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# Managerial Ownership, Audit Quality, and Financial Performance: The Moderating Role of Agency Costs in Indonesian Listed Banks

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**Abstract:** This study investigates how managerial ownership and audit quality relate to the financial performance of banks listed on the Indonesia Stock Exchange, and examines whether agency costs measured through the Operating Expense Ratio moderate both relationships. Drawing on panel data from 19 listed banks across the 2022–2024 period (57 firm-year observations) and estimating a Random Effects Model through Moderated Regression Analysis, the results indicate that neither managerial ownership nor audit quality (proxied by affiliation with a Big Four accounting firm) exerts a statistically significant direct effect on Return on Assets. Agency costs, however, emerge as a significant moderator in both relationships, though the direction of that moderation differs: agency costs amplify the influence of managerial ownership on financial performance while dampening the influence of audit quality. Taken together, these results imply that governance mechanisms do not enhance bank profitability uniformly; rather, their impact hinges on how efficiently a bank operates. The study contributes to agency theory by reframing agency costs as a boundary condition rather than a mere direct predictor of performance, offering a more unified account of why prior governance–performance findings have been inconsistent. From a practical standpoint, the results suggest that banks under heavier operating-cost pressure stand to gain more from managerial ownership incentives, whereas the payoff from audit-quality investments is greatest for banks that already operate efficiently.

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## INTRODUCTION

Banking-sector stability continues to underpin sustainable economic growth, particularly as banks navigate recurring global financial shocks and geopolitical uncertainty that have intensified since the 2008 crisis (Febriansyah & Adlan, 2025). Because banks function as intermediaries that channel funds between surplus and deficit units, their financial performance signals more than corporate-level profitability it reflects the resilience of the broader financial system. Solid, sustained performance is thus central to sustaining the confidence of investors, creditors, and regulators in a bank's prospects (Triana et al., 2024; Saputra, 2022). While metrics such as Return on Assets, Return on Equity, and Net Profit Margin remain the standard yardsticks of profitability and efficiency (Hery, 2017), the deeper scholarly puzzle is not how performance should be measured but which internal mechanisms allow banks to sustain it amid volatile operating conditions a question that points squarely at the governance structures shaping managerial decision-making.

Corporate governance is accordingly framed as the chief instrument for disciplining managerial behavior and, by extension, safeguarding financial performance. Rather than functioning merely as a compliance checkbox, governance is meant to close the gap between how decisions get made and whose interests they ultimately serve, thereby limiting the room for value-destroying conduct. Given that banks operate under close regulatory scrutiny and face pronounced information asymmetry, the

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quality of their governance arguably carries heavier performance consequences than it would in more loosely regulated sectors. Two mechanisms dominate this discussion: aligning internal interests through ownership structure, and providing external verification through audit oversight. Theory suggests that both mechanisms operating together should reinforce prudent resource allocation, yet how strongly that plays out in practice remains an empirical question on which the evidence has proven far less settled than theory would predict.

Managerial ownership is the governance mechanism most closely tied to the interest-alignment logic that Jensen and Meckling (1976) advanced: giving managers an equity stake ties their personal financial outcomes to firm performance, curbing the temptation toward opportunistic behavior. Under this logic, managers who hold shares should internalize the costs of value-destroying decisions and allocate resources more carefully, ultimately lifting profitability. Yet the empirical record does not consistently bear this out. Some studies report a positive, if statistically weak, association between managerial ownership and Return on Assets among banks on the Indonesia Stock Exchange (Meirina & Yudhawati, 2020), whereas others document a negative relationship in different regulatory settings for instance, commercial banks in Kenya (Kirimi et al., 2022) and listed firms in Jordan (Alkurdi et al., 2021). Such divergence suggests that the interest-alignment mechanism does not operate uniformly across institutional contexts, and that its effectiveness likely hinges on factors beyond the sheer proportion of shares management holds.

A comparable inconsistency surfaces in the audit-quality literature, the second governance mechanism most frequently examined as a form of external oversight. Audit quality captures an auditor's capacity to detect and report material misstatements in line with professional standards (DeAngelo, 1981; Indonesian Institute of Public Accountants, 2018; Effendi et al., 2025); auditors affiliated with the Big Four accounting firms are commonly used as a proxy for higher quality, on the theory that they are better positioned to curb earnings manipulation and bolster the credibility of financial reporting. Several studies lend support to this view: firms audited by Big Four accounting firms have shown significantly higher Return on Assets in Nigeria (Ado et al., 2020; Ugwu et al., 2020), and audit quality has been linked to incremental performance gains in Ghana (Angsoyiri, 2021). Yet audit oversight does not reliably translate into measurable profitability gains, especially where audit-committee mechanisms show inconsistent effects on the efficiency and solvency of conventional and sharia banks alike (Haddad et al., 2021). Put differently, audit quality appears to bolster the credibility of reported figures without necessarily lifting the underlying operational performance that ratios such as Return on Assets are meant to capture.

