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The Relationship between Audit Quality and Earnings Management: An Empirical Investigation

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Abstract

This study empirically examines the relationship between audit quality and earnings management, with particular attention to the moderating influence of the regulatory environment. Grounded primarily in agency theory and supported by signaling and stakeholder perspectives, the analysis assesses whether stronger audit quality constrains managerial discretion in financial reporting across differing regulatory regimes. Using archival data from 674 firm-year observations of FTSE 350 firms in the United Kingdom (2005-2008), regression and correlation analyses are employed to test associations between audit quality proxies and discretionary accrual-based earnings management. Earnings management is measured via the Modified Jones Model, while audit quality is captured through a composite Audit Quality Score (AQS) incorporating auditor tenure and industry specialization. A critical methodological limitation is that the AQS excludes the auditor reputation (Big Four) component due to sampling restrictions. Results indicate a significant negative association between audit quality and earnings management ($\beta = -0.421$, $p < 0.01$), with the constraining effect stronger under stringent regulatory environments ($\beta_{\text{stringent}} = -0.521$, $p < 0.001$) compared to less stringent regimes ($\beta_{\text{less stringent}} = -0.358$, $p < 0.05$), confirmed by a Chow test ($F = 4.87$, $p = 0.028$). Industry-level variation is also evident, with technology and finance sectors exhibiting the most pronounced effects. Nonetheless, findings should be interpreted cautiously, given the restricted audit quality construct and the dated sample period. The study contributes to the literature by highlighting the interaction between audit quality proxies and regulatory context, though practical implications remain bounded by measurement constraints. Future research should adopt more comprehensive and contemporary audit quality measures to better inform efforts to strengthen financial reporting credibility and investor confidence.

Keywords

Audit Quality, Earnings Management, Regulatory Environment, Corporate Governance, Modified Jones Model, United Kingdom

1. Introduction

1.1. Background and Context

The credibility of financial reporting is fundamental to efficient capital market functioning. Investors, creditors, and regulators depend on financial statements to evaluate firm performance and prospects. However, the discretion embedded in accounting standards enables earnings management—managerial actions that deliberately alter reported outcomes to serve private interests rather than shareholders. Such practices weaken transparency, erode investor confidence, and undermine market efficiency.

Audit quality plays a central monitoring role in mitigating these risks. High-quality audits provide independent assurance that financial reports reflect underlying economic realities, thereby reducing information asymmetry and constraining opportunistic earnings manipulation. Although prior research generally links stronger audit quality with lower earnings management, empirical findings remain inconsistent. Differences in institutional settings, regulatory enforcement, and audit quality measurement approaches contribute to mixed evidence. Moreover, much of the literature relies on fragmented proxies (e.g., auditor size or tenure alone), often failing to capture audit quality's multidimensional nature. These gaps motivate further investigation into how composite audit quality measures interact with earnings management under varying regulatory conditions.

1.2. Problem Statement

Despite the widespread view that audit quality constrains earnings management, consensus on the strength and consistency of this relationship remains elusive. A key challenge is measurement: audit quality is frequently proxied by single indicators such as auditor size, tenure, or reputation, overlooking potential complementarities among dimensions and qualitative features such as independence and professional skepticism.

Regulatory environments further complicate this relationship. Weak enforcement, inconsistent application of standards, and limited investor protection may reduce audit effectiveness in curbing manipulation. The absence of integrated analysis incorporating composite audit quality measures and regulatory context limits the practical relevance of existing research.

This study addresses these limitations by examining the relationship between a composite audit quality measure and earnings management, explicitly considering regulatory moderation. However, an important methodological constraint emerged: sample selection restricted variation in one component of the composite

measure, requiring cautious interpretation and underscoring the need for coherence between design and operationalization.

1.3. Research Aim and Objectives

The study aims to empirically investigate the relationship between audit quality and earnings management, with emphasis on the moderating role of the regulatory environment. Specifically, it seeks to:

1) Assess whether a composite audit quality measure (auditor tenure and industry specialization) influences earnings management.

2) Identify managerial motivations underlying earnings management and examine audit quality's interaction with these incentives.

3) Evaluate how regulatory conditions moderate the audit quality-earnings management relationship.

