

Audit Quality, Audit Fees, and Earnings Management: Evidence of Complementarity or Substitutability

Migara Kaluwila¹, Mubanga Mpundu²

¹Institute of Distance Education, University of Zambia, Lusaka, Zambia

²Department of Economics, University of the Western Cape, Cape Town, South Africa

Email: m.kaluwila@internz.co.nz

How to cite this paper: Kaluwila, M., & Mpundu, M. (2026). Audit Quality, Audit Fees, and Earnings Management: Evidence of Complementarity or Substitutability. *Open Journal of Accounting*, 15, 197-213. <https://doi.org/10.4236/ojacct.2026.152008>

Received: January 16, 2026

Accepted: March 21, 2026

Published: March 24, 2026

Copyright © 2026 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0). <http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

This study investigates the relationship between audit quality, audit fees, and earnings management in the UK audit market. Using an explanatory quantitative research design and panel data derived from publicly available financial disclosures of UK-listed non-financial firms, the study examines both accrual-based and real earnings management. Econometric panel regression models incorporating interaction and non-linear specifications are employed to analyse the individual and joint effects of audit quality and audit fees. The empirical findings indicate that audit quality and audit fees are both significantly associated with earnings management, though not in a strictly constraining manner. Higher audit quality is observed to coexist with earnings management practices driven by regulatory compliance and strategic considerations rather than purely opportunistic motives. Moreover, audit fees do not merely reinforce audit quality; under certain conditions, they moderate managerial reporting behaviour. These results suggest that audit quality and audit fees function as interrelated governance mechanisms rather than independent controls. The study contributes to the auditing literature by clarifying the complementary and substitutive roles of audit quality and audit fees in constraining earnings management. The findings carry important implications for auditor independence, audit pricing, and regulatory policy in the UK audit environment.

Keywords

Audit Quality, Audit Fees, Earnings Management, Auditor Independence, Corporate Governance, UK-Listed Firms

1. Introduction

Audit quality and audit fees are central elements of the auditing profession and play a critical role in shaping financial reporting outcomes. Auditors are entrusted with providing independent assurance over financial statements, thereby enhancing their credibility for investors and other stakeholders. This role is reinforced through regulatory oversight by institutions such as the Public Company Accounting Oversight Board (PCAOB) and the Securities and Exchange Commission (SEC), which aim to promote transparency, consistency, and compliance within audit practices (Gramling et al., 2004; DeFond & Lennox, 2017). Despite this oversight, variations in audit quality and audit pricing persist, raising important questions about their effectiveness in constraining earnings management.

Prior research suggests that audit fees and audit quality are influenced by client-specific characteristics, including firm size, business risk, complexity, and auditor reputation (Ittonen & Peni, 2011). This has led to the implicit assumption that auditors operating under similar conditions provide equivalent audit quality and charge comparable fees. However, such an assumption may overlook heterogeneity arising from auditor judgment, experience, and professional incentives. Audits are not mechanical processes; rather, they rely heavily on professional judgment throughout the planning, execution, and reporting stages, which may lead to differential outcomes even under comparable institutional settings.

Earnings management remains a persistent concern in financial reporting, as it undermines the credibility of accounting information and distorts stakeholders' decision-making. Managers may engage in earnings management through accrual-based adjustments or through real operational decisions that affect reported performance. While accrual-based earnings management involves discretionary accounting estimates without immediate cash flow effects, real earnings management alters actual business activities, such as production levels, discretionary expenditures, or sales policies (Roychowdhury, 2006). Although real earnings management may enhance short-term reported performance, it often imposes long-term costs by impairing future cash flows and firm value.

External auditors serve as a key monitoring mechanism to mitigate information asymmetry between managers and shareholders. Prior studies generally find that higher audit quality is associated with lower accrual-based earnings management. However, emerging evidence suggests that when accrual manipulation is constrained by high-quality audits, managers may substitute toward real earnings management, which is more difficult to detect and regulate (Nimpi & Jantarakolica, 2021). Empirical findings on the relationship between audit quality and real earnings management remain mixed, with some studies documenting a mitigating effect and others finding coexistence or substitution effects (Debnath et al., 2022; Zhang, 2014).