Evidence on both managerial ownership and audit quality thus converges on the same conclusion: governance mechanisms improve financial performance conditionally, not automatically. If the effectiveness of interest alignment through ownership and verification through audits both hinge on the institutional and organizational setting in which they operate, then explaining governance effectiveness requires moving past direct-effect models to identify the conditions under which these mechanisms succeed or fail. Agency theory itself points to where such conditions might be found not in the governance structure per se, but in the magnitude of the agency costs that governance is meant to contain.

Agency costs comprising monitoring costs, bonding costs, and residual loss (Jensen & Meckling, 1976) represent the economic toll of unresolved conflicts of interest between principals and agents. In banking, this toll is commonly captured through the Operating Expense Ratio (OER), where a higher ratio signals both weaker operational efficiency and greater agency costs stemming from managerial discretion over operating expenditures (Ang et al., 2000; Akbar et al., 2026). Viewed this way, agency costs are not simply another variable sitting alongside governance mechanisms; they characterize the organizational conditions under which those mechanisms operate. When agency costs are low, ownership-based interest alignment and audit-based verification can function as designed and reinforce each other's contribution to performance. When agency costs run high, managerial discretion widens, and the same two mechanisms may either lose their grip on opportunistic behavior or, alternatively, be spurred into working harder as efficiency pressures mount. These two possibilities position agency costs as a boundary condition capable of shaping not just the strength but the direction of governance effectiveness offering a plausible account for the inconsistencies noted above.

This theoretical link, however, has yet to receive adequate empirical scrutiny. Research on governance and agency costs has largely followed two separate tracks: one treats agency costs as a direct predictor or mediating channel for financial performance (Nurmalasari & Maradesa, 2021; Hafsyah et al., 2022; Andesta & Iryanto, 2022); the other examines whether governance and audit quality reduce agency costs, rather than the reverse. The possibility that agency costs moderate strengthening or weakening the governance–performance link has rarely been tested explicitly, particularly within banking. This gap is compounded by the fact that the direction and significance of managerial ownership's and audit quality's effects continue to vary across countries and industries (Faqih et al., 2024; Wardhani, 2019; Candy et al., 2024), underscoring the need to pin down the contingent factors that might reconcile these mixed results. Studies that jointly examine managerial ownership, audit quality, and agency costs within Indonesia's tightly regulated, ownership-concentrated banking sector remain scarce.

To address this gap, the present study departs from the conventional direct-effect framework by treating agency costs proxied by the Operating Expense Ratio as a boundary condition that governs how effectively managerial ownership and audit quality translate into financial performance. Rather than modeling agency costs as a stand-alone predictor, this research incorporates them as a moderating variable tested consistently across both governance–performance relationships and interpreted through a single theoretical lens. This dual-moderation framework offers a more coherent account of why governance mechanisms that appear theoretically sound can still produce inconsistent empirical results: their effectiveness is not universal but conditioned by each bank's level of operational efficiency.

By treating agency costs as a contingency factor rather than a stand-alone construct, this study extends agency theory beyond its conventional focus on monitoring and alignment costs, while also drawing on signaling theory, stakeholder theory, and stewardship theory to explain why governance signals and monitoring functions produce different performance outcomes depending on an organization's circumstances. In practical terms, the findings are intended to help bank management pinpoint the conditions under which governance investments pay off most, to help investors and auditors interpret ownership and audit signals in light of a bank's operational efficiency, and to give regulators a more contextualized basis for setting governance and audit standards across banks with differing efficiency profiles. This synthesis yields four testable propositions, spanning the direct effects of managerial ownership and audit quality on financial performance and the moderating role of agency costs in both relationships, as depicted in the conceptual framework in **Figure 1.**