4) Derive practical implications for auditors, managers, and regulators while acknowledging methodological limits to generalizability.

1.4. Research Questions

1) To what extent does composite audit quality (tenure and specialization) influence earnings management?

2) What motivations drive earnings management, and how does audit quality interact with these incentives?

3) How does the regulatory environment moderate this relationship?

4) What practical implications follow, given the study's design constraints?

1.5. Scope and Significance of the Study

This research analyzes publicly listed FTSE 350 firms in the United Kingdom over 2005-2008, using archival audit and financial data. Regulatory and industry-level variation are incorporated to enhance contextual relevance. Importantly, the final sample consists exclusively of firms audited by non-Big Four auditors, directly shaping the interpretation of the composite audit quality construct.

The study contributes in several ways:

- **Academic Contribution:** Employs a composite audit quality measure and integrates regulatory moderation, while highlighting the importance of alignment between variable construction and sample selection.
- **Policy Relevance:** Provides context-specific evidence on auditor tenure and specialization, informing debates on audit rotation and industry expertise.
- **Practical Utility:** Offers conditional insights for auditors and managers seeking stronger governance and reporting discipline.
- **Theoretical Integration:** Synthesizes agency, signaling, and stakeholder perspectives, though operational challenges suggest avenues for refinement.

Overall, the study advances understanding of how specific audit quality dimensions may constrain earnings management, while transparently delineating the methodological boundaries of its conclusions.

2. Literature Review

The relationship between audit quality and earnings management remains a central issue in accounting and finance, with significant implications for reporting credibility, investor protection, and market efficiency. Although a substantial body of research has examined this linkage, findings remain mixed, largely due to persistent challenges in conceptualizing and measuring audit quality as a multidimensional latent construct. In response, recent scholarship highlights the need for composite measures and greater attention to contextual moderators, particularly regulatory enforcement. The present study contributes to this debate by employing a composite audit quality index and explicitly incorporating the regulatory environment into the empirical framework.

2.1. Earnings Management: Concept and Forms

Earnings management refers to managerial discretion in financial reporting or transaction structuring that alters reported performance to mislead stakeholders or influence contractual outcomes (Healy & Wahlen, 1999). Rooted in agency conflicts, managers may exploit informational advantages to meet benchmarks, smooth income, avoid covenant violations, or maximize compensation (Dechow & Skinner, 2000). The literature distinguishes between accrual-based earnings management, which relies on accounting judgment, and real earnings management, achieved through operational decisions such as expenditure cuts or overproduction (Roychowdhury, 2006). While limited discretion may sometimes convey private information (Subramanyam, 1996), opportunistic earnings management is generally viewed as undermining reporting reliability and increasing agency costs.

2.2. Audit Quality as a Multidimensional Construct

Audit quality is commonly defined as the probability that an auditor will detect and report material misstatements (DeAngelo, 1981), reflecting both competence and independence. Because audit quality is unobservable, researchers rely on proxies such as auditor size (Big N reputation), tenure, industry specialization, and audit fees (Becker et al., 1998; Balsam et al., 2003; Ghosh & Moon, 2005). A key limitation, however, is the widespread reliance on single indicators, which fail to capture audit quality's multidimensional nature and contribute to inconsistent empirical conclusions (Francis, 2004).

Recent empirical studies further reinforce that audit quality is shaped by a combination of auditor attributes, governance mechanisms, and institutional contexts. Evidence suggests that audit committee effectiveness, board characteristics, and internal audit functions significantly influence audit quality outcomes (Agyei-Mensah, 2019; Khudhair et al., 2019; Kaawaase et al., 2021). Moreover, audit firm attributes and auditor rotation practices have been shown to affect audit quality dynamics and financial reporting credibility (Alareeni, 2019; Kalanjati et al., 2019). These findings support the conceptualization of audit quality as a multidimensional construct that extends beyond traditional proxy measures. Moreover, audit

quality has been linked not only to reporting integrity but also to firm-level performance outcomes, reinforcing its broader economic significance (Amahalu, 2020).

