these findings reframe corporate governance from a regulatory compliance mechanism to a strategic resilience investment, with important implications for OJK banking supervisors, board practitioners, and institutional investors in emerging market banking.

Keywords: Altman Z-Score; corporate governance; financial distress; Indonesian banking; investment resilience

1. Introduction

The Indonesian banking sector occupies a paradoxical position in the discourse on financial stability. As systemic intermediaries, banks are simultaneously among the economy's most important risk absorbers and its most governance-sensitive institutions. When financial distress occurs, its consequences can extend well beyond individual banks by constraining credit availability, suppressing capital formation, and threatening broader macroeconomic stability. This concern became particularly relevant during and after the COVID-19 period, when Indonesian banks experienced substantial pressures related to loan restructuring, asset quality, liquidity management, and investment allocation. The sector's non-performing loan (NPL) ratio reached 3.22% by late 2023 (OJK, 2024), illustrating the continuing relevance of financial vulnerability to banking stability and investment capacity.

Financial distress does not, however, translate automatically into investment suppression. Between financial stress and its investment consequences are institutional mechanisms capable of amplifying or attenuating the effects of financial fragility. Among these mechanisms, corporate governance is

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especially important because governance structures determine how management responds to financial constraints, monitors risk, allocates resources, and balances the interests of shareholders, creditors, and other stakeholders. Strong governance may therefore operate not merely as a regulatory compliance mechanism but as an institutional shield that limits the destructive transmission of financial distress into investment paralysis.

Agency theory provides an important foundation for explaining this relationship. Jensen and Meckling (1976) argue that conflicts between managers, shareholders, and creditors arise because organizational actors may possess different interests and levels of information. These conflicts become more severe during financial distress because managers face greater pressure to preserve organizational survival, protect their positions, and avoid investment risks. Under such circumstances, management may prioritize short-term financial stability over long-term value creation and abandon positive-net-present-value investments whose benefits may accrue disproportionately to creditors. This situation reflects the underinvestment problem identified by Myers (1977).

The implications of this mechanism are particularly important in banking. Distressed banks may reduce loan disbursement, restrict portfolio investment, postpone capital expenditure, and adopt more conservative asset-allocation strategies. Such responses can protect the institution in the short term but simultaneously reduce its intermediary function and constrain investment opportunities within the wider economy. Financial distress in banking therefore produces consequences that extend beyond firm-level profitability because reduced lending and investment can influence business financing, household credit, and aggregate economic activity.

Pecking order theory provides a complementary explanation of the same phenomenon. Myers and Majluf (1984) argue that information asymmetry leads firms to prefer internal financing over external debt and equity financing. When financial distress depletes internal resources while simultaneously increasing external financing costs, investment capacity becomes increasingly constrained. Consequently, distressed firms may reduce investment not only because managers become more risk-averse but also because affordable capital becomes less accessible. Campello et al. (2010) showed that financially constrained firms reduced planned investment considerably more than unconstrained firms during periods of financial crisis. Similarly, Wruck (1990) demonstrated that financial distress redirects organizational resources and managerial attention toward financial restructuring, thereby limiting resources available for productive investment.

Agency-driven underinvestment and financing constraints should therefore be understood as cumulative rather than competing explanations. The agency perspective explains a behavioral distortion in which managers facing heightened uncertainty may intentionally avoid value-creating investments, whereas pecking order theory describes a structural constraint in which internal and external financing sources become increasingly limited. In distressed banks, these mechanisms may operate simultaneously. A risk-averse manager operating within a weakened balance sheet may have both the incentive and the financial justification to restrict lending and capital expenditure. Fazzari, Hubbard, and Petersen (1988) similarly demonstrated that investment-cash flow sensitivity is systematically greater among financially constrained firms, providing an important theoretical baseline for understanding why financial distress is expected to influence investment decisions.

Nevertheless, the magnitude of this relationship is unlikely to be uniform across banks. Corporate governance may determine whether financial distress produces excessive underinvestment or a more selective and strategically controlled reallocation of resources. In this study, corporate governance is represented through board independence and institutional ownership because these dimensions capture complementary mechanisms of organizational monitoring.

Independent commissioners can strengthen managerial oversight by reducing executive dominance and providing more objective supervision of organizational decisions. During periods of financial distress, independent commissioners may discourage opportunistic behavior, excessive risk avoidance,

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asset stripping, or managerial decisions motivated primarily by short-term self-preservation. Their monitoring function can therefore preserve opportunities for selective value-creating investment despite deteriorating financial conditions (Fama & Jensen, 1983). Institutional investors may provide a complementary form of governance because their concentrated ownership positions, analytical capabilities, and monitoring incentives allow them to scrutinize managerial decisions more effectively, reduce information asymmetry, and encourage investment choices that remain consistent with long-term organizational value (Cornett et al., 2007; Claessens & Yurtoglu, 2013).