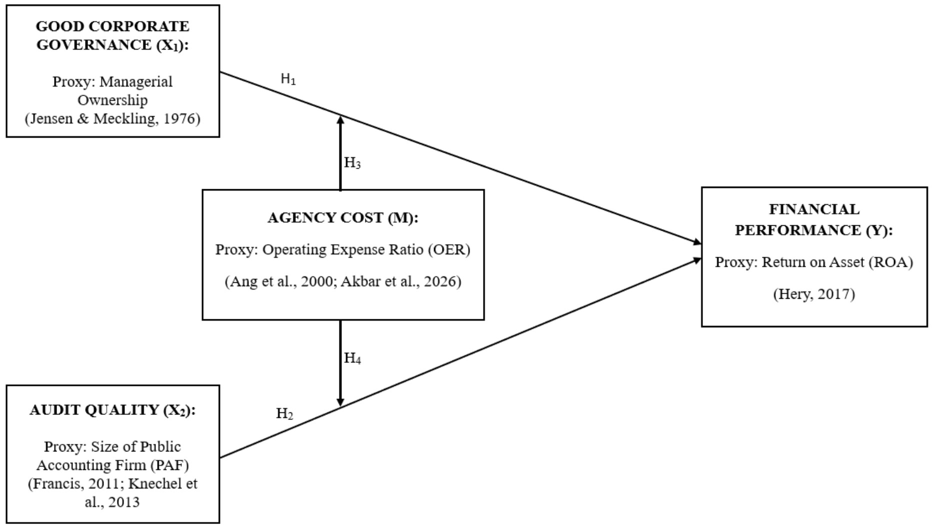


**Figure 1.** Conceptual Framework

The interest-alignment argument advanced by Jensen and Meckling (1976) holds that managerial share ownership discourages opportunistic behavior because managers then bear the financial consequences of decisions that harm firm value a logic that should push managers toward more prudent, shareholder-aligned resource management. Prior findings on the strength of this relationship are mixed: Meirina and Yudhawati (2020) found a positive but statistically insignificant effect among banks listed on the Indonesia Stock Exchange, while Kirimi et al. (2022), studying Kenyan commercial banks, and Alkurdi et al. (2021), studying listed Jordanian firms, both reported a negative relationship. This spread of findings suggests that the effectiveness of managerial ownership as an interest-alignment mechanism depends on the scale of ownership and the regulatory character of the industry in question. Even so, the interest-alignment argument remains theoretically worth testing within Indonesian banking. On this basis, the first hypothesis is proposed as follows.

**H1:** Managerial Ownership affects Financial Performance. Audit quality refers to the likelihood that an auditor detects and reports material misstatements in accordance with professional standards (DeAngelo, 1981), functioning as an independent monitoring mechanism that narrows the information gap between management and shareholders (Indonesian Institute of Public Accountants, 2018). Auditors affiliated with Big Four accounting firms are theorized to bring superior resources, reputation, and quality-control systems relative to non-Big Four firms, better positioning them to restrain opportunistic managerial behavior and strengthen the reliability of information disclosed to the market. This argument finds empirical backing in Ado et al. (2020), studying listed Nigerian companies, and Ugwu et al. (2020), studying Nigerian commercial banks between 2011 and 2017, both of which found a significant positive association between Big Four affiliation and Return on Assets, as well as in Angsoyiri (2021), who reported an incremental effect of audit quality on firm performance in Ghana. Building on this evidence, the second hypothesis is stated as follows.

**H2:** Audit Quality affects Financial Performance. Agency costs encompassing monitoring costs, bonding costs, and residual loss (Jensen & Meckling, 1976) are proxied in this study by the Operating Expense Ratio (OER), where a higher ratio reflects weaker operational efficiency and greater agency costs arising from unproductive managerial discretion (Ang et al., 2000; Akbar et al., 2026). Within agency theory, the effectiveness of managerial ownership as an alignment mechanism is expected to depend on the surrounding agency-cost conditions: when agency costs are low, managers tend to allocate resources efficiently, allowing ownership to translate into stronger financial performance; when agency costs are high, ownership incentives interact differently with the efficiency pressures management faces. Empirical work reinforces the relevance of agency costs as a contingency factor of this kind Ahmed et al. (2023) confirmed that agency costs significantly moderate the link between managerial decisions and firm performance; Khan et al. (2020), studying firms on the Shanghai Stock Exchange, found that governance quality and ownership concentration interact with agency costs in shaping performance; and Shaqqour (2020), studying banks on the Amman Stock Exchange, highlighted the relationship between the operating expense ratio, as a proxy for agency costs, and governance mechanisms such as board size. Accordingly, the third hypothesis is formulated as follows.

**H3:** Agency Costs moderate the relationship between Managerial Ownership and Financial Performance. As an external monitoring device, audit quality works to narrow information asymmetry and limit opportunistic managerial conduct (Indonesian Institute of Public Accountants, 2018; Effendi et al., 2025). Yet this monitoring function can be undermined when agency conflict intensifies. Ajaegbu and Mmayie (2025) note that under conditions of heightened agency conflict, audit systems including internal audit often struggle to carry out their monitoring role effectively, a pattern corroborated by Haddad et al. (2021), who found that audit-committee mechanisms do not consistently affect the efficiency and solvency of conventional and Islamic banks alike. Within the Indonesian banking context specifically, Safitri and Sudjono (2021) showed that the Operational Cost to Operational Income (BOPO) ratio affects bank performance through credit risk as a mediating channel, while Ekadjaja and Ekadjaja (2020) found that corporate governance and financial risk, including BOPO, shape banking performance in Indonesia. Collectively, these findings point to the operating expense ratio as a meaningful indicator of the agency costs that condition how strongly audit quality supports bank financial performance. Based on this reasoning, the fourth hypothesis is formulated as follows.

**H4:** Agency Costs moderate the relationship between Audit Quality and Financial Performance. Guided by these four hypotheses, this study sets out to examine how managerial ownership and audit quality affect the financial performance of banks listed on the Indonesia Stock Exchange, and to test whether agency costs proxied by the Operating Expense Ratio moderate both relationships. The analysis covers banking-sector firms listed on the Indonesia Stock Exchange over 2022–2024, a window selected for its relevance to the strengthening of governance and audit practices in Indonesia's post-pandemic banking sector. In doing so, this study offers an integrated moderation model that clarifies not merely whether, but under what conditions, managerial ownership and audit quality translate into stronger financial performance. The sections that follow set out the research design, conceptual framework, population and sample, data-collection procedures, variable measurement, research model, and analytical techniques used to test the four hypotheses.