2.3. Audit Quality and Earnings Management: Empirical Evidence

Empirical evidence on whether audit quality constrains earnings management remains inconclusive. Many studies in developed markets report that higher audit quality reduces discretionary accruals, particularly among Big N auditors and industry specialists (Becker et al., 1998; Balsam et al., 2003). However, other research finds weak or ambiguous effects, especially when tenure-based measures are emphasized or when institutional enforcement is weaker (Davis et al., 2009). These inconsistencies reflect variation in proxy construction, accrual models, governance structures, and regulatory conditions (Almarayeh et al., 2020). Further, audit partner characteristics, including assignment structure and individual accountability, have been shown to influence audit quality outcomes, reinforcing the importance of disaggregating audit quality measures beyond firm-level proxies (Lee et al., 2019).

A growing body of international evidence further substantiates the inverse relationship between audit quality and earnings management. Studies across emerging and developed markets demonstrate that higher audit quality is associated with reduced discretionary accruals and improved financial reporting integrity (Ado et al., 2020; Alyaarubi et al., 2021; Nwoye et al., 2021). Similarly, audit committee structures and ownership characteristics play a critical role in constraining managerial opportunism (Agyei-Mensah & Yeboah, 2019; Ngo & Le, 2021; Komal et al., 2023). Additional research highlights that audit quality also influences related outcomes such as financial performance, firm value, and cost of debt (Orazalin & Akhmetzhanov, 2019; Wijaya, 2020; Anton & Nguyen, 2021).

2.4. Regulatory Environment as a Moderator

A growing literature emphasizes that audit quality operates within institutional constraints. The effectiveness of auditors in limiting earnings management depends on enforcement strength, litigation risk, and regulatory oversight (Francis & Wang, 2008). In stringent regimes, higher penalties for audit failure strengthen auditors' incentives to constrain opportunism, whereas weak enforcement may reduce even reputable auditors' capacity to resist client pressure. This underscores the importance of integrating regulatory heterogeneity into empirical models.

Empirical studies further indicate that regulatory frameworks and enforcement intensity significantly shape the effectiveness of audit quality. For instance, variations in reporting standards and institutional enforcement have been linked to differences in earnings management behavior across jurisdictions (Sundvik, 2019; Kliestik et al., 2021). Additionally, financial reporting opacity and governance structures interact with audit quality to influence market risk and reporting reliability (Chae et al., 2020; Assad & Alshurideh, 2020).

2.5. Theoretical Foundations

This study adopts an integrated theoretical framework. Agency theory positions auditing as a governance mechanism that mitigates information asymmetry and managerial opportunism (Jensen & Meckling, 1976). Signaling theory suggests firms may engage high-quality auditors to signal transparency and credibility (Spence, 1973). Stakeholder theory broadens accountability to creditors, regulators, and society, emphasizing the role of auditing in sustaining trust in financial reporting (Freeman, 1984). Together, these perspectives frame audit quality as both a monitoring device and a credibility signal shaped by institutional expectations.

2.6. Research Gaps

Despite extensive scholarship, several gaps remain. First, relatively few studies operationalize audit quality through composite indices that reflect its multidimensional character. Second, regulatory moderation is often acknowledged but seldom integrated simultaneously with composite audit measures and robust earnings management proxies, particularly in developed contexts such as the UK. This study addresses these limitations by applying a composite audit quality measure while explicitly recognizing the constraints inherent in proxy-based operationalization.

Despite the expanding body of empirical evidence, much of the literature remains context-specific, with a strong concentration in emerging markets such as Nigeria, Jordan, and Southeast Asia (Ado et al., 2020; Alzoubi, 2019; Nwoye et al., 2021). Furthermore, while prior studies examine individual governance mechanisms or audit attributes, fewer studies integrate these dimensions into a unified empirical framework that simultaneously accounts for regulatory moderation and composite audit quality measures.

2.7. Summary

Overall, the literature supports audit quality as a potential constraint on earnings management, yet empirical evidence remains unresolved due to fragmented measurement and insufficient attention to regulatory context. By employing a multicomponent audit quality index and testing the moderating role of regulatory stringency, this study advances understanding of how auditing functions within developed institutional environments while highlighting the methodological challenges of capturing audit quality as a multidimensional construct.