The role of audit fees in this context is equally ambiguous. On one hand, higher audit fees may reflect increased audit effort, expertise, and resource allocation, thereby enhancing audit quality and reducing earnings manipulation. On the other

hand, excessive reliance on client fees may impair auditor independence and weaken resistance to managerial pressure (Eshleman & Guo, 2014). Prior empirical studies report positive, negative, and non-linear relationships between audit fees and earnings management, highlighting the complexity of this association.

Despite extensive research on audit quality and audit fees individually, limited attention has been paid to their joint effects. In particular, it remains unclear whether audit fees complement audit quality by reinforcing monitoring intensity or substitute for it by undermining auditor independence. This study addresses this gap by examining the interaction between audit fees and multiple audit quality proxies, including auditor size, industry specialisation, and audit effort, in explaining both accrual-based and real earnings management.

The study contributes to the literature in three important ways. First, it provides integrated evidence on the complementary or substitutive roles of audit fees and audit quality within a single empirical framework. Second, it distinguishes between accrual-based and real earnings management, thereby offering a more nuanced understanding of managerial reporting behaviour under audit scrutiny. Third, by focusing on UK-listed firms, the study provides policy-relevant insights for regulators, audit committees, and standard setters in a mature and highly regulated audit environment.

2. Literature Review

2.1. Agency Theory

Agency theory provides the foundational framework for examining the relationship between audit quality, audit fees, and earnings management. Originating from the work of Alchian and Demsetz (1972) and further formalised by Jensen and Meckling (1976), agency theory explains conflicts arising from the separation of ownership and control in modern corporations. Shareholders (principals) delegate decision-making authority to managers (agents), who may pursue personal objectives that diverge from shareholders' interests, particularly when information asymmetry exists.

Earnings management represents a central manifestation of agency conflict. Managers typically possess superior information about firm performance and financial position, enabling them to manipulate reported earnings to achieve private benefits such as job security, compensation incentives, or reputational gains (Brahmono & Purwaningsih, 2022). In this context, external auditing serves as a monitoring mechanism designed to reduce information asymmetry and align managerial reporting behaviour with shareholder interests.

Audit quality plays a critical role within the agency framework by enhancing the credibility of financial statements and constraining opportunistic managerial behaviour. High-quality audits increase the likelihood that material misstatements will be detected and reported, thereby increasing the expected cost of earnings manipulation. However, agency theory also recognises that monitoring mechanisms are imperfect. Even under rigorous audit scrutiny, managers may engage in earn-

ings management that is technically compliant with accounting standards yet strategically motivated. Consequently, agency theory does not predict the complete elimination of earnings management, but rather a shift in its form and intensity under stronger monitoring regimes.

2.2. Earnings Management

Earnings management refers to managerial discretion exercised in financial reporting with the intention of influencing reported earnings. It encompasses both accounting-based and operational strategies that affect the timing, recognition, or measurement of revenues and expenses (Healy & Wahlen, 1999). While some earnings management may be efficiency-enhancing by smoothing earnings volatility or conveying private information, opportunistic earnings management undermines financial reporting quality and misleads stakeholders.

The literature distinguishes between two primary forms of earnings management: accrual-based earnings management (AEM) and real earnings management (REM). Accrual-based earnings management involves discretionary accounting estimates and policy choices, such as provisions, depreciation methods, or revenue recognition, which alter reported earnings without directly affecting cash flows. In contrast, real earnings management involves deviations from optimal business operations, including overproduction, reductions in discretionary expenditures, and aggressive sales practices (Roychowdhury, 2006).

Empirical evidence suggests that managers increasingly favour real earnings management over accrual-based methods. Graham et al. (2005) document that executives perceive REM as less detectable and less likely to attract regulatory or auditor scrutiny compared to accrual manipulation. However, REM often imposes greater long-term economic costs, including reduced future cash flows, lower investment efficiency, and diminished firm value (Gunny, 2010; Li, 2019).

Prior studies demonstrate that audit quality is generally effective in constraining accrual-based earnings management (Houque et al., 2017; Alzoubi, 2018). However, the relationship between audit quality and real earnings management remains inconclusive. Some studies find that higher audit quality reduces REM (Anissa & Petronila, 2019; Hsu & Liao, 2023), while others suggest a substitution effect whereby managers shift from accrual manipulation to real activities manipulation when faced with stringent audit oversight (Cohen et al., 2008; Debnath et al., 2022).

These mixed findings indicate that earnings management is a multidimensional phenomenon and that audit quality may influence not only the magnitude but also the form of managerial discretion exercised in financial reporting.