## RESEARCH METHOD

### Research Design

This study adopts a quantitative, explanatory research design to examine the causal relationships among managerial ownership, audit quality, and financial performance, together with the moderating role of agency costs. The unit of analysis is banking-sector firms listed on the Indonesia Stock Exchange (IDX). Panel data spanning 2022–2024 are analyzed through panel data regression using a Moderated Regression Analysis (MRA) approach (Sekaran & Bougie, 2016).

### Population and Sample

The study population comprises 48 banking companies listed on the IDX during 2022–2024. A purposive sampling procedure was applied based on three criteria: (1) publication of complete financial statements and annual reports throughout the observation period; (2) profitability; and (3) consecutive dividend distribution across 2022–2024. Applying these criteria yielded a final sample of 19 companies and 57 observations. **Table 1,** summarizes the sample-selection process.

**Table 1.** Sample Selection Criteria

| Criteria | Amount |
|---|---|
| Banking companies listed on the IDX | 48 |
| Do not earn profits | (10) |
| Do not distribute dividends | (29) |
| Final sample | 19 |

Source: processed data, 2026

### Data Collection

This study relies on secondary data drawn from the annual financial statements and annual reports of banking companies for 2022–2024, obtained through the Indonesia Stock Exchange (IDX). Data were gathered through documentation and literature-review techniques that also informed theory development and variable measurement (Bryman & Bell, 2022).

### Measurement of Variables

The study incorporates one dependent variable, two independent variables, and one moderating variable, with the operational definition of each summarized in **Table 2**.

**Table 2.** Operational Definitions of Variables

| Variable | Proxy | Measurement | Reference |
|---|---|---|---|
| Financial Performance (Y) | ROA | Net Income / Total Assets × 100% | Imraatussolichah & Sumarni (2024) |
| Good Corporate Governance (X1) | Managerial Ownership | Managerial Shares / Outstanding Shares × 100% | Munir & Widiatmoko (2022) |
| Audit Quality (X2) | KAP Big Four | Dummy (1 = Big Four; 0 = Non-Big Four) | Francis (2011); Knechel et al. (2013) |
| Agency Costs (M) | Operating Expense Ratio (OER) | Operating Expenses / Operating Revenue × 100% | Ang et al. (2000); Akbar et al. (2026) |

Source: research data, 2026

### Research Model

The hypotheses are tested using Moderated Regression Analysis (MRA) applied to the following panel data regression model:

$$FP_{it} = \alpha + \beta_1 MO_{it} + \beta_2 AQ_{it} + \beta_3 AC_{it} + \beta_4 (MO \times AC)_{it} + \beta_5 (AQ \times AC)_{it} + \varepsilon_{it}$$

where FP denotes Financial Performance (ROA), MO denotes Managerial Ownership, AQ denotes Audit Quality, AC denotes Agency Costs (OER), and MO×AC and AQ×AC are interaction terms capturing the moderation effects.

## RESULTS AND DISCUSSION

### Result

### Descriptive Statistics

**Table 3** reports the descriptive statistics for the 57 panel observations, providing the sample characteristics that frame the interpretation of the hypothesis-testing results discussed next.

**Tabel 3.** Descriptive Statistics

| | KM | KAP | OER | ROA |
|---|---|---|---|---|
| Mean | 0,039832 | 0,684211 | 72,68333 | 2,534737 |
| Median | 0,026000 | 1,000000 | 74,10000 | 2,160000 |
| Maximum | 0,230000 | 1,000000 | 91,69000 | 11,43000 |
| Minimum | 0,000000 | 0,000000 | 41,70000 | 0,660000 |
| Std. Dev. | 0,046626 | 0,468961 | 12,01364 | 1,718142 |
| Skewness | 1,928135 | -0,792594 | -0,680270 | 2,783572 |

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| | KM | KAP | OER | ROA |
|---|---|---|---|---|
| Kurtosis | 7,026022 | 1,628205 | 2,983734 | 14,15298 |
| Jarque-Bera | 73,81422 | 10,43727 | 4,396913 | 369,0323 |
| Probability | 0,000000 | 0,005415 | 0,110974 | 0,000000 |
| Observations | 57 | 57 | 57 | 57 |

Source: processed data eviews 13, 2026

*Note: KM = Managerial Ownership; KAP = affiliation with Big Four Public Accounting Firms; OER = Operating Expense Ratio; KK = Financial Performance (ROA).*

Overall, the descriptive profile in Table 3 shows that managerial ownership remains low and fairly stable across the sample. The strong presence of Big Four auditors, combined with the sizable spread in OER, sets an empirical backdrop suggesting that governance effectiveness may vary with a bank's operating conditions a possibility examined further through panel data regression that treats OER as a moderating variable.

**Selection of Panel Data Regression Model**

Overall, the descriptive profile in Table 3 shows that managerial ownership remains low and fairly stable across the sample. The strong presence of Big Four auditors, combined with the sizable spread in OER, sets an empirical backdrop suggesting that governance effectiveness may vary with a bank's operating conditions a possibility examined further through panel data regressionA Chow test to compare the Common Effect Model against the Fixed Effect Model could not be performed here, since managerial ownership (X1) and Big Four affiliation (X2) barely change over 2022–2024 for each bank; estimating the Fixed Effect Model under these conditions produces a near-singular data matrix. This is consistent with the descriptive statistics in **Table 3**, where variation in both variables is driven overwhelmingly by cross-sectional differences rather than changes over time.