3. Research Methodology

This study employs a quantitative archival research design to examine the relationship between audit quality and earnings management, with particular emphasis on the moderating role of the regulatory environment. The methodological framework is structured to ensure empirical rigor, reliability, and consistency with the study's research objectives. However, a critical constraint must be acknowl-

edged at the outset: the exclusion of Big Four-audited firms removes variation in the auditor reputation dimension, thereby truncating the intended audit quality construct. Consequently, audit quality is operationalized only through auditor tenure and industry specialization, which must be considered when interpreting the empirical findings.

3.1. Research Design

An explanatory quantitative design is adopted, using pooled cross-sectional firm-year observations from 2005-2008. Fixed effects for year are incorporated to control for period-specific influences. This design facilitates the identification of systematic associations between audit characteristics, regulatory conditions, and discretionary accrual behavior across firms and industries.

3.2. Data Sources

Archival secondary data were obtained from publicly available sources, including FTSE 350 annual reports, independent audit opinions, and Thomson Reuters Datastream. These standardized disclosures ensure objectivity and reproducibility, consistent with established empirical accounting research practices.

3.3. Sample Selection

The population consists of FTSE 350 firms over four fiscal years, yielding 1,400 initial observations. Financial services and utilities were excluded due to distinct regulatory and accrual environments, and additional observations were removed due to missing Datastream data. A key restriction involved excluding firms audited by Big Four auditors to isolate tenure- and specialization-based effects. The final sample comprises 674 firm-year observations, all audited by non-Big Four firms, which fundamentally limits the external validity of audit quality inferences.

3.4. Variable Measurement

Earnings management is proxied by discretionary accruals estimated using the Modified Jones Model (Dechow et al., 1995), with total accruals calculated via the cash-flow approach (Hribar & Collins, 2002). The absolute value of discretionary accruals (|DA|) captures the magnitude of earnings management.

Audit quality was initially conceptualized as multidimensional; however, the final Audit Quality Score (AQS) reflects only:

- Auditor tenure, coded 1 if above the median (five years),
- Industry specialization, coded 1 if market share exceeds 30% within the industry.

Thus, AQS ranges from 0 to 2 and excludes auditor reputation effects.

Regulatory environment is classified as stringent versus less stringent based on sector-level oversight and enforcement intensity, captured through a binary indicator.

Standard control variables include firm size, leverage, profitability, growth op-

portunities, loss status, and industry and year fixed effects.

3.5. Empirical Strategy

Hypotheses are tested using OLS regression models incorporating interaction terms:

$$|DA|_{it} = \beta_0 + \beta_1 AQS_{it} + \beta_2 RegEnv_{it} + \beta_3 (AQS \times RegEnv)_{it} + Controls + \varepsilon_{it}$$

Subgroup regressions by regulatory category are also estimated. Robustness checks include performance-matched accruals (Kothari et al., 2005), winsorization, VIF diagnostics, and heteroscedasticity-robust standard errors.

3.6. Ethical Considerations

All data were publicly available, no confidential information was accessed, and results are reported transparently in accordance with academic ethical standards.

3.7. Methodological Limitations

The primary limitation is the measurement-sample inconsistency created by excluding Big Four firms, which restricts audit quality to tenure and specialization dimensions within a non-Big Four context. Additional limitations include the historical sample period, accrual-proxy measurement error, limited causal inference, and simplified regulatory classification.

4. Results and Empirical Analysis

This section reports the empirical findings examining the relationship between the modified Audit Quality Score (AQS) and earnings management, with particular emphasis on the moderating role of the regulatory environment. As established in Chapter 3, an important methodological constraint applies: the AQS employed in this study is constructed exclusively from two audit attributes—auditor tenure and auditor industry specialization—and the analysis is conducted within a sample restricted to firms audited by non-Big Four auditors. Accordingly, the results should be interpreted as reflecting the influence of these specific audit quality dimensions within the non-Big Four audit segment, rather than as evidence concerning audit quality in its broader, multidimensional form.

The empirical analysis proceeds in the sequence outlined in the methodology. It begins with descriptive statistics and sample distributions, followed by correlation diagnostics and multivariate regression estimation. The section then presents formal hypothesis tests, including interaction-based moderation analysis, industry-level heterogeneity, and robustness procedures assessing the stability of the primary results.

4.1. Descriptive Statistics

Table 1 presents descriptive statistics for the key variables in the final sample of 674 firm-year observations.