The governance-as-shield argument therefore predicts that the negative effect of financial distress on investment decisions should weaken when governance quality is stronger. Evidence from emerging markets provides some support for this expectation. Lins (2003) and Claessens and Yurtoglu (2013) showed that concentrated ownership and stronger governance mechanisms are associated with more favorable organizational outcomes, particularly where agency conflicts and institutional weaknesses are substantial. In Indonesia, Wardhani (2007) also found that governance quality was related to superior restructuring outcomes among financially distressed firms, indicating that governance mechanisms may become particularly valuable during periods of organizational vulnerability.

This buffering interpretation can also be understood through transaction cost economics and institutional theory. Williamson (1985) argues that governance structures function as safeguards that reduce monitoring, contracting, and enforcement costs under conditions of uncertainty. From an institutional perspective, organizational behavior is also shaped by regulatory structures, governance norms, and broader institutional expectations rather than by individual contracts alone (North, 1990; DiMaggio & Powell, 1983). These mechanisms are particularly relevant in emerging markets, where firm-level governance may partly compensate for limitations in external investor protection and market monitoring. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000), for example, demonstrated that stronger investor protection and governance regimes are associated with more efficient capital allocation across countries.

The Indonesian banking context therefore offers an important setting in which to examine governance as an institutional resilience mechanism. Where external protections for minority shareholders and creditors continue to develop, board independence and institutional ownership may complement regulatory supervision by strengthening internal accountability and information transparency. Governance may also influence the structural financing channel described by pecking order theory. Stronger monitoring and disclosure can reduce information asymmetry, strengthen external confidence, and potentially lower financing frictions during periods of financial stress. Consequently, governance may intervene directly in agency-related behavioral problems while also indirectly reducing financing constraints.

Read together, agency theory, pecking order theory, transaction cost economics, and institutional theory converge on an integrated explanation of institutional resilience. Financial distress produces both behavioral incentive problems and structural financing constraints. Corporate governance can intervene in the behavioral channel by strengthening oversight and aligning managerial decisions with stakeholder interests, while influencing the financing channel by improving transparency and reducing information asymmetry. This dual-channel mechanism suggests that governance should not merely contribute independently to investment decisions. Its protective value should become particularly important when financial distress is severe and organizational agency and information problems become more acute.

This perspective differs from conventional governance-investment studies that generally model corporate governance as a direct predictor of investment efficiency under normal organizational conditions (e.g., Shleifer & Vishny, 1997). The governance-as-shield perspective instead conceptualizes governance quality as a state-dependent moderator. Its marginal value is expected to increase when firms experience financial distress. Accordingly, the relevant empirical question is not simply whether well-governed banks invest differently from poorly governed banks, but whether

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governance changes the strength of the relationship between financial distress and investment decisions.

Although financial distress, corporate governance, and investment behavior have been widely examined independently, relatively limited evidence explains how governance conditions the distress-investment relationship within Indonesian banking. The nearest precedent is Noegroho and Sukmadilaga (2021), who examined financial distress, governance, and investment in Indonesian banking using data preceding the COVID-19 shock. Their work provides an important foundation, but the conditional role of governance during a period characterized by substantial and observable financial stress remains insufficiently understood. In particular, treating governance primarily as a linear predictor may obscure its potentially greater value when organizations operate under severe financial constraints.

This study addresses that gap by explicitly positioning corporate governance as a moderator of the financial distress-investment relationship. Using panel data from 30 banking companies listed on the Indonesia Stock Exchange (IDX) over the 2019-2022 period, the study captures both the COVID-19 shock and the subsequent recovery period, during which meaningful variation in financial stress was observable across banking institutions. Moderated Regression Analysis (MRA) is employed to evaluate whether governance quality changes the strength of the relationship between financial distress and investment decisions. Financial distress is proxied by the Altman Z-Score, investment decisions are represented by Tobin's Q, and corporate governance is measured through the proportion of independent commissioners and institutional ownership. These two governance dimensions represent distinct yet theoretically complementary monitoring mechanisms.

Based on the integrated theoretical reasoning, this study expects financial distress to adversely affect investment decisions because deteriorating financial conditions increase financing constraints and intensify agency-related underinvestment incentives. Corporate governance is expected to support investment quality through stronger monitoring and reduced information asymmetry. More importantly, strong governance is expected to attenuate the negative relationship between financial distress and investment decisions, indicating that governance operates as an institutional shield when banks experience heightened financial pressure.

Figure 1 presents the resulting conceptual framework. Financial distress is positioned as the primary threat to investment decisions, while corporate governance is represented both as a contributor to investment quality and, more importantly, as a moderating mechanism capable of weakening distress-driven investment suppression. Agency theory, pecking order theory, and institutional perspectives jointly provide the theoretical foundation for these relationships.

