

GUARDIANS OR BYSTANDERS? AUDITORS' ROLE IN CURBING EARNINGS MANAGEMENT DURING FINANCIAL DISTRESS IN INDONESIA

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ABSTRACT

Introduction/Main Objectives: This study aims to investigate the role of auditors in mitigating earnings management when firms experience financial distress, focusing on the effectiveness of Big 4 auditors in maintaining reporting quality in Indonesia. **Background Problems:** Firms under financial distress often manipulate earnings to preserve legitimacy and maintain investor confidence. In emerging markets such as Indonesia, weak institutional enforcement and client pressures raise questions about whether auditors can effectively constrain such opportunistic behavior. **Novelty:** By applying prospect theory to explain managerial risk-taking under financial distress and role theory to examine how structural capacity influences auditors' monitoring effectiveness, the study provides new insights into the conditional effectiveness of Big 4 auditors in an emerging market setting. **Research Methods:** The study uses 5,008 firm-year observations of non-financial companies listed on the Indonesia Stock Exchange (IDX) from 2010 to 2024. Earnings management is measured using the modified Jones model (Kothari et al., 2005), financial distress is proxied by Altman's Z-score, and auditor quality is captured with a Big 4 dummy. Robustness tests and additional analyses are employed for validation. **Findings/Results:** Results show financial distress is positively associated with earnings management, consistent with prospect theory. Big 4 auditors are associated with lower levels of earnings management overall, but their moderating effect under distress is not significant. Additional analyses reveal that Big 4 auditors are more effective in reinforcing reporting discipline across broader financial conditions than in severe distress scenarios. **Conclusion:** Auditor effectiveness in Indonesia is highly contextual. While Big 4 auditors improve reporting quality in general, their ability to curb opportunistic behavior in distressed firms remains limited under a weak institutional environment. This study contributes to the accounting literature by extending prospect and role theory applications in auditing, and offers policy implications for strengthening auditor capacity and institutional enforcement in emerging markets.

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INTRODUCTION

This study aims to investigate the role of auditors in mitigating earnings management behavior when firms experience a decline in financial performance. As highlighted by Agrawal and Chatterjee (2015) and Charitou et al. (2007), firms often operate under substantial economic uncertainty, which can significantly impair internal performance. When facing the threat of bankruptcy, managers are frequently confronted with a critical dilemma: whether to disclose financial performance transparently (Kyriakou, 2020; Li et al., 2020) or exploit the flexibility inherent in accounting standards to preserve the firm's external image (Agrawal & Chatterjee, 2015; Charitou et al., 2007).

Empirical evidence suggests that firms under financial distress tend to engage in more aggressive earnings manipulation to maintain a positive corporate image and sustain stakeholder confidence despite deteriorating fundamentals (Koop & Korobilis, 2014; Viana Jr et al., 2022). In such settings, earnings management may serve as a legally permissible but potentially misleading tool to influence perceptions of financial stability. The resulting financial reports are shaped not solely by operational realities but by the strategic intent to present a favorable narrative to the market.

This phenomenon has strong practical relevance for Indonesia's capital market. When financially distressed firms manipulate earnings, the reliability of financial information declines, potentially misleading investors, creditors, and regulators. Understanding how auditors respond in such situations is crucial for strengthening audit oversight, improving investor protection, and enhancing the overall quality of corporate governance in emerging markets.

Against this backdrop, auditors serving as external monitors are expected to safeguard the integrity of financial reporting. However, in

practice, particularly within emerging markets such as Indonesia, auditors often operate under significant client pressure and institutional constraints, including weak legal enforcement and conflicts of interest (Francis, 2004; Krishnan & Krishnan, 1996; Li et al., 2020; Rosner, 2003; Sumiyana et al., 2023). This gives rise to a fundamental question: In moments of heightened corporate vulnerability, when the integrity of financial reporting is most crucial, do auditors fulfill their role as guardians or do they become passive bystanders?

Studies of auditing quality by Francis et al. (1999) and Francis and Wang (2008) have suggested that auditors are not merely technical agents responsible for verifying accounting figures but institutional actors who fulfill a broader public oversight function and reinforce the credibility of financial reporting. However, this role is exercised in complex and high-pressure environments, particularly when clients are confronted with bankruptcy risk. Under such circumstances, auditors face strong economic incentives and psychological pressures to preserve long-term client relationships, with the implicit threat of losing audit engagements if adverse findings jeopardize management interests (Becker et al., 1998; Du & Lai, 2018).

These challenges are further amplified in emerging markets such as Indonesia, where institutional support for auditor independence remains weak and legal enforcement is inconsistently applied (Camacho - Miñano et al., 2023; Krishnan & Krishnan, 1996; Kyriakou, 2020). In Indonesia, weak legal enforcement manifests through limited litigation risk, inconsistent application of sanctions, and a high degree of client dependence within the audit market (Francis, 2004; Krishnan & Krishnan, 1996; Sumiyana et al., 2023). These institutional weaknesses reduce auditors' incentives to challenge management and constrain audit

effort. Even Big 4 affiliates, though backed by international reputational capital, operate under local ownership and licensing structures that limit the transferability of global audit methodologies and quality control systems. Consequently, weak enforcement mechanisms can attenuate audit quality across the market, including among international audit networks.

Drawing on role theory, such contradictory pressures give rise to role conflict, whereby auditors experience tension between their professional obligations as guardians of information integrity and the realities of client-driven market dynamics. At the same time, role ambiguity arises when auditors lack clarity regarding their authority or ability to resist client pressure (Camacho-Miñano et al., 2023; Christensen et al., 2016; Defond et al., 2018). Taking these factors into account, this study develops a contextualized and integrative framework to assess the auditor's role by empirically testing whether external auditors moderate the relationship between financial distress and earnings management.

Corporate earnings management is measured employing the discretionary accruals model developed by Jones (1991), as modified by Kothari et al. (2005) and further elaborated by Biddle et al. (2009). The model decomposes total accruals into inherent and discretionary components, enabling a more precise identification of earnings management as arising from managerial discretion. Financial distress is proxied using the Altman Z-score, a composite indicator that captures a firm's likelihood of bankruptcy by synthesizing key financial dimensions, including liquidity, profitability, operational efficiency, and leverage (Altman, 1968). The role of external auditors is captured through a binary indicator variable that identifies whether a firm engages a Big 4 audit firm or a Big 4-affiliated audit firm. The sample

comprises non-financial firms listed on the Indonesia Stock Exchange between 2010 and 2024, yielding a total of 5,008 firm-year observations.

The study results reveal that firms experiencing financial distress exhibit a stronger propensity to engage in more aggressive earnings management (Agrawal & Chatterjee, 2015; Charitou et al., 2007; Ekawati, 2025; Kyriakou, 2020). Notably, the findings highlight the crucial role of auditor structural strength in mitigating such opportunistic reporting behavior. Specifically, firms audited by Big 4 or Big 4-affiliated auditors report significantly lower levels of earnings management under financial distress compared to those audited by non-Big 4 auditors (Francis et al., 1999; Francis & Wang, 2008; Viana Jr et al., 2022).

The results provide empirical support for the application of role theory in the auditing context, suggesting that auditors with greater institutional positioning are more likely to uphold their role as guardians of financial reporting integrity, even amid economic pressures and conflicts of interest (Kurniawan et al., 2024; Naudé, 2010; Sumiyana et al., 2023). Conversely, auditors lacking sufficient institutional support and resources appear more vulnerable to adopting a passive stance, effectively serving as bystanders who fail to deter earnings manipulation.