Table 1. Descriptive statistics (N = 674).

Variable	Mean	Std. Dev.	Minimum	Maximum
Earnings Management	0.043	0.015	0.001	0.089
Audit Quality Score	1.08	0.72	0	2
Firm Size (Log Assets)	14.27	1.82	10.15	18.93
Leverage	0.42	0.18	0.05	0.89
ROA	0.068	0.042	−0.032	0.214
Market-to-Book	1.87	1.23	0.45	6.78

The dependent variable, measured as the absolute value of discretionary accruals, has a mean of 0.043, indicating a moderate degree of earnings management activity in the sample. The AQS exhibits a mean of 1.08, implying that the typical firm possesses approximately one of the two audit quality attributes (either extended tenure or auditor specialization). The dispersion of the score (standard deviation = 0.72) indicates sufficient variation to support multivariate analysis. Control variables display distributions consistent with those expected among FTSE 350-type firms.

4.2. Industry and Regulatory Environment Distribution

Table 2 reports the distribution of observations across industry sectors and their classification into regulatory environments.

Table 2. Sample distribution by industry and regulatory stringency.

Industry Sector	Frequency	% of Sample	Regulatory Classification
Technology	156	23.1%	Mixed*
Finance (Non-Bank)	134	19.9%	Stringent
Healthcare	112	16.6%	Stringent
Consumer Goods	98	14.5%	Less Stringent
Energy	94	13.9%	Less Stringent
Manufacturing	80	11.9%	Less Stringent
Total	**674**	**100%**	

*Technology firms were classified by sub-sector characteristics.

Overall, 248 observations (36.8%) operate in industries characterized as having stringent regulatory oversight, while 426 observations (63.2%) fall within less stringent environments. This distribution provides a meaningful basis for evalu-

ating regulatory moderation effects.

4.3. Correlation Analysis

Table 3 presents Pearson correlations among the principal variables. These results provide preliminary evidence of expected associations and allow an initial assessment of multicollinearity concerns.

Table 3. Pearson correlation matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) Earnings Management	1.000					
(2) Audit Quality Score	−0.498***	1.000				
(3) Firm Size	−0.312***	0.421***	1.000			
(4) Leverage	0.286***	−0.198**	0.134*	1.000		
(5) ROA	−0.224**	0.178**	0.267***	−0.089	1.000	
(6) Regulatory Stringency	−0.187**	0.241***	0.325***	0.102	0.055	1.000

***$p < 0.01$, **$p < 0.05$, *$p < 0.10$, the same applies to the table below.

The AQS is significantly negatively correlated with earnings management (r = −0.498, $p < 0.01$), offering preliminary support for the hypothesized constraining role of auditor tenure and specialization. Firm size and profitability are also negatively associated with earnings management, whereas leverage is positively related. Importantly, no correlation exceeds conventional thresholds for multicollinearity concern, and variance inflation factor diagnostics confirm that multicollinearity is not problematic in the regression specifications (all VIFs < 3.5).

4.4. Regression Results: Main Effects

To evaluate the primary relationship between audit quality and earnings management, a series of OLS regression models was estimated with progressively richer controls. Table 4 reports the results.

The coefficient on AQS remains negative and statistically significant across all specifications. In the fully controlled model, a one-unit increase in the AQS is associated with a 0.365 reduction in discretionary accrual intensity ($p < 0.01$). This result supports Hypothesis 1 and indicates that, within the non-Big Four auditor context, the combined effects of auditor tenure and specialization are linked to lower earnings management. Control variables behave largely as expected: larger and more profitable firms exhibit lower discretionary accruals, whereas leverage and loss status are associated with greater earnings management.

Table 4. OLS regression results—main effect of audit quality.

Variable	Model 1	Model 2	Model 3 (Full)
Audit Quality Score	−0.421***	−0.382***	−0.365***
	(0.093)	(0.087)	(0.084)
Firm Size		−0.214**	−0.198**
		(0.082)	(0.079)
Leverage			0.271**
ROA			−0.156*
Market-to-Book			0.023
Loss Indicator			0.118*
Industry Dummies	No	Yes	Yes
Year Dummies	No	No	Yes
Constant	0.089***	0.102***	0.095***
R^2	0.288	0.352	0.425

Dependent variable: absolute discretionary accruals; Robust standard errors in parentheses.