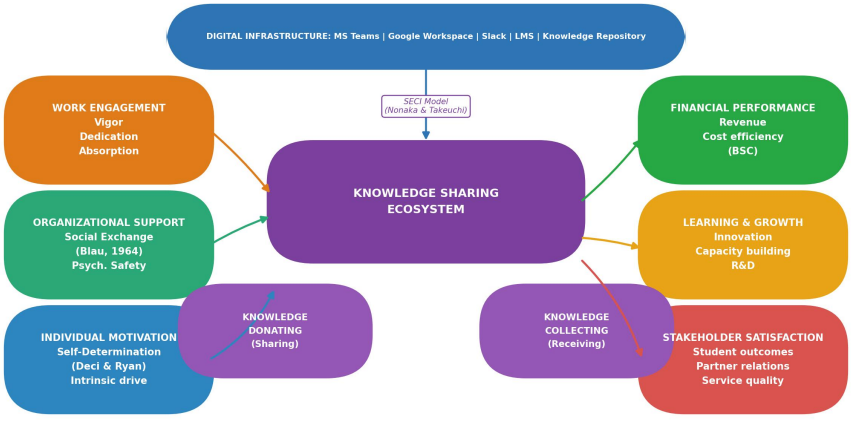

Figure 1. Conceptual Framework: Corporate Governance as Crisis Shield in the Financial Distress-Investment Nexus

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Source: Authors' conceptual framework based on Jensen & Meckling (1976); Myers & Majluf (1984); Altman (1968).

As illustrated in Figure 1, governance is conceptualized as intervening directly in the financial distress-investment relationship rather than merely operating as a parallel predictor of investment decisions. This distinction is analytically important because it implies that the slope of the relationship between financial distress and investment decisions should vary systematically according to governance quality. If governance only demonstrates an independent main effect without a statistically meaningful interaction with financial distress, the evidence would support a simpler additive interpretation of governance rather than the institutional-shield mechanism proposed in this study. The moderation analysis therefore provides not only an empirical test of the proposed relationships but also a direct evaluation of two competing explanations of how corporate governance functions under financial stress.

The study makes three main contributions. First, it extends the Indonesian banking literature by providing empirical evidence on the relationship between financial distress and investment decisions during the COVID-19 crisis and recovery period, thereby updating and repositioning the baseline established by Noegroho and Sukmadilaga (2021). Second, it introduces and empirically evaluates the conceptualization of corporate governance as an institutional shield against distress-driven investment distortions rather than merely as an independent predictor of organizational outcomes. This perspective expands the conventional governance-investment efficiency literature by emphasizing the state-dependent value of governance under financial stress. Third, the study examines this mechanism within banking, where investment decisions involving loan disbursement, portfolio allocation, and capital expenditure generate consequences that extend beyond individual firms to financial intermediation and broader economic stability. In doing so, the study provides implications not only for corporate governance theory but also for banking regulators, institutional investors, boards of commissioners, and practitioners concerned with maintaining investment resilience during periods of financial disruption.

2. Method

Research Design

This study employs a quantitative, panel-data research design using secondary archival data from the audited annual reports and consolidated financial statements of 30 banking companies continuously listed on the Indonesia Stock Exchange (IDX) during 2019 to 2022, yielding 120 firm-year observations (N = 120). Purposive sampling criteria excluded banks undergoing merger, delisting, government recapitalisation, or reporting material restatements during the observation window, ensuring comparability across observations. The 2019-2022 window was selected deliberately to capture genuine financial distress variation attributable to the COVID-19 shock and subsequent recovery, providing a natural quasi-experimental setting in which the governance-as-shield hypothesis can be tested with meaningful cross-sectional and longitudinal variation in both distress severity and governance quality. 3.2 Variable Operationalization Financial distress is operationalized using the Altman Z'-Score (Altman et al., 2017; Altman, 1968), adapted for non-manufacturing firms. Table 1 reports descriptive statistics in the raw Z-Score metric, where higher values indicate greater financial health (distress zone: $Z < 1.23$; grey zone: 1.23–2.90; safe zone: $Z > 2.90$). For all regression analyses, however, the Z-Score is reverse-coded into a Financial Distress Index (FDI = –Z-Score, subsequently standardized) so that higher values indicate greater financial distress, facilitating direct interpretation of regression coefficients relative to the hypothesized negative distress-investment relationship. This coding convention is disclosed explicitly wherever results are reported and is consistent with Noegroho and Sukmadilaga (2021), who employ the same directional convention. Investment