This study offers both theoretical and practical implications. First, it extends the earnings management literature by demonstrating that the auditor's role is not homogeneous but instead contingent on structural characteristics inherent to the auditor. Second, the findings provide empirical support for the application of role theory within the accounting context, particularly in explaining variations in auditor effectiveness under conditions of financial stress (Agrawal & Chatterjee, 2015). Third, the results offer an important signal for regulators and

stakeholders in Indonesia's audit and capital markets. Specifically, strengthening the structural capacity of auditors, primarily through improving the quality and independence of non-Big 4 auditors, would represent a strategic step toward enhancing wider corporate governance (Kyriakou, 2020; Rajablu, 2016; Surifah, 2025; Viana Jr et al., 2022; Younas et al., 2021). Finally, the findings hold practical relevance for investors and creditors seeking to assess the quality of financial reporting among distressed firms, underscoring the importance of auditor identity in evaluating the credibility of reported financial information.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

1. Prospect Theory

Prospect theory describes individual decision-making behavior under conditions of risk and uncertainty (Tversky & Kahneman, 1992; Young et al., 2012). The theory highlights a psychological mechanism by which individuals operate under bounded rationality, evaluating outcomes relative to subjective reference points such as the status quo, performance targets, or future expectations (Barberis, 2013; Young et al., 2012). Consequently, one emphasis of prospect theory is the potential for individuals to engage in opportunistic behavior that aligns with their perceived psychological comfort. This study incorporates prospect theory to explain the link between financial distress and earnings management. Specifically, when operating in the gain domain where performance is perceived as significant, research has shown individuals tend to be risk-averse and conservative in their actions (Barberis et al., 2016; Ekawati, 2025; Tversky & Kahneman, 1992). In contrast, when situated in the loss domain, individuals are more likely to engage in risk-seeking behavior in an effort to escape adverse outcomes (Barberis,

2013; Tversky & Kahneman, 1992; Young et al., 2012). Accordingly, managers may engage in earnings manipulation when experiencing performance shortfalls, seeking to reverse perceived losses by presenting a more favorable image of financial health.

2. Role Theory

Role theory posits that social roles are inherently attached to individuals and shape their behavior within organizational and institutional contexts (Biddle, 1986; Charitou et al., 2007). A role can be conceptualized as a set of socially prescribed expectations, obligations, and norms based on the status an individual occupies (Anglin et al., 2022; Eagly et al., 2012). As such, individuals tend to act in accordance with these prescribed social roles to align their behavior with societal or organizational expectations. The resulting conduct is often shaped by environmental pressures that reinforce the behavioral boundaries associated with one's role. However, prior literature has noted that individuals may experience role conflict when confronted with competing expectations or diverging personal perspectives, leading to dilemmas in role performance (Anglin et al., 2022; Biddle, 1986). Role theory, therefore, provides a helpful lens through which to assess the extent to which individuals adhere to expected behaviors under conflicting conditions.

In this study, we apply role theory to examine the extent to which external auditors fulfill their role in constraining earnings management when client firms are facing financial distress. While external auditors are entrusted with safeguarding the integrity of financial reporting, they may simultaneously experience role dilemmas stemming from institutional asymmetries that influence auditor behavior (Charitou et al., 2007; Eagly et al., 2012; Ekawati, 2025). Specifically, role ambiguity and

conflict may arise when auditors are incentivized to retain clients rather than issue strict opinions on potentially misleading financial disclosures. In contrast, auditors with stronger institutional standing are less likely to exhibit client-affiliated biases and therefore more capable of constraining earnings management under financial distress.

3. Developing Countries' Characteristics

As a major emerging economy in Southeast Asia, Indonesia presents a unique institutional context for studying financial reporting and auditing practices. Claessens et al. (2001) and Naudé (2010) highlighted that corporate ownership structures in Indonesia are typically concentrated in the hands of controlling shareholders, which increases the risk of agency conflicts between majority and minority investors. In such an environment, financial statements serve not only as a medium for performance communication but also as a critical instrument for maintaining legitimacy in the eyes of investors. Although Indonesia's capital market regulator has adopted reporting standards that align with the International Financial Reporting Standards (IFRS), and strengthened oversight of the accounting profession, the auditing process continues to face challenges due to weak legal enforcement and considerable variation in auditor quality (Francis & Wang, 2008; Viana Jr et al., 2022). Internationally affiliated audit firms, such as the Big 4, tend to possess superior reputational capital, resources, and audit methodologies compared to local firms, which often struggle with capacity limitations and economic pressures to retain clients.

Financial distress further exacerbates the need for auditor independence and effectiveness, as firms under economic strain may be more inclined to manipulate financial outcomes. In such high-stakes environments, role ambiguity

and role conflict may intensify the behavioral dilemmas faced by auditors (Charitou et al., 2007; Christensen et al., 2016; Du & Lai, 2018). Against this backdrop, the current study investigates whether auditors with varying levels of institutional capacity can effectively uphold their role as guardians of financial reporting in the face of financial distress. Evidence from the Indonesian setting is expected to provide broader insights into the functionality of audit mechanisms in emerging markets, and to offer policy-relevant implications for regulators aiming to enhance corporate governance through improvements in audit quality.

4. Financial Distress and Earnings Management

Financial distress is a complex condition that arises when a firm's liquidity position becomes insufficient to meet total claims from its investors (Agrawal & Chatterjee, 2015; Charitou et al., 2007). Under such circumstances, firms have been shown less likely to meet investor expectations, potentially leading to declining stock prices and loss of critical financing opportunities (Li et al., 2020). As previously reported, financial distress exerts substantial pressure on corporate management to adopt strategies aimed at preserving the firm's financial image (Agrawal & Chatterjee, 2015; Campa, 2015; Kyriakou, 2020; Li et al., 2020). We argue that in the presence of financial distress, earnings management emerges as a viable tactic for managers seeking to boost reported performance and mask the firm's underlying financial deterioration until stability is restored.

Prior studies have documented that distressed firms are more likely to engage in income-increasing earnings manipulation to avoid bankruptcy, protect debt covenants, and maintain listing qualifications that yield financial incentives (Charitou et al., 2007; Du & Lai,

2018; Rosner, 2003). Financially distressed firms are therefore more prone to upward earnings management than their healthy counterparts (Campa, 2015; Rosner, 2003), primarily as a mechanism to protect their financial image (Banimahd & Aliabadi, 2013; Camacho-Miñano et al., 2023; Campa, 2015) and deliver positive signals to capital markets (Banimahd & Aliabadi, 2013; Cheng et al., 2016).

Financial distress reflects a firm's internal economic condition. Auditors have often responded to such situations through the issuance of *going concern audit opinions*, which signal doubts about a firm's ability to continue operations (Defond et al., 2018; Francis & Wang, 2008). The Altman Z-score used in this study captures the financial deterioration that typically precedes these audit judgments. While going concern opinions represent an auditor's behavioral response to distress, Z-score indicators provide an objective measure of underlying financial risk. Together, both constructs reflect complementary aspects of corporate vulnerability.

Financial distress also induces adverse framing effects at the managerial cognitive level, where studies have shown decision-making becomes biased by a heightened aversion to perceived loss and increased inclination toward risk-seeking behavior (Agrawal & Chatterjee, 2015; Barberis, 2013; Naudé, 2010; Tversky & Kahneman, 1992). Such cognitive distortions amplify management's willingness to engage in risk-laden strategies, including earnings management, to sustain the firm's continuity. Accordingly, we argue that financial distress increases managerial tolerance for accounting manipulation as a rational response to prevent loss of funding, reputational damage, or even corporate failure. Based on this reasoning, we formulate the following hypothesis:

H1: Financial distress is positively associated with earnings management.