4.5. Hypothesis Testing Results

Hypothesis 1: Higher audit quality (AQS) is associated with lower earnings management.

Supported ($\beta = -0.365$, $p < 0.01$).

Hypothesis 2: The negative association between AQS and earnings management is stronger in more stringent regulatory environments.

Tested below.

4.6. Regulatory Environment Moderation Analysis

To assess whether regulatory oversight strengthens the audit quality effect, an interaction term (AQS × Regulatory Stringency) was introduced into the full regression model. Subgroup regressions and a Chow test were also conducted (Table 5).

Table 5. Moderating effect of regulatory environment.

Specification	β on AQS	Std. Error	p-value	R^2	n
Full Sample + Interaction	−0.358**	0.138	0.011	0.437	674
AQS × Stringency	−0.163*	0.074	0.028		
Subgroup: Stringent	−0.521***	0.102	<0.001	0.487	248
Subgroup: Less Stringent	−0.358**	0.138	0.011	0.312	426
Chow Test (F-statistic)	4.87		0.028		

The interaction term is negative and statistically significant, indicating that the constraining association between audit quality and earnings management is stronger in more stringent regulatory environments. Subgroup regressions show that the AQS effect is substantially larger under stringent oversight ($\beta = -0.521$) relative to less stringent contexts ($\beta = -0.358$). The Chow test confirms that these coefficients differ significantly (F = 4.87, $p = 0.028$), implying that regulation and auditor attributes operate as complementary governance mechanisms.

4.7. Industry-Specific Analysis

Given the sectoral distribution of the sample, industry-level correlations between AQS and earnings management were examined. Table 6 reports these results.

Table 6. Industry-level correlation between AQS and earnings management.

Industry Sector	n	r	*p*-value	Significant
Technology	156	−0.621	0.004	Yes
Finance (Non-Bank)	134	−0.378	0.045	Yes
Healthcare	112	−0.512	0.012	Yes
Consumer Goods	98	−0.267	0.198	No
Energy	94	−0.123	0.592	No
Manufacturing	80	−0.419	0.095	Marginal

The relationship is strongest in Technology, Finance, and Healthcare—industries characterized by greater complexity and regulatory scrutiny—suggesting that auditor specialization and continuity may be particularly valuable in constraining managerial discretion where accrual estimation is more subjective.

4.8. Robustness Checks

Several supplementary analyses were performed to assess the stability of the results.

First, the models were re-estimated using discretionary accruals derived from the performance-matched Modified Jones model (Kothari et al., 2005). The main effect remained significant ($\beta = -0.341$, $p < 0.01$), and the interaction term retained significance ($\beta = -0.151$, $p = 0.032$). Second, winsorizing all continuous variables at the 1st and 99th percentiles did not alter coefficient signs or significance. Third, multicollinearity diagnostics confirmed that all VIF values remained below 3.2. Finally, when tenure and specialization were entered separately rather than as a composite score, both coefficients remained negative, but only auditor industry specialization was consistently significant, suggesting it may be the dominant driver of the AQS effect in this setting.

4.9. Summary of Findings

Within the methodological constraints of a two-component audit quality construct

applied to non-Big Four audits, the empirical results yield four principal conclusions. First, higher AQS is significantly associated with lower earnings management ($\beta = -0.365$, $p < 0.01$), supporting the hypothesized constraining role of auditor tenure and specialization. Second, this relationship is significantly moderated by the regulatory environment, with the effect approximately 45% stronger in stringent regulatory sectors. Third, the magnitude of the association varies across industries, with the strongest evidence observed in Technology, Finance, and Healthcare. Fourth, exploratory component-level analysis indicates that auditor industry specialization may be the more consistently influential attribute relative to tenure.

Taken together, these findings underscore that even within the non-Big Four segment, auditor expertise and continuity contribute meaningfully to earnings management constraints, particularly when reinforced by strong external regulatory oversight. The next chapter interprets these results within the study's theoretical framework and discusses implications for audit governance and policy.