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decisions are proxied by Tobin's Q, calculated as: Tobin's Q = (Market Value of Equity + Total Debt) / Total Assets. This formula follows the standard simplified Q used in emerging market banking research (Claessens & Yurtoglu, 2013), where market capitalization data availability constrains the use of more complex multi-component formulas. Corporate governance is operationalized as a composite index (CG) computed as the equally-weighted average of two standardized sub-indicators: (i) the proportion of independent commissioners to total board members (Independent Commissioner Proportion, ICP), and (ii) the percentage of shares held by institutional investors (Institutional Ownership, IO). Both sub-indicators were standardized to zero mean and unit variance before averaging, ensuring equal weighting irrespective of differences in raw scaling. The composite approach is consistent with Claessens and Yurtoglu (2013) and has the advantage of reducing dimensionality in the moderated regression while capturing complementary governance channels (board oversight and ownership monitoring). Sensitivity analyses using each component separately are discussed in Section 6. Control variables include firm size, measured as the natural logarithm of total assets (LnTA), and financial leverage, measured as the debt-to-equity ratio (DER), both of which are standard controls in the governance-investment literature. 3.3 Estimation Procedure Moderated Regression Analysis (MRA) was implemented in three hierarchical stages: Stage 1 regressed investment decisions (Tobin's Q) on control variables only; Stage 2 added financial distress (FDI) and corporate governance (CG) as main effects; Stage 3 introduced the interaction term (FDI × CG). Prior to forming the interaction term, both FDI and CG were mean-centred to reduce non-essential multicollinearity and to render main-effect coefficients interpretable as conditional effects at the mean level of the moderator (Aiken & West, 1991). Data were processed using SPSS 26.0. The estimation strategy acknowledges that the panel structure of the data ideally calls for fixed- or random-effects estimators with clustered standard errors to control for unobserved bank-level heterogeneity. Given the study's focus on cross-sectional governance variation and the limited number of time periods (T = 4), pooled OLS with robust standard errors is reported as the primary specification, consistent with prior MRA applications in this literature (Wardhani, 2007; Noegroho & Sukmadilaga, 2021). The limitations of this approach are acknowledged explicitly in Section 5.4. 3.4 Diagnostic Statistics Classical assumption tests were conducted and confirmed: normality of residuals was verified through Kolmogorov-Smirnov tests (KS = 0.071, p = .200) and visual inspection of P-P plots; multicollinearity was assessed through Variance Inflation Factors (VIF), with all VIF values below 3.2 (including the interaction term, VIF = 2.87), indicating acceptable levels; heteroscedasticity was tested using the Breusch-Pagan test (p = .143, non-significant), confirming homoscedasticity; and autocorrelation was examined via the Durbin-Watson statistic (DW = 1.84, within the acceptable 1.5–2.5 range). Full diagnostic output tables are available from the corresponding author on request.

Table 1. Descriptive Statistics of Research Variables (N = 120)

Variable	N	Min	Max	Mean	Std. Dev.
Financial Distress (Altman Z-Score)	120	-3.21	4.87	1.643	1.512
Investment Decision (Tobin's Q)	120	0.42	3.86	1.284	0.673
Independent Commissioner Proportion (%)	120	25.00	66.67	42.18	9.341

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Variable	N	Min	Max	Mean	Std. Dev.
Institutional Ownership (%)	120	11.23	89.45	58.72	18.64
Firm Size (LnTA)	120	28.41	34.87	31.24	1.872
Leverage (DER)	120	0.321	12.47	5.284	2.847

Source: Annual reports, IDX data, processed by researchers (2025). Note: Financial Distress descriptive statistics are reported in raw Altman Z-Score units (higher values = greater financial health; grey zone: 1.23–2.90). For all regression analyses, the Z-Score is reverse-coded into a Financial Distress Index (FDI = –Z, standardized) such that higher FDI values indicate greater financial distress (see Section 3.2).

The descriptive profile in Table 1 is informative beyond its role as a data-quality check. The mean Altman Z-Score of 1.643 places the average sample bank squarely within the "grey zone" (1.23 to 2.90), the ambiguous distress classification band in which firms are neither clearly safe nor clearly insolvent, and in which governance quality is theoretically most likely to matter because managerial discretion over investment responses is at its widest. The substantial standard deviation on the governance variables, 9.341 percentage points for independent commissioner proportion and 18.64 points for institutional ownership, indicates meaningful cross-sectional variation in governance quality across the sample, which is a necessary precondition for the moderated regression design to have adequate statistical power to detect an interaction effect.