5. The Auditor's Role in Financial Distress and Earnings Management

Francis and Wang (2008) and Viana Jr et al. (2022) have argued that external auditors serve as independent agents entrusted by a firm's stakeholders to safeguard the integrity of financial reporting. This expectation requires auditors to maintain objectivity, uphold professional standards, and critically assess the reasonableness of financial disclosures. In capital markets, previous research has confirmed that auditors play a vital gatekeeping role, lending credibility and assurance that the accounting information presented by firms reflects their underlying economic reality (Du & Lai, 2018; Eagly et al., 2012; Francis & Wang, 2008; Januarsi & Taufik, 2025; Vandenberghe et al., 2017).

Auditors also hold an institutional position that grants them authority to validate financial disclosures and enforce compliance with reporting standards (Becker et al., 1998; Camacho-Miñano et al., 2023; Krishnan & Krishnan, 1996). This firm institutional footing has enabled auditors to fulfill their role effectively, even with clients in financial distress (Christensen et al., 2016; Defond et al., 2018; Kyriakou, 2020). While auditors may face dilemmas, such as economic pressure from clients that can undermine their monitoring role, those affiliated with global audit networks (e.g., Big 4) have tended to maintain their professional integrity, given the reputational risks associated with audit failures (Francis et al., 1999; Francis & Wang, 2008; Viana Jr et al., 2022). Accordingly, the consistency with which external auditors fulfill their institutional role is crucial in mitigating the earnings management behavior often triggered by financial distress.

We therefore argue that the importance of auditors is heightened in the presence of financial distress. Distressed firms have been shown more likely to engage in aggressive earnings management to maintain a positive image in the eyes of investors and creditors (Campa, 2015; Ekawati, 2025; Rosner, 2003). Drawing on role theory, we posit that the effectiveness of audit oversight depends on the extent to which auditors fulfill their assigned role. Auditors with strong institutional positioning, such as those in the Big 4, have proved more capable of achieving role fulfillment, meeting stakeholder expectations as rigorous and independent monitors (Camacho-Miñano et al., 2023; Campa, 2015; Rosner, 2003). In contrast, auditors with weaker institutional capacity are more susceptible to role conflict, wherein the pressure to retain distressed clients compromises their independence and weakens their monitoring effectiveness. Therefore, consistent auditor performance, particularly by institutionally strong auditors, is crucial to constraining the impact of financial distress on earnings management. Based on this reasoning, we formulate the following hypothesis:

H2: Auditor quality weakens the positive relationship between financial distress and earnings management.

METHODS, DATA, AND ANALYSIS

1. Data and Sample

This study utilized secondary data on non-financial firms listed on the Indonesia Stock Exchange (IDX). Financial firms were excluded due to their distinct regulatory environments and financial structures, which differ substantially from those of non-financial firms (Kurniawan et al., 2024; Sumiyana et al., 2023). The primary data sources were Bureau van Dijk and Eikon Refinitiv Thomson Reuters. A purposive

sampling approach was employed based on the following criteria: (1) the firm was listed on the IDX during the 2010–2014 period; (2) the firm published annual financial reports with a fiscal year ending December 31; and (3) the firm provided complete data for all variables required in the analysis. Applying these filters yielded a final sample of Indonesian firms over the 2010–2014 period, resulting in 5,008 firm-year observations.

The 2010–2024 study period was chosen for several reasons. First, it captures a long horizon covering multiple economic cycles in Indonesia, including the post-global financial crisis recovery, commodity price shocks, the COVID-19 pandemic and subsequent period of economic stabilization. This temporal span allowed for observation of firm behavior under varying financial pressures and institutional environments, which is essential for examining the dynamics of financial distress and earnings management.

Second, the period aligns with consistent implementation of the International Financial Reporting Standards (IFRS) in Indonesia, which were fully adopted beginning in 2012. Using data from 2010 onward ensured comparability of financial reporting practices and audit standards across firms. Third, extending the window to 2024 provides the most recent evidence available, enhancing the study's relevance for contemporary policy discussions on audit quality and corporate governance in emerging markets.

2. Variable Measurement

In the Indonesian context, going concern audit opinions are not consistently disclosed across firms and years, limiting their use as a robust variable. Therefore, consistent with prior research (Agrawal & Chatterjee, 2015; Li et al., 2020), this study employed the Altman Z-score as a more comprehensive and continuous

indicator of the financial condition of a firm. This measure captures the financial factors that generally precede auditors' going concern judgments, ensuring that distress is evaluated on an economically objective basis.

The Z-score is computed as shown in Equation (1), where: X_1 is the ratio of net income to total assets; X_2 is the ratio of sales to total assets; X_3 is the ratio of retained earnings to total assets; X_4 is the ratio of working capital to total assets; and X_5 is the ratio of market value of equity to total liabilities. Lower Z-scores indicate a higher level of financial distress, while higher values reflect a healthier financial condition. Following the conventional threshold, we defined a binary variable equal to 1 if a firm's Z-score was below 1.81 (indicating distress), and 0 otherwise. For ease of interpretation in subsequent analyses, we multiplied the financial distress dummy variable by -1, such that higher values consistently represent more severe financial distress.

$$Z\text{-Score} = 0.3X_1 + 1.0X_2 + 1.4X_3 + 1.2X_4 + 0.6X_5 \quad (1)$$

The empirical design directly reflects the theoretical framework of this study. Prospect theory suggests that firms under financial distress (the "loss domain") are more likely to engage in risk-seeking behavior such as earnings manipulation. Accordingly, financial distress was measured using the Altman Z-score to capture the degree of perceived financial loss. Role theory, in turn, was used to frame the auditor's moderating role, assessing whether external auditors mitigate such opportunistic behavior. To test these relationships, we employed the discretionary accruals model to operationalize earnings management and included auditor quality as a moderating variable.

Earnings management was proxied in this study using discretionary accruals. We followed the accrual-based model developed by Jones (1991), as modified by Kothari et al. (2005), which incorporates return on assets (ROA) to control for firm performance and operational efficiency. This modified model is designed to better capture managerial discretion by accounting for normal business activities more accurately (Jones, 1991; Kothari et al., 2005). The accrual estimation was computed through Equations (2), (3), and (4), where: $TA_{i,t}$ represents total accruals, calculated as the change in current assets minus the change in cash, minus the change in current liabilities plus short-term debt, minus depreciation and amortization, scaled by average total assets; $PPE_{i,t}$ is the gross value of property, plant, and equipment scaled by average total assets; $ROA_{i,t}$ is return on assets, computed as net income divided by total assets. Discretionary accruals (DA) were derived as the residual, the difference between actual accruals and the predicted normal accruals estimated from the model above.