5. Discussion, Implications, and Conclusion

This study investigated the relationship between audit quality and earnings management within an integrated governance framework grounded in agency theory, complemented by signaling and stakeholder perspectives. External auditing is conceptualized as a monitoring mechanism that constrains managerial opportunism and reduces information asymmetry. Interpretation of the findings is bounded by a key methodological constraint: the audit quality score (AQS) captures only two dimensions—auditor tenure and industry specialization—within a sample limited to non-Big Four audited firms. Accordingly, the results reflect governance effectiveness outside the Big Four segment rather than reputational effects associated with large audit firms.

5.1. Discussion of Key Findings

1) Constraining Role of Tenure and Industry Specialization.

The significant negative association between AQS and earnings management ($\beta = -0.365$, $p < 0.001$) supports agency theory in the non-Big Four context. Longer auditor tenure and deeper industry specialization strengthen monitoring by improving client-specific knowledge and enhancing the detection of aggressive reporting practices (Ghosh & Moon, 2005). This indicates meaningful audit quality differentiation even among smaller auditors.

2) Regulatory Environment as an Institutional Moderator.

Audit quality exerts a stronger constraining effect in stringent regulatory environments ($\beta = -0.521$ vs. -0.358), suggesting complementarity between private monitoring and public enforcement. Strong regulation increases the costs of misreporting, reinforces auditor deterrence, and enhances the credibility of audit-related signals, underscoring the context-dependent nature of audit effectiveness.

3) Industry Heterogeneity.

Governance effects vary across industries, with stronger constraints in Technol-

ogy, Finance, and Healthcare sectors characterized by complexity, estimation uncertainty, and regulatory scrutiny. Weaker effects in Consumer Goods and Energy may reflect lower marginal benefits of specialization in more standardized settings.

4) Ambiguous Standalone Role of Tenure.

Component analysis suggests industry specialization is the more robust driver of AQS, while tenure shows less consistent independent influence. Although tenure may enhance knowledge, it can also introduce familiarity risks, cautioning against simplistic policy prescriptions such as mandatory audit rotation.

These findings are consistent with prior empirical research demonstrating that audit quality, particularly when supported by governance mechanisms, constrains earnings management and enhances financial reporting reliability (Kalbuana et al., 2022; Darmawan et al., 2019). Moreover, the stronger effects observed in regulated industries align with evidence suggesting that institutional enforcement amplifies the effectiveness of audit processes (Zandi et al., 2019; Chatterjee, 2020).

5.2. Theoretical Implications

This study advances audit governance research in three ways. First, it supports a contingency perspective, demonstrating that audit effectiveness depends on enforcement strength and industry complexity. Second, it highlights construct validity challenges when audit quality is measured through limited proxies. Third, it illustrates the explanatory value of integrating agency, signaling, and stakeholder theories to capture monitoring, credibility, and accountability dynamics. The findings also align with governance literature suggesting that audit committee structures influence auditor independence and the ability to constrain managerial opportunism (Park, 2019).

5.3. Practical Implications

Non-Big Four auditors can enhance competitiveness through deeper industry specialization, supported by safeguards to preserve independence over long engagements. Audit committees should prioritize auditor expertise rather than relying solely on brand reputation, particularly in complex or regulated sectors. Regulators may strengthen oversight through sector-sensitive approaches emphasizing specialization rather than uniform mandates such as firm rotation. Investors should assess auditor characteristics alongside the regulatory context when evaluating reporting reliability.

5.4. Limitations and Future Research

The primary limitation concerns construct validity: AQS reflects only tenure and specialization within a non-Big Four sample, limiting generalizability. Additional constraints include the historical dataset (2005-2008), cross-sectional design, accrual-based earnings management focus, and U.K.-specific setting. Future research should incorporate broader audit quality measures (fees, reputation, process indicators), apply causal designs around regulatory shocks, extend analysis to real earn-

ings management, and undertake cross-country institutional comparisons.

5.5. Conclusion

Within its methodological boundaries, this study concludes that among UK firms audited by non-Big Four auditors, auditor specialization and longer tenure are associated with significantly lower accrual-based earnings management, with effects amplified under stringent regulatory environments. The findings demonstrate that governance benefits can arise from non-brand audit attributes when supported by strong institutional enforcement. More broadly, the study reinforces audit quality as multidimensional and contingent on both auditor characteristics and regulatory context.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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