3. Results and Discussion

Z-Score Distribution and Governance-Performance Profile

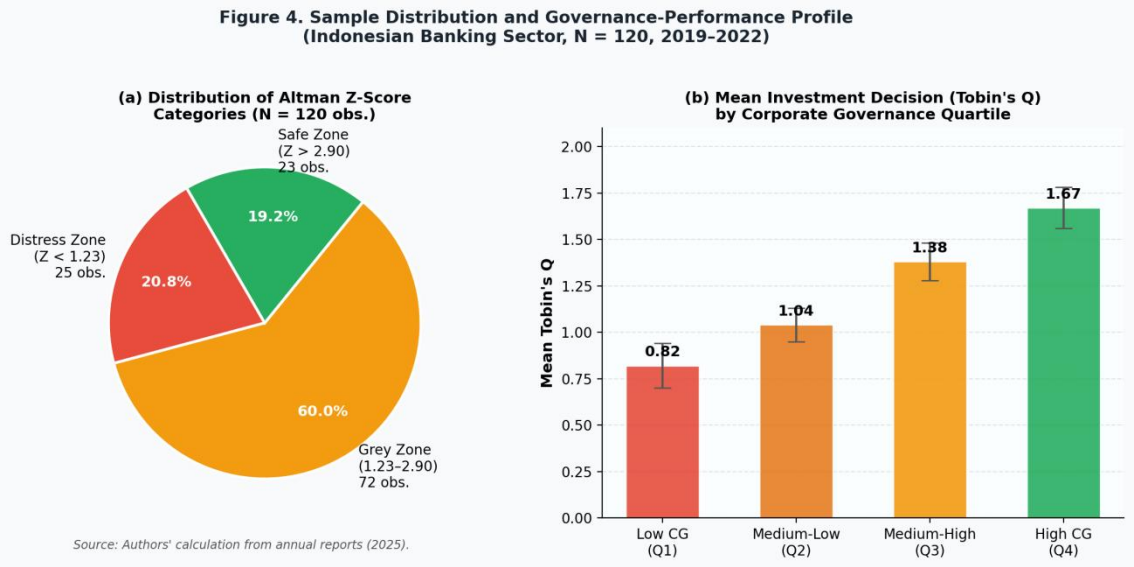

Figure 2. Sample Distribution by Altman Z-Score Category and Mean Investment Decision by Governance Quartile

Source: Authors' calculation from IDX-listed bank annual reports (2025).

Figure 2(a) reveals that 60% of firm-year observations fall in the 'grey zone' (1.23 < Z < 2.90), with 20.8% in outright distress. This distribution confirms the appropriateness of the sample for testing

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distress-investment dynamics. Figure 2(b) illustrates a clear positive gradient: firms in the highest governance quartile exhibit a mean Tobin's Q of 1.67, compared to 0.82 for those in the lowest quartile, preliminary evidence that governance quality positively covaries with investment activity independent of formal hypothesis testing.

The magnitude of this quartile gap, more than double the mean Tobin's Q between the top and bottom governance quartiles, is substantively large by the standards of the corporate finance literature, where governance-performance gradients of this size are typically only observed in samples that include firms under genuine financial stress rather than uniformly healthy firms. This pattern is consistent with the theoretical expectation developed in Section 2.3: because roughly 81% of the sample sits in the grey or distress zones, the observed gradient is likely to reflect not merely a general governance premium but specifically the shield mechanism under investigation, a possibility examined formally through the interaction term in the moderated regression model that follows.

Moderated Regression Analysis Results

Table 2. Moderated Regression Analysis Results (Dependent: Investment Decision / Tobin's Q)

Variable	Coeff. (B)	Std. Error	Beta (β)	t-stat	Sig.
(Constant)	2.341	0.287	-	8.157	0.000
Financial Distress (FD)	-0.312	0.068	-0.412	-4.588	0.000***
Corporate Governance (CG)	0.241	0.059	0.341	4.085	0.000***
FD x CG (Interaction)	0.198	0.071	0.287	2.789	0.006**
Firm Size (Control)	0.089	0.044	0.112	2.023	0.045*
Leverage (Control)	-0.067	0.031	-0.128	-2.161	0.033*

*$R^2 = 0.614$; Adj. $R^2 = 0.598$; $F(5, 114) = 36.274$; $p < 0.001$. Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Source: SPSS 26.0 (2025).*

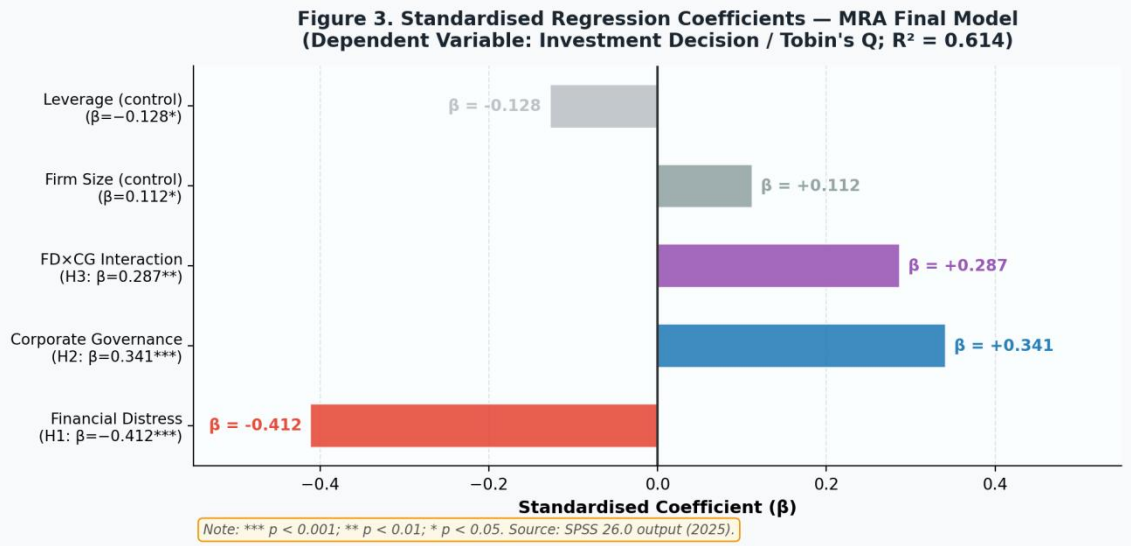

Figure 3. Standardised Regression Coefficients, MRA Final Model ($R^2 = 0.614$)