$$\begin{aligned} \frac{TA_{i,t}}{ASSETS_{i,t-1}} = & \beta_0 + \beta_1 \frac{1}{ASSETS_{i,t-1}} + \\ & \beta_2 \frac{\Delta SALES_{i,t}}{ASSETS_{i,t-1}} + \beta_3 \frac{PPE_{i,t}}{ASSETS_{i,t-1}} + \\ & \beta_4 ROA_{i,t} + \theta_0 \end{aligned} \quad (2)$$

$$\begin{aligned} \frac{\widehat{TA}_{i,t}}{ASSETS_{i,t}} = & \widehat{\beta}_0 + \widehat{\beta}_1 \frac{1}{ASSETS_{i,t-1}} + \\ & \widehat{\beta}_2 \frac{\Delta SALES_{i,t}}{ASSETS_{i,t-1}} + \widehat{\beta}_3 \frac{PPE_{i,t}}{ASSETS_{i,t-1}} + \\ & \widehat{\beta}_4 ROA_{i,t} \end{aligned} \quad (3)$$

$$EQ_{i,t} = |TA_{i,t} - \widehat{TA}_{i,t}| \quad (4)$$

To further capture earnings management practices as part of firms' managerial decision-making, this study followed the approach applied by Balakrishnan et al. (2014) and Francis (2004), which decomposes accrual

quality into two components: the inherent component (reflecting firms' underlying economic fundamentals) and the discretionary component (reflecting managerial choices). In this study, the inherent component was proxied by several firm-specific characteristics, namely firm size (SIZE), cash flow volatility (CFV), sales volatility (SALV), operating cycle ratio (OCR), and an operating loss dummy (NINC). The estimation model was specified as follows:

$$AQ_{i,t} = \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 \Delta CFV_{i,t} + \beta_3 SALV_{i,t} + \beta_4 OCR_{i,t} + \beta_5 NINC_{i,t} + \theta_0 \quad (5)$$

$$\widehat{AQ}_{i,t} = \widehat{\beta}_0 + \widehat{\beta}_1 SIZE_{i,t} + \widehat{\beta}_2 CFV_{i,t} + \widehat{\beta}_3 \Delta SALV_{i,t} + \widehat{\beta}_4 OC_{i,t} + \widehat{\beta}_5 NINC_{i,t} + \theta_0 \quad (6)$$

$$FRQ_{i,t} = \widehat{AQ}_{i,t} - AQ_{i,t} \quad (7)$$

The value of earnings management (EM) was obtained from the residuals of the model, representing the difference between the firm's actual accruals (as derived from the discretionary accruals model) and the predicted accruals based on the firm's underlying financial characteristics. A larger absolute residual value indicates a higher degree of earnings management, suggesting that managerial discretion played a greater role in determining reported accruals. Conversely, a smaller residual value implies that the firm's discretionary accruals could largely be explained by its normal financial condition, reflecting a lower level of earnings management.

3. Description of Auditor's Characteristics

To examine the role of auditors in constraining earnings management practices among firms experiencing financial distress, this study adopted an auditor-characteristics-based approach using the BIG4 variable. This variable

was measured as a dummy, taking the value of 1 if the firm's financial statements were audited by one of the Big 4 audit firms (Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers), and 0 otherwise. This approach follows prior studies showing that Big 4 auditors generally deliver higher audit quality due to stronger reputational incentives, greater resource capacity, and higher litigation risk associated with audit failures (Defond et al., 2018; Francis & Wang, 2008).

International evidence indicates that Big 4 auditors tend to enforce stricter monitoring over financial reporting, particularly in emerging markets characterized by weak legal enforcement and institutional oversight. An analysis by Viana Jr et al. (2022) found that among financially distressed firms in such markets, the involvement of Big 4 auditors significantly weakened the positive association between financial distress and accrual-based earnings management. This supports the notion that Big 4 auditors act as an effective external governance mechanism, limiting managerial opportunism in environments marked by institutional voids. Accordingly, in this study, auditor characteristics served as a moderating variable to test whether the presence of a Big 4 auditor mitigated the tendency of firms to engage in earnings management under financial pressure.

While this binary proxy does not capture within-group heterogeneity, it reflects a structural distinction widely used in prior research to represent audit quality in emerging markets (Francis & Wang, 2008; Viana Jr et al., 2022). Big 4 affiliation thus served as a credible indicator of institutional audit capacity and reputational incentives, even though individual audit offices may differ in quality due to local constraints. Although Big 4 auditors represented only 19% of our sample, this level of variation is consistent with the market structure observed in

Indonesia and is sufficient for meaningful comparative analysis.

4. Hypothesis Testing Model

The empirical analysis was conducted in two stages. First, to test Hypothesis 1, we examined the relationship between financial distress (FD) and earnings management (EM) using Equation (8). Second, to test Hypothesis 2, we assessed the moderating effect of external auditor quality (AUD) on the relationship between financial distress and earnings management using Equation (9). Both models included year fixed effects to control for macroeconomic shocks and industry fixed effects to account for cross-industry heterogeneity.

$$EM_{i,t} = \alpha_0 + \beta_1 FD_{i,t} + \delta \text{Firms Controls} + \text{Year Fixed Effect} + \text{Industry Fixed Effect} + \varepsilon_{i,t} \quad (8)$$

$$EM_{i,t} = \alpha_0 + \beta_1 FD_{i,t} + \beta_2 AUD_{i,t} + \beta_3 (FD_{i,t-1} + AUD_{i,t}) + \delta \text{Firms Controls} + \text{Year Fixed Effect} + \text{Industry Fixed Effect} + \varepsilon_{i,t} \quad (9)$$

The study included several control variables based on prior literature (Agrawal & Chatterjee, 2015; Kurniawan et al., 2024; Sumiyana et al., 2023; Viana Jr et al., 2022), including firm size ($SIZE_{i,t}$), leverage ($LEV_{i,t}$), asset growth ($GWH_{i,t}$), sales-to-assets ratio ($STR_{i,t}$), market-to-book value of equity ($MTB_{i,t}$), liquidity ratio ($LR_{i,t}$), and intangible asset ratio ($INR_{i,t}$). To ensure the robustness of the results, we conducted additional tests by separating the analysis for each of the Big 4 auditors and redefining firm financial conditions using broader specifications.

RESULTS AND DISCUSSION

1. Descriptive Statistics

Table 1 presents the descriptive statistics of the study variables. The mean value of earnings management ($EM_{i,t}$) is 0.106 with a standard deviation of 0.126, indicating considerable variation in earnings management practices across firms. The median value of EM is 0, suggesting that most firms did not exhibit detectable earnings management. However, the maximum value of 1 implies that some firms engaged in substantial discretionary reporting behavior. The average value of financial distress ($FD_{i,t}$) is 0.395, indicating that approximately 39.5% of the firm-year observations could be classified as indicating financial distress, based on the cut-off Z-score threshold of < 1.81 . The continuous Z-score variable ($Zscore_{i,t}$) has a mean of 2.611 and a standard deviation of 4.403, with values ranging from -47.84 to 47.32 . This wide dispersion reflects substantial heterogeneity in the financial health of Indonesian firms, ranging from highly solvent to severely distressed.

Among the control variables, leverage ($LEV_{i,t}$) has a mean of 1.311 with a broad distribution, indicating significant variation in capital structures across firms. The average asset growth ratio ($GWH_{i,t}$) is 0.116, while the liquidity ratio ($LR_{i,t}$) averages 2.737, also with considerable dispersion, suggesting meaningful differences in short-term financial flexibility. The market-to-book ratio ($MTB_{i,t}$) averages 2.619, indicating that many firms were valued well above their book value by the market. Finally, only 19.2% of firms were audited by Big 4 audit firms ($AUD_{i,t}$), reflecting the dominance of non-Big 4 auditors in the Indonesian market.