Model selection therefore rests on the Hausman Test and the Breusch-Pagan Lagrange Multiplier (LM) Test. The Hausman Test returns a random cross-section probability of 0.1052, exceeding the 0.05 threshold and favoring the Random Effects Model (REM) over the Fixed Effects Model. The Breusch-Pagan LM Test yields a cross-sectional probability of 0.0000, well below 0.05, again favoring REM over the Common Effects Model. **Table 4** summarizes these model-selection results, that treats OER as a moderating variable.

**Tabel 4.** Summary of Panel Data Regression Model Selection Results

| Test | Model Comparison | Final Result |
|---|---|---|
| Chow | Common Effect Model (CEM) or Fixed Effect Model (FEM) | *Near singular matrix* |
| Hausman | Fixed Effect Model (FEM) or Random Effect Model (REM) | REM |
| Lagrange Multiplier | Common Effect Model (CEM) or Random Effect Model (REM) | REM |

Source: summary of processed data eviews 13, 2026.

Since REM was favored in both feasible tests, it is adopted as the final estimation model. This choice is justified not simply because it wins on test outcomes, but because REM's Generalized Least Squares (GLS) estimation is well suited to data dominated by cross-sectional variation, as is evident from the time-invariant nature of X1 and X2, while also preserving more degrees of freedom than the dummy-variable approach required under the Fixed Effect Model. A further check of the correlation matrix among the independent variables shows a maximum correlation of only 0.489 and a minimum of -0.601 both comfortably below the 0.80 threshold indicating that multicollinearity is not a concern and that all independent variables can reasonably be combined in a single regression model.

### Model Estimation Results

The Random Effect Model estimation yields the following panel data regression equation:

$$Y = 2{,}523 - 5{,}331X1 + 0{,}447X2 - 0{,}132M + 0{,}534(X1 \times M) - 0{,}094(X2 \times M) + \varepsilon$$

**Table 5.** Results of the Random Effect Model Estimation

| Variable | Coefficient | Probability | Explanation |
|---|---|---|---|
| Constant (α) | 2,523 | — | — |
| Managerial Ownership (X1) | -5,331 | 0,0915 | Not significant |
| Big Four Audit Firm (X2) | 0,447 | 0,501 | Not significant |
| Agency Cost/OER (M) | -0,132 | < 0,05 | Significant |
| X1 × M | 0,534 | 0,006 | Significant |
| X2 × M | -0,094 | 0,000 | Significant |

Source: processed data Eviews 13, 2026. Adjusted R-Square = 0.689; Prob. (F-statistic) = 0.000; Standard Error of Regression = 0.375; Standard Deviation of Dependent Variable = 0.673.

The constant term of 2.523 represents the estimated ROA when every independent variable equals zero. The managerial-ownership coefficient of -5.331 points to a negative relationship with ROA when OER is zero, but its probability of 0.0915 sits above the 0.05 threshold, rendering it statistically insignificant in the full model. Similarly, the Big Four coefficient of 0.447 suggests a positive direction at an OER of zero but is likewise not significant, with a probability of 0.501. By contrast, the agency-cost coefficient (M) of -0.132 is statistically significant, indicating that each one-unit rise in OER corresponds to a 0.132-unit decline in ROA, holding other variables constant consistent with the intuition that operational waste erodes profitability directly.

The two interaction terms carry the greatest substantive weight for this study's purposes. The X1×M coefficient of 0.534 (p = 0.006) shows that both the magnitude and direction of managerial ownership's effect on ROA shift with the level of OER. The X2×M coefficient of -0.094 (p = 0.000) shows a parallel pattern for Big Four affiliation's effect on ROA, but moving in the opposite direction from the first interaction. This contrast underpins the discussion of H3 and H4 below.

On model fit, an Adjusted R-Square of 0.689 indicates that managerial ownership, audit quality, and agency costs together with their interaction terms account for roughly 68.9 percent of the variation in sample banks' financial performance, leaving 31.1 percent attributable to factors outside the model. The Standard Error of Regression, at 0.375, falls below the dependent variable's standard deviation of 0.673, pointing to a relatively low prediction error, while an F-statistic probability of 0.000 confirms that the model as a whole is statistically well suited to explaining the relationships among the variables. Taken together insignificant direct effects for X1 and X2 alongside significant X1×M and X2×M interactions these results form the core argument of this research: the model's explanatory power comes not from the direct influence of managerial ownership or audit quality in isolation, but from how these two mechanisms interact with the level of agency costs a bank faces.

### Discussion

### The Influence of Managerial Ownership on Financial Performance

With a probability value of 0.0915, above the 0.05 threshold, H1 that managerial ownership affects financial performance is not supported. That said, statistical insignificance at conventional levels does not necessarily imply the absence of any economic relationship between the two variables; it is better read as evidence that interest alignment through managerial share ownership has not yet taken hold within this banking-sector sample.