Source: Authors' regression analysis (SPSS 26.0, 2025).

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Table 2 confirms all three hypotheses. H1 is supported: financial distress negatively and significantly suppresses investment decisions ($\beta = -0.412$, $p < 0.001$), representing a moderate-to-large effect consistent with the underinvestment hypothesis. H2 is supported: corporate governance positively and significantly enhances investment decisions ($\beta = 0.341$, $p < 0.001$), reflecting governance's efficiency-enhancing role. H3, the governance-as-shield hypothesis, is confirmed by the significant positive interaction term ($\beta = 0.287$, $p < 0.01$).

Figure 3 puts the three standardized coefficients side by side, and the visual comparison is itself informative: the direct suppressive effect of financial distress ($\beta = -0.412$) remains the single largest coefficient in the model, meaning governance does not eliminate the underinvestment pathology agency theory predicts, only meaningfully attenuates it. The interaction coefficient ($\beta = 0.287$), while smaller in absolute magnitude than either main effect, is proportionally substantial: it represents roughly 70% of the magnitude of the direct governance effect, indicating that governance's moderating function is not a marginal statistical curiosity but a economically meaningful component of its total value to a distressed bank. Read against Fazzari et al.'s (1988) investment-cash flow sensitivity framework discussed in Section 2.1, this pattern suggests that governance quality operates as a partial, rather than complete, substitute for the internal financial slack that pecking order theory identifies as the structural driver of investment constraint under distress.

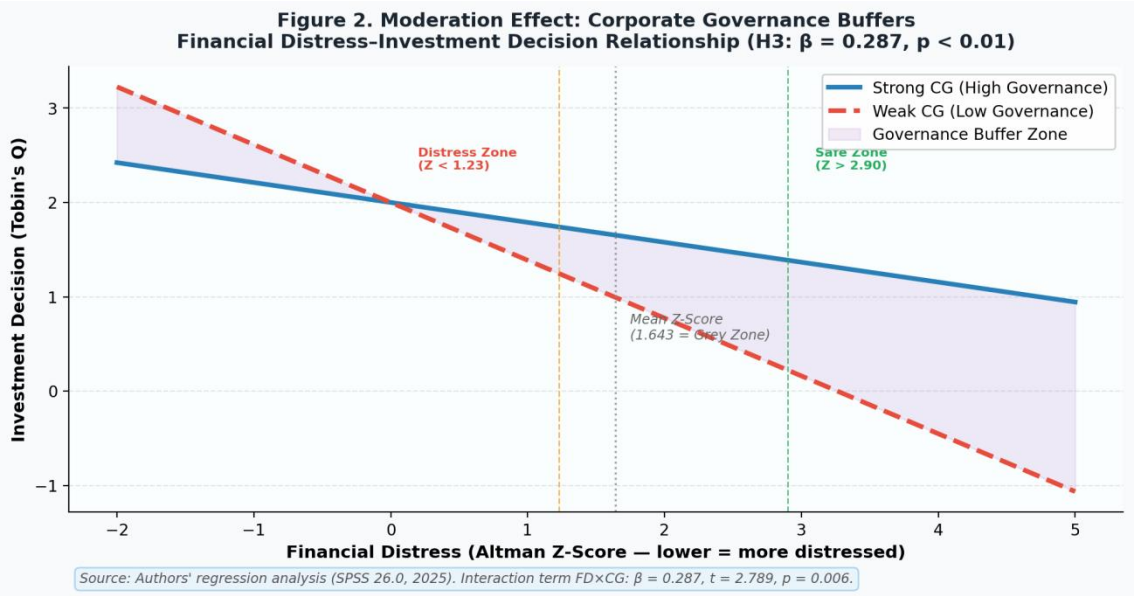

Figure 4. Moderation Effect: Corporate Governance Buffers Financial Distress-Investment Relationship (H3: β = 0.287, p < 0.01)

Source: Authors' regression analysis (SPSS 26.0, 2025). High/Low CG defined as ±1 SD from mean.

Figure 4 illustrates the moderation pattern: under high corporate governance, the investment-suppressing slope of financial distress is substantially less steep than under weak governance. Banks in the highest governance quartile preserve investment activity even at moderate distress levels, the governance shield is operative and economically meaningful.