Table 1. Descriptive Statistics

Variables	Obs	Mean	SD	Min	Max	P50	P25	P75
EM _{i,t}	5,008	0.106	0.126	0.0001	0.8982	0.0285	0.0638	0.1312
ZScore _{i,t}	5,008	2.611	4.403	-47.845	47.323	2.196	1.331	3.471
FD _{i,t}	5,008	0.395	0.488	0	1	0	0	1
AUD _{i,t}	5,008	0.192	0.394	0	1	0	0	0
CP _{i,t}	5,008	21.942	1.645	15.300	26.868	21.925	20.845	23.060
LEV _{i,t}	5,008	1.131	11.510	-692.972	126.636	0.845	0.377	1.597
GWH _{i,t}	5,008	0.116	0.423	-0.948	14.858	0.062	-0.012	0.165
LR _{i,t}	5,008	2.737	7.327	0.001	247.127	1.553	1.042	2.591
STR _{i,t}	5,008	0.190	1.047	-0.948	30.377	0.086	-0.046	0.239
MTB _t	5,008	2.619	5.798	-51	75	1	1	3
INR _t	5,008	0.024	0.076	-0.060	0.874	0.000	0.000	0.010

2. Hypothesis Statistics

The following empirical analyses were structured to address the study's main problem: Can auditors, particularly those with stronger institutional capacity, effectively constrain earnings management in financially distressed firms? The regression results were therefore interpreted in direct relation to the behavioral expectations derived from prospect theory and role theory. Table 2 presents the regression results examining the relationship between financial distress (FD_{i,t}) and earnings management (EM_{i,t}), as well as the moderating role of Big 4 auditors (AUD_{i,t}). Models (1) and (2) evaluated the direct relationship between firm financial condition and earnings management, while Models (3) and (4) assessed whether auditor characteristics moderated this association.

In column (1), the coefficient on FD_{i,t} is positive and statistically significant (0.012, t-stat = 3.26, p < 0.05), suggesting that firms experiencing greater financial distress were more likely to engage in earnings management through accrual manipulation. This finding is robust to the inclusion of year and industry fixed effects in Model (2), where the coefficient on FD_{i,t} increases slightly to 0.014 (t-stat = 3.62, p < 0.01). These results indicate that Hypothesis

(H1) is supported, indicating a positive association between financial distress and earnings management.

Next, we examined the direct effect of Big 4 auditors on earnings management. Across all models, AUD_{i,t} consistently exhibits a negative and statistically significant coefficient (ranging from -0.010 to -0.014, all p < 0.05), indicating that firms audited by Big 4 auditors engaged in significantly less earnings management than those audited by non-Big 4 auditors. This reinforces the notion that Big 4 auditors, due to their stronger reputational concerns and higher litigation risks, are more effective in constraining managerial discretion. However, the interaction term FD_{i,t} × AUD_{i,t} in Models (3) and (4) yielded positive coefficients (0.008 and 0.009, respectively) that are not statistically significant at conventional levels (p > 0.10). Thus, we find no substantial evidence that Big 4 auditors are more effective than non-Big 4 auditors in constraining earnings management, specifically under conditions of financial distress. As a result, Hypothesis (H2) is not supported.

The analysis also offered insights into the role of control variables. Firm size (SIZE_{i,t}) is negatively and significantly associated with

earnings management, suggesting that larger firms, subject to greater public and regulatory scrutiny, were less likely to engage in such practices. In contrast, asset growth ($GWH_{i,t}$) is positively and significantly related to earnings management, consistent with the notion that high-growth firms have more substantial incentives to manage earnings in order to maintain favorable market perceptions. Liquidity ($LR_{i,t}$) and asset structure ($STR_{i,t}$) both have negative

coefficients, implying that firms with stronger short-term financial positions and higher proportions of tangible assets are less prone to accrual manipulation. Meanwhile, market-to-book ratio ($MTB_{i,t}$) and intangible assets ($INR_{i,t}$) are both positively and significantly associated with earnings management, suggesting that firms with high market valuations and those with significant intangible assets are more vulnerable to accounting manipulation.

Table 2. Hypothesis Testing

	Dependent Variable: Earnings Management			
	(1)	(2)	(3)	(4)
FD	0.012** (3.26)	0.014*** (3.62)	0.010** (2.52)	0.011** (2.8)
AUD	-0.010** (-2.23)	-0.011** (-3.26)	-0.012** (-2.86)	-0.014** (-3.34)
FD*AUD			0.008 (1.13)	0.009 (1.28)
SIZE	-0.010*** (-9.03)	-0.009*** (-7.68)	-0.010*** (-8.99)	-0.008*** (-7.64)
LEV	0.001 (0.70)	0.000 (9.36)	0.001 (0.91)	0.000 (0.57)
GWH	0.092*** (6.77)	0.085*** (6.12)	0.087*** (6.86)	0.080*** (6.18)
LR	-0.002** (-3.14)	-0.002** (-2.86)	-0.002** (-3.21)	-0.002** (-2.92)
STR	-0.006 (-0.97)	-0.008 (-1.19)	-0.005 (-0.86)	-0.007 (-1.10)
MTB	0.001** (2.19)	0.001** (2.50)	0.001** (2.22)	0.001** (2.53)
INR	0.174*** (3.83)	0.170*** (3.78)	0.166*** (3.85)	0.162*** (3.81)
Cons	0.328*** (12.27)	0.295*** (10.95)	0.318*** (12.33)	0.286*** (11.01)
Robust	Yes	Yes	Yes	Yes
Year Fixed Effect	No	Yes	No	Yes
Industry Fixed Effect	No	Yes	No	Yes
Obs	5,008	5,008	5,008	5,008
R-Square	0.0423	0.2901	0.0424	0.2962

*, **, *** indicates significance level at 10%, 5% and 1% respectively.

3. Robustness Test

Table 3 presents the results of the robustness tests, in which each of the Big 4 audit firms was examined separately in the context of the relationship between financial distress and earnings management. This analysis allowed us to assess whether the moderating effect observed in the main models was homogeneous across Big

4 auditors or varied by specific audit firm. The results revealed that the interaction terms $FD_{i,t} \times AUD_{i,t}$, when defined individually for each of the Big 4 firms, were statistically insignificant across all model specifications. This suggests there is no substantial evidence to indicate that any Big 4 auditor is more effective than any other in constraining earnings management during financial distress. Taken together, these

Table 3. Robustness Test Statistics: Big 4 Separation

	Dependent Variable: Earnings Management			
	(1)	(2)	(3)	(4)
FD	0.011** (2.64)	0.014*** (3.49)	0.013*** (3.49)	0.013*** (3.79)
AUD	-0.023*** (-5.67)	-0.019** (-2.53)	0.005 (0.63)	0.001 (0.19)
FD*AUD (A)	0.008 (1.21)			
FD*AUD (B)		0.023 (1.58)		
FD*AUD (C)			0.008 (0.54)	
FD*AUD (D)				0.003 (0.27)
SIZE	-0.008*** (7.44)	-0.009*** (-7.69)	-0.009*** (-7.85)	-0.013*** (-12.31)
LEV	0.000 (0.64)	-0.000 (-0.01)	0.000 (0.58)	-0.000 (-0.50)
GWH	0.080*** (6.21)	0.092*** (6.00)	0.082*** (6.34)	0.080*** (6.26)
LR	-0.002** (-3.05)	-0.002** (-2.97)	-0.002** (-3.02)	-0.002*** (-3.71)
STR	-0.007 (-1.13)	-0.010 (-1.46)	-0.007 (-1.11)	-0.007 (-1.31)
MTB	0.001** (2.32)	0.001** (2.33)	0.001** (2.45)	0.001* (1.66)
INR	0.160*** (3.75)	0.180*** (3.79)	0.165*** (3.82)	0.044 (1.20)
Cons	0.2835*** (10.92)	0.304*** (10.80)	0.2903*** (11.06)	0.3830*** (16.00)
Robust	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes
Obs	5,008	5,008	5,008	5,008
R-Square	0.2963	0.2967	0.2796	0.2960

*, **, *** indicates significance level at 10%, 5% and 1% respectively.

robustness results reinforce the finding that financial distress remains a consistent and significant predictor of earnings management. In contrast, the heterogeneity among Big 4 auditors in Indonesia is insufficient to moderate this relationship meaningfully. These findings further support the argument that the effectiveness of auditor oversight in emerging markets is highly contingent on broader institutional contexts, rather than being solely driven by the global identity of the audit firm.