One explanation lies in the scale of ownership itself. Managerial ownership in this sample averages just 3.98 percent, and four of the nineteen sample banks report no managerial ownership at all. Such a modest stake is unlikely to generate incentives strong enough to meaningfully alter managerial behavior when management holds only a sliver of equity, managers bear little financial exposure to their own decisions, weakening the grip of the interest-alignment logic that underpins H1. The banking sector's heavy regulation compounds this pattern: bank performance tends to hinge more on structural factors such as capital adequacy, asset quality, and operational efficiency than on internal ownership structure alone. Moreover, in the large state-owned and national private banks that dominate the sample, strategic decisions are shaped more by controlling shareholders and by regulators such as the Financial Services Authority than by managerial shareholders.

Agency theory itself offers a further lens through the entrenchment hypothesis, which posits that the ownership–performance relationship is not uniformly positive but non-monotonic, varying with the size of the ownership stake. At the very low ownership levels observed here, the alignment effect may simply be too weak to register statistically. Signaling theory adds a complementary angle: ownership signals only register with the market and investors once the stake is large enough to be read as a genuine managerial commitment. At levels below five percent, as in this sample's average, that signal is unlikely to carry enough weight to shape market perception or managerial conduct.

This pattern echoes findings from banking research in other emerging economies, even where the direction of results differs. Managerial ownership among banks on the Indonesia Stock Exchange has previously been found to have a positive but insignificant effect on ROA (Meirina & Yudhawati, 2020), a contextual parallel that reinforces the suspicion that Indonesia's tightly regulated banking sector tends to blunt the direct influence of managerial ownership on profitability. Elsewhere, research on Kenyan commercial banks found a negative association between managerial ownership and performance measures such as net interest margin and earnings per share (Kirimi et al., 2022), while a study of listed Jordanian firms similarly found a negative relationship between managerial ownership and ROA (Alkurdi et al., 2021). That findings across these three developing economies range from insignificant to negative suggests that managerial ownership's effectiveness as a governance mechanism is highly dependent on institutional characteristics and incentive structures specific to each market, rather than holding as a universal relationship across the full range of ownership levels.

Theoretically, these results affirm agency theory's continued relevance as an explanatory framework, while showing that managerial ownership's effectiveness as a governance instrument depends on the magnitude of ownership rather than applying uniformly across all ownership levels. This has direct implications for the discussion that follows: the absence of a significant direct effect under H1 raises the question of whether managerial ownership's effectiveness is instead conditional on other organizational factors a question taken up specifically in the test of H3.

**The Influence of Audit Quality on Financial Performance**

With a probability value of 0.501, well above the 0.05 threshold, H2 that audit quality affects financial performance is not supported. This suggests that auditor reputation alone does not directly determine bank profitability as measured by ROA. This outcome is best understood in light of what external audit is designed to do: it functions as an assurance mechanism that verifies the quality of financial information rather than as a lever that directly generates operational value. Within agency theory, audit quality operates as a monitoring cost that narrows the information gap between management and shareholders; Big Four auditors, with their greater reputation and resources, are theoretically positioned to provide stronger assurance over financial statement quality and to curb managerial opportunism. The pathway implied by agency theory is nonetheless indirect: high-quality audits can reduce earnings management and strengthen the reliability of reported information, but improved information quality does not automatically translate into higher profitability, since ROA more directly captures a bank's ability to deploy its assets profitably than the quality of its financial reporting. Signaling theory offers a further explanation: Big Four affiliation can function as a positive signal about the credibility of financial statements and a firm's commitment to sound governance, potentially boosting investor confidence or lowering the cost of capital, but these benefits do not automatically show up in ROA, given that bank profitability is shaped more by lending policy, risk management, and operational cost control.

The descriptive data reinforce this interpretation. Big Four-affiliated auditors are responsible for 68.42 percent of the sample observations, reflecting how widespread large-auditor use has become within national banking. This concentration leaves relatively little variation among banks audited by non-Big Four firms, making it statistically harder to detect meaningful performance differences between the two groups. Because the sampled banks are, on the whole, well-established institutions under close regulatory oversight, their financial reporting standards tend to be fairly uniform, narrowing the quality gap between Big Four and non-Big Four auditors.

A notable contrast emerges when these results are compared against evidence from other emerging markets. A study of 84 listed Nigerian companies found that firms audited by Big Four accounting firms achieved significantly higher ROA (Ado et al., 2020); a similar pattern held for Nigerian commercial banks between 2011 and 2017, where auditor size had a positive and significant effect on ROA (Ugwu et al., 2020); and in Ghana, Big Four affiliation was found to provide incremental value to firm performance (Angsoyiri, 2021). These divergent results are most plausibly explained by differences in institutional and regulatory environments: Nigeria and Ghana have governance conditions, oversight systems, and regulatory enforcement that differ from Indonesia's, producing wider variation in audit quality across firms and making the effect of Big Four auditors on performance easier to detect statistically. In Indonesia's banking sector, where regulatory governance and oversight standards are already stringent, the quality gap between Big Four and non-Big Four auditors narrows considerably, leaving their impact on financial performance statistically indistinguishable.