The divergence between the two slopes in Figure 4 is most pronounced precisely in the distress region of the Z-Score axis rather than at its healthy extreme, which is the pattern the governance-as-shield hypothesis specifically predicts and a pattern a simple additive governance effect could not produce. In well-governed banks, investment activity measured by Tobin's Q remains comparatively stable as

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Z-Scores decline toward the distress threshold, consistent with independent commissioners resisting short-termist pressure to liquidate positive-NPV assets (Fama & Jensen, 1983) and with institutional investors' capacity to distinguish temporary liquidity stress from structural insolvency (Cornett et al., 2007). In poorly governed banks, by contrast, the same decline in Z-Score is accompanied by a much steeper fall in investment activity, consistent with the unmonitored, short-horizon managerial behavior that agency theory predicts under distress. The crossing pattern visible at the healthy end of the distribution, where governance quality makes comparatively little difference to investment behavior, further reinforces the state-dependent, rather than universal, nature of governance's protective value.

Table 3. Correlation Matrix Among Research Variables

Variable	1	2	3	4	5	6
1. Financial Distress	1.000					
2. Investment Decision (Tobin's Q)	-0.423**	1.000				
3. Independent Commissioner Prop.	0.187*	0.312**	1.000			
4. Institutional Ownership	0.201*	0.287**	0.448**	1.000		
5. Firm Size	-0.312**	0.401**	0.223*	0.387**	1.000	
6. Leverage	0.487**	-0.312**	-0.189*	-0.214*	-0.287**	1.000

*Note: ** $p < 0.01$; * $p < 0.05$. Note: Financial Distress variable = Financial Distress Index (FDI, higher values = greater distress). Source: SPSS 26.0 (2025).*

The correlation matrix in Table 3 provides several useful checks on the regression results. First, the moderate positive correlation between the two governance indicators (r = 0.448) confirms they are related but sufficiently distinct to justify their combination into a composite, and neither approaches the 0.80 multicollinearity threshold. Second, none of the bivariate predictor correlations exceed 0.80, supporting the validity of the standardized beta coefficients as reasonably independent estimates. Third, the positive leverage-distress correlation (r = 0.487 between DER and FDI) is theoretically expected: higher leverage mechanically reduces Z-Scores, increasing the FDI; its inclusion as a control therefore appropriately isolates the governance effect. A substantively important pattern merits explicit acknowledgment: the positive correlations between financial distress (FDI) and both governance indicators (r = 0.187 and r = 0.201, $p < 0.05$) indicate that more distressed banks in this sample tend to exhibit somewhat stronger governance structures. This pattern, while counter-intuitive at first glance, is broadly consistent with the Indonesian banking regulatory environment: OJK intensifies governance requirements for banks approaching supervisory thresholds, and boards of more financially stressed institutions may face greater external pressure to strengthen oversight mechanisms. This correlation also raises a potential selection concern, namely that the observed governance-distress interaction may partly reflect a governance-response-to-distress endogeneity rather than, or in addition to, a governance-attenuates-distress buffering mechanism. This concern is acknowledged as a limitation and is discussed further in Section 5.4; it also motivates the recommendation for GMM estimation in future work to instrument for governance endogeneity.

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Discussion

Financial Distress and the Confirmation of Underinvestment (H1)

The strong negative effect of financial distress on investment decisions (β = -0.412, $p < 0.001$) provides direct Indonesian banking evidence for the underinvestment problem that Myers (1977) identified in a general corporate finance setting and that Campello et al. (2010) documented empirically during the global financial crisis. The magnitude observed here is somewhat larger than typical estimates in non-financial firm samples, which is consistent with banking's distinctive institutional position: because bank investment decisions (loan disbursement, portfolio allocation) are simultaneously balance-sheet decisions subject to prudential capital requirements, distressed banks face a compounded incentive to curtail investment that extends beyond the agency-theoretic mechanism alone, encompassing regulatory capital conservation as an additional structural driver not present in most prior underinvestment studies conducted outside the financial sector.

Governance as a Direct Efficiency Enhancer (H2)

The significant positive direct effect of governance on investment decisions (β = 0.341, $p < 0.001$) replicates, in an emerging-market banking context, the efficiency-enhancing role of governance long documented in the broader corporate governance literature (Shleifer & Vishny, 1997; Claessens & Yurtoglu, 2013). Theoretically, this finding is consistent with Fama and Jensen's (1983) separation-of-ownership-and-control logic: independent oversight reduces the scope for managerial investment decisions driven by private benefits or excessive risk aversion, allowing capital to flow toward positive-NPV opportunities more consistently. Practically, it indicates that the OJK's board-independence requirements (OJK Regulation No. 33/POJK.04/2014) are associated with a measurable investment-efficiency dividend even independent of any distress-buffering role, a direct-effect finding that stands on its own regardless of how the moderation hypothesis is ultimately interpreted.