To address potential selection bias in auditor choice, an additional robustness analysis was performed by incorporating firm-level corporate governance variables. Specifically, two governance-related indicators were added: the Governance Pillar Score (GPS) from Refinitiv, which reflects the overall quality of a firm's governance framework (including board independence, shareholder rights, and audit committee effectiveness), and Board Size (BS), which represents the number of directors and captures the board's monitoring capacity.

These variables are theoretically relevant because stronger governance mechanisms can influence both the likelihood of engaging a Big 4 auditor and the firm's propensity to manage earnings. Including these controls therefore helped to mitigate endogeneity concerns arising from governance-related self-selection into Big 4 audits. However, because Refinitiv ESG coverage for Indonesian firms only available for limited firms', the inclusion of GPS and BS reduced the number of observations to 456. Due to this data availability limitation, the analysis is presented as a robustness check rather than a main specification.

Table 4 reports the regression results incorporating these corporate governance controls. The findings remain consistent with the baseline results. The coefficient on financial distress (FD) is positive and statistically significant across all

models, confirming that firms experiencing weaker financial conditions tend to engage in higher levels of earnings management (Becker et al., 1998; Du & Lai, 2018; Rajablu, 2016; Younas et al., 2021). The coefficient on BIG4 remains negative and significant, indicating that firms audited by Big 4 auditors reported lower discretionary accruals compared to those audited by non-Big 4 firms. The interaction term $FD \times BIG4$ remains negative (though not statistically significant), suggesting that Big 4 auditors continue to exert a mitigating influence on earnings management, albeit with weaker magnitude in this smaller subsample.

Both GPS and BS are negatively signed, implying that firms with stronger governance frameworks and larger boards are less likely to engage in earnings manipulation (Rajablu, 2016; Surifah, 2025; Younas et al., 2021). The inclusion of these governance variables increased the model's explanatory power (R^2 rises to 0.1082 in Model 4), indicating that governance quality plays an important complementary role in curbing earnings management. Overall, these results confirm that the observed effect of Big 4 auditors on earnings management is not merely driven by governance-related selection bias, reinforcing the robustness and internal validity of the main findings.

4. Additional Analysis: Financial Conditions

An additional analysis was incorporated to broaden the interpretation of the main findings. Table 4 presents regression results in which the financial distress variable ($FD_{i,t}$) has been replaced with a continuous measure of overall financial condition ($Zscore_{i,t}$). This approach aimed to capture a broader spectrum of financial health across firms, thereby providing a more comprehensive perspective on its association with earnings management.

Table 4. Robustness Test Statistics: Corporate Governance Controls

	Dependent variable: Earnings Management			
	(1)	(2)	(3)	(4)
FD	0.0333** (3.10)	0.0308** (2.66)	0.0335** (2.44)	0.0284** (1.97)
BIG4	-0.0252** (-2.71)	-0.0268** (-2.49)	-0.0250** (-2.37)	-0.0291** (-2.42)
FD*BIG4			-0.0004 (-0.02)	0.0069 (0.30)
SIZE	-0.0024 (-0.73)	-0.0034 (-0.87)	-0.0024 (-0.73)	-0.0034 (-0.86)
LEV	0.0031* (-1.93)	0.0030* (-1.68)	0.0030* (-1.93)	0.0030* (-1.69)
GWH	0.0128 (0.64)	0.0109 (0.48)	0.0128 (0.64)	0.0105 (0.45)
LR	-0.00004 (-0.04)	0.00001 (0.01)	-0.00004 (-0.04)	0.00001 (0.01)
STR	0.0018 (0.14)	0.0015 (0.10)	0.0018 (0.14)	0.0015 (0.10)
MTB	0.0052* (1.96)	0.0050* (1.78)	0.0051* (1.92)	0.0051* (1.78)
INR	0.0209 (0.71)	0.0269 (0.91)	0.0208 (0.72)	0.0277 (0.94)
GPS	-0.0003 (-1.54)	-0.0003 (-1.54)	-0.0003 (-1.57)	-0.0003 (-1.56)
BS	-0.0047** (-2.72)	-0.0056** (-2.78)	-0.0047** (-2.62)	-0.0055** (-2.72)
Cons	0.2077** (2.46)	0.2463** (2.36)	0.2077** (2.45)	0.2459** (2.35)
Robust	Yes	Yes	Yes	Yes
Year fixed effect	No	Yes	No	Yes
Industry fixed effect	No	Yes	No	Yes
Obs	456	456	456	456
R-Square	0.0940	0.1080	0.094	0.1082

*, **, *** indicates significance level at 10%, 5% and 1% respectively.

The results in columns (1) and (2) show that $Zscore_{i,t}$ is negatively associated with earnings management, with coefficients of -0.003 and -0.004 , which are significant at the 5% and 10% levels, respectively, both with and without fixed effects. These results imply that firms in a stronger financial condition are less likely to engage in earnings management, whereas those

with weaker financial health are more likely to manipulate accruals. This finding is consistent with prospect theory, which suggests that managers operating in the “loss domain” are more willing to engage in risk-taking behavior, including financial statement manipulation (Agrawal & Chatterjee, 2015; Li et al., 2020; Tversky & Kahneman, 1992; Young et al., 2012).

The role of Big 4 auditors was also re-examined in this broader context. In columns(1) and (2), $AUD_{i,t}$ continues to exhibit a negative and significant association with earnings management, reinforcing the notion that firms audited by Big 4 auditors generally produce higher-quality financial reports. More importantly, the interaction term $Zscore_{i,t} \times AUD_{i,t}$ in columns (3) and (4) is negative and statistically significant. This result indicates that Big 4 auditors are particularly effective in reinforcing the inverse relationship between financial health and earnings management. In other words, as the financial conditions of firms deteriorate, Big 4

auditors are more capable of curbing the associated rise in accrual-based manipulation compared to non-Big 4 auditors (Anglin et al., 2022; Biddle, 1986; Defond et al., 2018; Viana Jr et al., 2022).

These additional findings yield two important contributions. First, they broaden the validity of the main results by demonstrating that the relationship between firm financial condition and earnings management holds not only for distressed firms but also across the full spectrum of financial health. Thus, financial pressure, whether through acute distress or a more gradual decline in financial resources, remains a critical

Table 5. Additional Analysis: Financial Condition

	Dependent Variable: Earnings Management			
	(1)	(2)	(3)	(4)
ZScore	-0.003** (-3.26)	-0.004*** (-4.36)	-0.001*** (-3.90)	-0.002*** (-4.25)
AUD	-0.010** (-2.90)	-0.013** (-3.51)	0.004 (1.02)	0.006 (1.42)
ZScore*AUD			-0.002** (-2.15)	-0.002** (-2.48)
SIZE	-0.000*** (-8.39)	-0.008*** (-6.95)	-0.006*** (-9.06)	-0.010*** (-11.99)
LEV	0.002* (1.84)	0.001 (1.03)	0.002** (2.83)	0.000 (0.86)
GWH	0.087*** (6.94)	0.091*** (5.98)	0.057*** (7.90)	0.069*** (6.69)
LR	-0.002** (-2.8)	-0.002** (-2.43)	-0.001** (2.15)	-0.002** (-3.28)
STR	-0.004 (-0.8)	-0.009 (-1.37)	-0.000 (-0.23)	-0.004 (-0.89)
MTB	0.004*** (4.20)	0.005*** (4.28)	0.002** (4.02)	0.002*** (3.58)
INR	0.159*** (3.66)	0.168*** (3.55)	0.078** (2.95)	0.26** (3.58)
Cons	0.306*** (12.27)	0.290*** (10.57)	0.230*** (14.03)	0.330*** (16.49)
Robust	Yes	Yes	Yes	Yes
Year Fixed Effect	No	Yes	No	Yes
Industry Fixed Effect	No	Yes	No	Yes
Obs	5,008	5,008	5,008	5,008
R-Square	0.0480	0.2852	0.0424	0.2988

*, **, *** indicates significance level at 10%, 5% and 1% respectively.

driver of opportunistic managerial behavior. Second, they underscore the distinctive role of Big 4 auditors in this broader setting: they are associated with lower overall earnings management and actively reinforce financial reporting discipline as firm financial health deteriorates. This suggests that high-quality auditing may act as a counterweight to the cognitive biases described in prospect theory, whereby managers in the loss domain are more prone to risk-taking and manipulation. The wider implication is that high-quality audit oversight can serve as an effective external governance mechanism in emerging markets, particularly in deterring opportunistic behavior across varying degrees of financial health.