The theoretical implication is that audit quality more plausibly affects financial performance through indirect channels for instance, by lowering the cost of capital or improving the reliability of information used in decision-making rather than through a single, direct pathway. This implication carries forward into the test of H4, which asks whether audit quality's effectiveness in fact depends on a bank's operational-efficiency conditions, as captured by agency costs.

**The Role of Agency Costs Moderation on the Relationship between Managerial Ownership and Financial Performance**

The interaction between managerial ownership and agency costs (X1×M) produces a positive coefficient of 0.534 ($p = 0.006$), supporting H3 that agency costs moderate the relationship between managerial ownership and financial performance with the moderation strengthening that relationship.

Interpreting this finding correctly requires reading the interaction coefficient alongside the main managerial-ownership coefficient of -5.331. The conditional effect of managerial ownership on ROA at any given OER level can be expressed as $\partial(ROA)/\partial(X1) = -5.331 + 0.534 \times OER$. Setting this expression to zero yields a break-even OER of approximately 9.98 percent (5.331/0.534), meaning managerial ownership's effect turns from negative to positive once OER surpasses roughly 9.98 percent. Because sample OER values range from 41.70 percent to 91.69 percent comfortably above this threshold managerial ownership exhibits a positive conditional effect on ROA across the entire sample. A simple slope analysis at three representative OER levels sharpens this picture: at one standard deviation below the mean (OER = 60.67%), the conditional slope is +27.07, meaning a one-percentage-point rise in managerial ownership corresponds to a 0.27-percentage-point rise in ROA; at the sample mean (OER = 72.68%), the slope climbs to +33.48, or a 0.33-point ROA gain per percentage point of ownership; and at one standard deviation above the mean (OER = 84.69%), the slope reaches +39.89, equivalent to 0.40 ROA points per percentage point. This steadily rising pattern confirms that agency costs' positive moderating effect on managerial ownership grows stronger as operational inefficiency deepens.

Economically, banks facing a high OER confront considerably greater pressure to improve operational efficiency, and it is precisely under these conditions that managerial ownership becomes more consequential for driving performance: managers who also hold equity absorb the direct financial cost of inefficiency, giving them a sharper incentive to pursue operational improvements. In banks already operating efficiently those with a low OER the marginal contribution of managerial ownership to further performance gains is comparatively small, since there is less situational pressure demanding a response. Managerial ownership's benefits, in other words, are most pronounced precisely when banks face high operational-efficiency pressure, not when conditions are already favorable.

This result runs counter to the conceptual framework's initial directional prediction, which had assumed that high agency costs would weaken managerial ownership's effectiveness. The reversal can nonetheless be reconciled within agency theory if OER is understood not solely as a symptom of managerial slack but also as a signal of situational pressure: when operating-cost burdens rise, manager-shareholders are directly exposed to those inefficiencies and thus have a stronger incentive to act. Rather than undercutting Jensen and Meckling's (1976) interest-alignment logic, this pressure-activation mechanism arguably operationalizes it the alignment incentive matters most precisely when the cost of misalignment is most visible.

This moderation pattern is broadly consistent with findings from other emerging markets, even though the specific direction of moderation varies by context. A study on the Shanghai Stock Exchange found that governance mechanisms and agency costs interact meaningfully in shaping firm performance, with corporate governance quality and ownership concentration positively moderating the agency-cost–performance relationship (Khan et al., 2020) reinforcing the notion that agency costs can either strengthen or weaken governance mechanisms' impact on performance, depending on institutional context. The relevance of the operating expense ratio as an agency-cost proxy in banking is further supported by a study of banks on the Amman Stock Exchange, which links agency costs proxied by the operating expense ratio to governance mechanisms such as board size (Shaqqour, 2020).

The H3 findings represent one of this study's central contributions: although managerial ownership shows no significant direct effect on financial performance (leading H1 to be rejected), its role becomes significant and strengthens once it interacts with a bank's level of agency costs. Agency costs, then, are not simply a direct determinant of financial performance; they also serve as a boundary condition that determines when managerial ownership functions effectively as a governance instrument. Theoretically, this finding extends agency theory from a direct-effect framework toward a contingency framework, while offering the practical implication that strengthening managerial ownership as an incentive mechanism will yield its greatest payoff precisely in banks under heavy operational-efficiency pressure.

**The Role of Agency Costs Moderation on the Relationship between Audit Quality and Financial Performance**

The interaction between audit quality and agency costs (X2×M) produces a negative coefficient of -0.094 ($p = 0.000$), supporting H4 that agency costs moderate the relationship between audit quality and financial performance but with a moderating effect that runs opposite to H3, weakening rather than strengthening that relationship.

This negative interaction coefficient should be interpreted alongside the main Big Four coefficient of 0.447. Mathematically, audit quality's positive impact on ROA diminishes as OER rises: in banks with low OER that is, higher operational efficiency Big Four affiliation contributes more meaningfully to ROA gains, whereas in banks with high OER, that contribution becomes increasingly limited. Audit quality's benefits, therefore, appear greatest precisely when banks have already managed their operating costs efficiently a pattern that runs contrary to what was found under H3. This can again be traced to the nature of external audit: audits strengthen the reliability and credibility of financial statements and reduce information asymmetry between management and stakeholders, but they carry no authority to alter a bank's operational policies or business strategy. When a high

OER reflects a deep-seated, structurally inefficient cost base, improving audit quality alone cannot resolve a problem rooted in operational management and business strategy rather than in the quality of financial reporting.