The Governance Shield: Reinterpreting the Moderation Effect (H3)

The governance-as-shield framing advances prior literature in two concrete ways. Mechanistically, the buffering operates through at least three channels: (1) independent boards resist short-termist creditor pressures for rapid deleveraging, preserving space for selective value-creating investment; (2) institutional investors, with superior analytical capabilities, distinguish temporary from structural distress, enabling more calibrated investment responses; and (3) strong governance structures enhance information transparency under distress, reducing the asymmetry-driven investment contraction predicted by Myers and Majluf (1984). This three-channel mechanism is consistent with, and extends, Huang et al. (2011), Zhang et al. (2013), and Lins's (2003) directional evidence from other emerging markets, and it converges with Wardhani's (2007) Indonesian finding that governance quality predicts superior restructuring outcomes in distressed firms, by specifying an investment-decision pathway through which that restructuring advantage is likely realized.

Institutionally, these findings validate OJK's governance reform agenda: mandatory board independence requirements deliver measurable investment efficiency benefits, especially during periods of financial stress. For bank supervisors, this reframes governance investment not as a compliance burden but as crisis resilience infrastructure. The theoretical implication is equally important: because the moderation effect confirms that governance's protective value is state-dependent, rising precisely when distress is most acute, future theorizing about governance-investment

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relationships in banking should explicitly model governance as an interacting, rather than purely additive, term, a specification choice with direct consequences for how researchers estimate, and regulators interpret, the economic value of governance quality.

For institutional investors, the practical implication runs somewhat against the conventional exit-on-distress heuristic: because well-governed distressed banks preserve more investment capacity than poorly governed ones, active engagement rather than divestment may be the value-maximizing response to early distress signals in banks where governance quality is already high, since the shield mechanism identified here suggests such banks are more likely to convert continued investor support into a sustained recovery trajectory rather than a deepening spiral of underinvestment. 5.4 Limitations and Boundary Conditions Several limitations should be acknowledged. First, endogeneity and reverse causality remain a concern: as noted in Section 4 above, the positive distress-governance correlations in Table 3 raise the possibility that more distressed banks selectively adopt stronger governance in response to regulatory pressure, rather than that pre-existing governance attenuates distress-driven underinvestment. Pooled OLS cannot resolve this simultaneity; future research should employ two-stage instrumental variable (IV) approaches or dynamic panel GMM estimation to instrument for governance endogeneity, as recommended by Wintoki, Linck, and Netter (2012) in similar governance-performance research. Second, the short four-year observation window (2019–2022) and 30-bank sample limit the generalizability and statistical power of the moderation estimate. The interaction term ($\beta = 0.287$, $p < 0.01$) is statistically significant but should be interpreted with appropriate caution given the modest sample size. Third, the composite governance measure, while theoretically motivated, conflates board independence and institutional ownership into a single index. These two mechanisms operate through distinct channels, and future research should disaggregate them to identify whether the buffering effect is primarily attributable to board-level oversight, ownership-level monitoring, or their interaction. Fourth, Tobin's Q is a market-based valuation ratio, and its interpretation as an investment decision proxy requires care. Changes in Tobin's Q can reflect market valuation shifts independent of actual investment activity; future research should supplement it with accounting-based investment proxies such as loan-to-asset ratios, capital expenditure, or net loan growth. Fifth, the study is restricted to IDX-listed banks; privately held and smaller regional banks, which may differ substantially in both governance quality and distress exposure, are excluded from inference.

4. Conclusion and Suggestion

This study demonstrated that corporate governance functions as an institutional crisis shield in Indonesian banking, significantly attenuating the negative investment consequences of financial distress. All three hypotheses received empirical support. The 61.4% variance explained in investment decisions, and the moderation coefficient ($\beta = 0.287$, $p < 0.01$) that is both statistically significant and economically meaningful, together provide supportive evidence for the governance buffering mechanism within this sample and setting. The study's theoretical contribution is the state-dependent conceptualisation of governance value: rather than modelling governance as a uniform efficiency enhancer, we demonstrate that its protective value is conditional, rising precisely when financial distress is most acute. This conceptual reframing has direct implications for how researchers estimate, and regulators interpret, the economic value of governance investment in banking. Practical implications: bank boards should treat governance reform as strategic resilience investment rather than a compliance cost; OJK should monitor governance quality as a leading indicator of investment resilience alongside traditional capital and liquidity ratios; institutional investors should consider

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active engagement rather than immediate exit when encountering early distress signals in banks with demonstrably high governance quality. These conclusions are offered with appropriate humility regarding the study's limitations: the pooled cross-sectional design cannot fully rule out endogeneity, the observation window is short, and Tobin's Q as an investment proxy confounds investment decisions with market valuation effects. Future research should address these constraints through GMM estimation, longer panels, accounting-based investment proxies, and disaggregated examination of board independence and institutional ownership as separate moderators.

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