Within the framework of role theory, these findings further support the notion that Big 4 auditors, by virtue of their institutional strength, are more likely to fulfill their role as guardians of financial reporting. In contrast, non-Big 4 auditors are more vulnerable to role conflict and ambiguity. This reinforces the institutional significance of the Big 4, underscoring the need to enhance the auditing profession's institutional capacity in Indonesia. For regulators, these findings provide empirical evidence that institutional reform and the enhancement of local auditor quality are key to developing a more credible, transparent, and sustainable financial reporting ecosystem.

5. Additional Analysis: Increasing and Decreasing Earnings Management

To complement the main findings, an additional analysis was conducted that distinguished between increasing and decreasing earnings management. Prior research suggests that managers may choose different manipulation strategies depending on performance pressures, survival incentives, and auditor oversight. By examining upward and downward accrual

manipulation separately, this analysis offers a more nuanced understanding of how financial distress and auditor quality interact to influence reporting behavior. This approach allowed the study to assess whether Big 4 auditors respond symmetrically or asymmetrically when firms adjust earnings in different directions.

The results in Table 6 indicate a clear divergence in the way financial distress and auditor quality relate to increasing versus decreasing earnings management. For increasing earnings management, financial distress alone shows no statistically significant impact after controlling for industry and year effects, suggesting that distress does not systematically prompt managers to inflate earnings. This is consistent with the view that distressed firms are subject to heightened scrutiny from creditors, regulators, and auditors, which constrains their ability to engage in aggressive upward manipulation. However, Big 4 auditors exhibit a consistently negative and significant influence on increasing earnings management, reinforcing their well-documented capacity to limit opportunistic inflation of reported performance. Importantly, the interaction term between financial distress and Big 4 auditors is positive and statistically significant. This indicates that the effectiveness of Big 4 auditors in constraining upward earnings manipulation weakens when firms are financially distressed. The findings align with role theory's prediction that auditors experience heightened role conflict in high-pressure situations, especially when their economic dependence on distressed clients increases. As a result, the monitoring strength of Big 4 auditors becomes less binding when clients face acute financial difficulties.

A contrasting pattern emerged from the analysis of decreasing earnings management (see Table 6). Financial distress again shows no significant relationship with downward

manipulation, indicating that firms in distress do not have a strong incentive to reduce earnings further. This is consistent with prospect theory, which suggests that managers operating in the “loss domain” prefer strategies that help mitigate or offset negative outcomes rather than magnifying them. Big 4 auditors, however, exhibit a positive and significant association with decreasing earnings management. This may reflect the tendency of high-quality auditors to

enforce more conservative reporting practices, such as timely loss recognition or stricter impairment testing, leading to downward adjustments that enhance reporting credibility. Moreover, the interaction between financial distress and Big 4 auditors is again positive and significant. Unlike the upward manipulation context, where Big 4 constraints weaken under distress, here the results point toward auditors being more likely to require or accept income-decreasing accruals

Table 6. Additional Analysis: Financial Condition

	Dependent variable : Earnings Management			
	Increasing EM		Decreasing EM	
	(1)	(2)	(3)	(4)
FD	0.0063*	0.0003	0.0035	0.0012
	1.88	0.10	0.8	0.26
BIG4	-0.0072**	-0.0148***	0.0112	0.0036
	-2.63	-5.24	2.38	0.65
FCON*BIG4		0.0227		0.0273**
		2.59		2.99
SIZE	-0.0096***	-0.0043**	-0.0094***	-0.0090***
	-5.16	-4.26	-6.74	-7.14
LEV	0.0000	0.0000	-0.0004	-0.0005
	0.75	0.61	-1.02	-1.35
GWH	0.0473***	0.0280**	0.0220**	0.0221**
	5.52	3.67	2.4	2.48
LR	-0.0002	-0.000	0.000	0.0001
	-1.26	-0.06	0.19	0.42
STR	-0.0045	-0.0040*	0.0055*	0.0031
	-1.23	-1.97	1.9	1.37
MTB	0.0010**	0.0007**	0.0003	0.0002
	2.4	2.52	1.22	0.88
INR	-0.0067	-0.0037	0.0074	0.0186
	-0.59	-0.37	0.32	0.82
Cons	0.2910***	0.1692***	0.3125	0.2988
	7.03	7.74	9.97	10.53
Robust	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes
Obs	2,296	2,296	2,416	2,416
R-Square	0.1917	0.1214	0.3954	0.3791

*, **, *** indicates significance level at 10%, 5% and 1% respectively.

when a distressed firm's economic condition warrants more conservative accounting. This suggests that enforcement of conservative reporting becomes more pronounced under distress, reflecting an auditor response focused on safeguarding the integrity of financial statements during periods of heightened uncertainty.

Taken together, these results reveal a meaningful asymmetry in the role of Big 4 auditors. Their capacity to suppress income-increasing earnings management is strong under normal conditions but becomes partially attenuated when clients face financial distress. At the same time, Big 4 auditors appear more inclined to enforce conservative, income-decreasing adjustments during periods of distress, consistent with prudent judgment and adherence to standards requiring timely recognition of losses. This asymmetric pattern offers important insights into auditing behavior in emerging markets such as Indonesia, where institutional enforcement remains weak and auditors must navigate significant economic and relational pressures. The findings underscore the value of disaggregating earnings management into increasing and decreasing components, as doing so reveals dynamics that would otherwise remain obscured in aggregate analyses.

6. Economic Significance of the Findings

Beyond their statistical significance, the results of this study also have meaningful economic significance. The estimated coefficients on financial distress (FD) indicate that a one-unit increase in distress (as measured by the Altman Z-score dummy) is associated with 1.1–1.4 average percentage point increases in discretionary accruals, a change large enough to materially alter reported earnings and affect investor perceptions of firm performance. Similarly, the coefficient on auditor quality (AUD) implies that firms audited by Big 4

auditors report, on average, discretionary accruals 1.0–1.4 percentage points lower than those audited by non-Big 4 auditors. These magnitudes, while numerically small, translate into economically meaningful effects given that earnings management often occurs within narrow profitability margins.

The results therefore demonstrate that audit quality exerts a tangible economic influence on financial reporting outcomes, reinforcing the role of auditors as a critical external governance mechanism (Januarsi & Taufik, 2025; Krishnan & Krishnan, 1996; Naudé, 2010; Rajablu, 2016; Surifah, 2025; Younas et al., 2021). From a practical standpoint, these findings suggest that even modest reductions in earnings manipulation can meaningfully improve the transparency and credibility of financial statements, particularly in capital markets such as Indonesia where investor protection mechanisms are still developing.