This result also runs counter to the initial directional prediction, which had assumed that greater agency conflict would heighten the need for high-quality external auditors and thereby strengthen audit quality's contribution to performance. The empirical pattern points the other way. The explanation lies in the functional limits of external audit: audits verify financial-statement quality and narrow information asymmetry, but carry no mandate to reshape operational cost structures or business strategy. Once agency conflict has hardened into chronic operational inefficiency the condition a high OER captures improvements in information quality cannot substitute for the operational governance reforms that performance improvement actually requires. Audit quality accordingly loses traction as a performance driver precisely when agency costs are at their highest (Ajaegbu & Mmayie, 2025).

This pattern is consistent with other empirical evidence. Audit-committee mechanisms have been found not to consistently affect the efficiency and solvency of conventional and sharia banks alike (Haddad et al., 2021), indicating that the effectiveness of audit mechanisms in improving performance depends heavily on the audited company's conditions and characteristics. Within Indonesian banking specifically, the Operational Cost to Operational Income (BOPO) ratio has been found to affect bank performance through credit risk as a mediating variable (Safitri & Sudjono, 2021), while corporate governance and financial risk, including BOPO, have also been shown to influence Indonesian banks' performance (Ekadjaja & Ekadjaja, 2020). Both findings, situated within domestic banking, reinforce the relevance of OER/BOPO as an indicator of agency costs that consistently constrain the strength of governance mechanisms audit quality among them in supporting banking financial performance.

Read together, the H3 and H4 findings reveal an asymmetric moderation pattern that forms the core contribution of this research: agency costs are not merely a direct determinant of financial performance but act as a boundary condition that shapes the effectiveness of both governance mechanisms strengthening managerial ownership's role as an interest-alignment instrument while weakening audit quality's role as an external monitoring instrument. This asymmetry theoretically extends both agency theory and signaling theory by showing that ownership-based incentive mechanisms and external monitoring mechanisms respond to agency-cost conditions in opposite ways, meaning they cannot be treated interchangeably when designing governance strategy. Practically, these findings suggest that investment in audit quality pays off most for banks that have already achieved adequate operational efficiency, whereas banks under heavy efficiency pressure stand to benefit more from strengthening managerial ownership incentives and improving operational governance than from simply enhancing external auditor reputation.

## CONCLUSION

This study examines how managerial ownership and audit quality influence the financial performance of banking companies listed on the Indonesia Stock Exchange during 2022–2024, alongside the moderating role of agency costs proxied by the Operating Expense Ratio (OER). The Random Effect Model results indicate that neither managerial ownership (H1) nor audit quality proxied by Big Four affiliation (H2) has a significant direct effect on Return on Assets (ROA). Agency costs, by contrast, significantly moderate both relationships, but in opposite directions strengthening the effect of managerial ownership on financial performance (H3) while weakening the effect of audit quality on financial performance (H4).

These findings show that governance mechanisms do not automatically enhance performance; their effectiveness instead depends on a bank's operational conditions. Agency costs act as a boundary condition governing how effectively internal governance mechanisms managerial ownership and external mechanisms audit quality function. The results also establish that agency costs do more than influence financial performance directly; they help determine when governance mechanisms can operate effectively at all. This research thereby extends agency theory from a direct-relationship perspective toward a contingency perspective, offering a more contextualized account of the mixed findings that characterize prior governance–banking-performance research.

The asymmetric moderation pattern stands as an important contribution of this study: agency costs strengthen the influence of managerial ownership while weakening the influence of audit quality on financial performance, indicating that ownership-based incentive mechanisms and external monitoring mechanisms respond differently to operational-efficiency conditions. Governance effectiveness, then, cannot be judged solely on whether a mechanism exists, but must also account for the operational conditions surrounding the firm.

Practically, these findings suggest that improving bank governance should go hand in hand with enhancing operational efficiency through cost control, business-process optimization, and digital technology adoption. Investors evaluating bank performance would do well to weigh not only managerial ownership and auditor reputation but also the level of operational efficiency reflected in OER. For auditors and regulators particularly the Financial Services Authority factoring operational efficiency into governance and supervisory evaluations would allow policy to be more responsive to each bank's specific characteristics.

This study is subject to several limitations, including its reliance on managerial ownership as the sole governance proxy, OER as the sole agency-cost proxy, a relatively short observation window (2022–2024) covering 19 sample banks, and a quantitative design based on secondary data. Future research could broaden the measurement approach by incorporating additional governance proxies such as institutional ownership, independent commissioners, and audit-committee effectiveness and alternative agency-cost proxies such as the asset turnover ratio and free cash flow ratio. Extending the observation period and study scope to the non-banking financial sector, and adopting mixed-methods approaches, could likewise yield a more comprehensive understanding of how agency costs shape governance effectiveness, audit quality, and financial performance in a broader setting.

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