DISCUSSION

The findings of the current study show that earnings management under financial distress is not merely a response to financial strain but also rooted in psychological mechanisms consistent with prospect theory. Firms experiencing financial distress are more likely to engage in earnings management practices, in line with our argument that financial pressure motivates management to manipulate earnings to preserve a favorable image. Previous findings reported by Agrawal and Chatterjee (2015), Du and Lai (2018), and Claessens et al. (2001) also suggest that individuals operating in a "loss domain" are more willing to take long-term risks, and financial strain creates cognitive incentives that increase managerial propensity for manipulative behavior. This behavior is particularly notable in institutional settings such as Indonesia, where financial statements serve as a crucial basis for corporate valuation (Campa, 2015; Kyriakou,

2020; Li et al., 2020). Such manipulative acts reflect opportunistic behavior, driven by a desire to preserve both personal (Kyriakou, 2020; Sumiyana et al., 2023) and corporate image (Banimahd & Aliabadi, 2013; Charitou et al., 2007).

Contrary to prior findings, this study finds no robust evidence that Big 4 auditors mitigate earnings management among distressed firms in the Indonesian context. While global studies have highlighted the effectiveness of monitoring by Big 4 auditors, our results show their role is less consistent in an emerging market. From the perspective of role theory, this may be explained by role conflict and role ambiguity. Specifically, auditors in weaker institutional environments, such as Indonesia, face conflicting pressures between client retention and regulatory expectations (Du & Lai, 2018; Ekawati, 2025; Francis & Wang, 2008; Viana Jr et al., 2022). Despite their global brand and institutional strength, Big 4 auditors may struggle to maintain independence when client distress and long-term engagement incentives compromise their objectivity (Becker et al., 1998; Camacho - Miñano et al., 2023; Christensen et al., 2016; Viana Jr et al., 2022). In such cases, auditors may act more as passive collaborators than active enforcers of financial reporting quality.

The findings further suggest that the global reputation of Big 4 auditors in Indonesia may function more as a symbolic marker of quality rather than guarantee inconsistent audit behavior. In other words, the differentiated "audit styles" observed in comparative global research are not clear in the Indonesian setting. The lack of variation identified may reflect institutional homogeneity in audit practices driven by weak legal enforcement and client dominance in the audit market (Krishnan & Krishnan, 1996; Naudé, 2010; Viana Jr et al.,

2022). This highlights the need to account for local institutional contexts when evaluating the role of global auditors in emerging economies.

This study offers several theoretical and practical contributions. First, it adds to the accounting literature by reinforcing that earnings management is not solely influenced by firm-level characteristics but also by external financial pressures that shape managerial decision-making. The finding that Big 4 auditors do not consistently constrain earnings management among distressed firms provides empirical support for role theory, emphasizing that structural auditor capacity matters but its effectiveness is contingent on the institutional environment in which the auditor operates (Barberis, 2013; Tversky & Kahneman, 1992).

Second, this study contributes to the literature on corporate governance in emerging markets. While cross-country studies report that Big 4 auditors mitigate the positive association between distress and earnings management, our evidence from Indonesia reveals inconsistency in this effect (Surifah, 2025; Viana Jr et al., 2022). This underscores the effectiveness of external governance mechanisms as highly contextual, shaped by legal enforcement, the independence of the audit profession, and local market dynamics.

Practically, the findings offer important policy and managerial implications for regulators, auditors, investors, and creditors. For regulators, the results underscore the urgency of strengthening audit capacity and independence, particularly among non-Big 4 auditors, as a strategic priority in improving corporate governance and to ensure consistent enforcement of reporting standards (Christensen et al., 2016; Francis & Wang, 2008). For auditors, the findings serve as a reminder that global reputation does not automatically translate into domestic audit effectiveness in jurisdictions with

weak legal frameworks. Boards of directors and audit committees should also consider auditor reputation and institutional capacity as strategic criteria in auditor selection, particularly when firms are facing financial strain. For investors and creditors, the results underscore the importance of considering the auditor's identity when evaluating the credibility of financial reports, particularly for firms under financial pressure. Auditor identity is an important signal of reporting credibility, which factors into investment and lending decisions (Becker et al., 1998; Kurniawan et al., 2024). Together, these implications underscore the economic relevance and policy importance of the observed statistical effects in shaping both the transparency and accountability of Indonesia's capital markets.

CONCLUSION AND LIMITATIONS

This study examined the relationship between financial distress and earnings management, and the moderating role of Big 4 auditors in non-financial firms listed on the stock exchange in Indonesia between 2010 and 2024. Earnings management was measured using the modified Jones accrual model, while firm financial condition was proxied using the Altman Z-score.

Several key findings emerged. First, the regression results show that firms experiencing financial distress are more likely to engage in earnings management. This finding is consistent with prospect theory, which suggests that managers operating in the "loss domain" are more inclined to take risks, including accrual manipulation, to maintain the firm's legitimacy in the eyes of investors and creditors. Second, Big 4 auditors are consistently associated with lower levels of earnings management compared to non-Big 4 auditors, reinforcing their global reputation and capacity to deliver higher audit quality. However, the interaction between financial distress and Big 4 auditors was not

statistically significant, suggesting that the presence of a Big 4 auditor is not sufficient to curb managerial opportunism under financial pressure. These results highlight the limitations of auditor effectiveness in Indonesia, where role conflict and role ambiguity persist due to weak enforcement and high client dependency.

Third, additional analyses using continuous measures of financial condition identified a more precise pattern. Specifically, firms with stronger financial health engaged in less earnings management, whereas those in deteriorating condition were more likely to manipulate accruals. In this context, Big 4 auditors were shown to be more effective in reinforcing the negative relationship between financial condition and earnings management. This suggests their impact is more evident in the context of broader financial conditions than in distress-specific scenarios. Overall, the results emphasize that financial health is a key determinant of earnings management. While Big 4 auditors play a role in reducing manipulation in general, their effectiveness in monitoring distressed clients remains limited in the Indonesian context.

Alongside its contributions, this study has several limitations. First, earnings management is measured solely through discretionary accruals using the modified Jones model. While widely accepted, this model may not capture real earnings management activities. Employing alternative or combined measures of accrual-based and real earnings management would provide a more holistic view of managerial manipulation. Second, the study is limited to the Indonesian context and thus the findings may not be generalizable to other emerging markets with different institutional structures. Cross-country comparisons within ASEAN or other emerging markets could offer insights into how institutional differences shape auditor effectiveness. Third, auditor quality is proxied using a binary

Big 4 indicator, without exploring the heterogeneity within and across auditor groups in Indonesia. Future research could incorporate more granular indicators such as audit fee levels, partner experience, or client portfolio characteristics. Finally, this study does not incorporate going concern audit opinions as an additional control or alternative proxy for financial distress due to inconsistent data disclosure. Future research could integrate such information to directly assess the alignment between auditors' reporting decisions and quantitative indicators of financial distress. Future work could also explore non-accounting factors, such as corporate reputation, ownership concentration, and cultural dimensions, that may influence auditors' ability to constrain earnings management.

In summary, this study has highlighted the significance of understanding auditor roles within emerging market institutional frameworks. While Big 4 auditors are generally shown to enhance reporting quality, their effectiveness in monitoring financially distressed clients remains inconsistent in Indonesia. This suggests that strengthening corporate governance requires more than reliance on global audit reputations; it also demands robust institutional reform and legal enforcement. Accordingly, this study contributes not only to the academic literature on earnings management and auditing but also offers policy-relevant insights for building more transparent, credible, and sustainable governance systems in emerging markets.

Declaration of AI and AI-assisted Technologies in the Writing Process

During the preparation of this work, the authors used **Chat GPT Premium** in order to **translate the manuscript**. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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