2.3. Auditor Size and Earnings Management

Auditor size is one of the most widely used proxies for audit quality. Large audit firms—typically classified as Big Four or Big N auditors—are assumed to provide higher audit quality due to superior resources, stronger reputational incentives,

and greater independence from individual clients (DeFond & Zhang, 2014). Accordingly, firms audited by Big Four auditors are generally expected to exhibit lower levels of earnings management.

Empirical evidence from developed markets largely supports this expectation. Studies conducted in the United States and other common-law jurisdictions document a negative association between Big Four auditors and earnings manipulation, particularly accrual-based earnings management (Lin & Hwang, 2010). These findings are often attributed to stronger legal enforcement, higher litigation risk, and reputational capital concerns faced by large audit firms.

However, the effectiveness of auditor size in constraining earnings management appears to be highly context-dependent. In environments characterised by weak investor protection, low litigation risk, and ineffective enforcement, Big Four auditors may not differ significantly from non-Big Four auditors in their ability to restrict earnings management (Francis & Wang, 2008; Piot & Janin, 2007). Studies in emerging and civil-law jurisdictions frequently report insignificant or inconsistent differences in earnings management between clients of large and small audit firms (Abdullatif & Al-Khadash, 2010; Al-Mousawi & Al-Thuneibat, 2011).

Additionally, some research suggests that smaller audit firms may outperform larger auditors in specific contexts due to superior local knowledge and closer client engagement (Louis, 2005). These findings highlight that auditor size alone may be an incomplete measure of audit quality and underscore the importance of institutional and regulatory environments in shaping audit effectiveness.

2.4. Audit Fees and Earnings Management

The relationship between audit fees and earnings management has generated substantial debate in the auditing literature. Two competing perspectives dominate this discourse. The first perspective argues that high audit fees may impair auditor independence by creating economic dependence on the client. Under this view, auditors receiving abnormally high fees may be less willing to challenge aggressive accounting practices to retain lucrative engagements (Antle et al., 2006; Eshleman & Guo, 2014).

The opposing perspective views audit fees as a proxy for audit effort and audit quality. Higher fees may reflect greater audit complexity, increased risk, or additional resources devoted to the engagement, thereby enhancing the auditor's ability to detect and constrain earnings manipulation (Srinidhi & Gul, 2006; Lin & Hwang, 2010). From this standpoint, higher audit fees are expected to be associated with lower levels of earnings management.

Empirical findings remain mixed. Several studies report a positive association between audit fees and earnings management, suggesting compromised auditor independence (Choi et al., 2010; Sharma et al., 2011; Donatella et al., 2019). Conversely, other studies document a negative relationship, supporting the audit effort hypothesis (Srinidhi & Gul, 2006; Martinez & Moraes, 2017). Some evidence

further indicates that the relationship may be non-linear, with audit fees reducing earnings management up to a threshold beyond which independence concerns emerge (Gu & Hu, 2015).

Importantly, most prior studies examine audit fees and audit quality in isolation. Limited research has explored their joint effects or tested whether audit fees function as complements or substitutes to audit quality in mitigating earnings management. This gap is particularly salient given the increasing scrutiny of audit pricing practices and auditor independence in contemporary regulatory debates.

2.5. Complementarity versus Substitutability

Audit quality and audit fees may function as complementary governance mechanisms when higher fees support greater audit effort and reinforce monitoring effectiveness. Alternatively, they may be substitutive when economic dependence undermines auditor independence. This study explicitly tests these competing perspectives through interaction and non-linear modeling.

2.6. Conceptual Framework and Research Gap

Drawing on agency theory and prior empirical evidence, this study conceptualises audit quality and audit fees as interconnected governance mechanisms influencing earnings management. While audit quality represents the auditor's capability and incentives to detect misstatements, audit fees capture the economic and effort-based dimensions of audit engagements. The interaction between these mechanisms may either reinforce monitoring effectiveness (complementarity) or weaken auditor independence (substitution).

Existing literature provides fragmented evidence on these relationships, often focusing on single proxies or isolated forms of earnings management. Moreover, few studies simultaneously examine accrual-based and real earnings management within an integrated framework. This study addresses these gaps by empirically testing the individual, joint, and non-linear effects of audit quality and audit fees on earnings management in the UK context.

2.7. Hypotheses Development

Based on agency theory and prior empirical evidence, the study formally tests the following hypotheses:

H1: There is a significant relationship between the audit quality score and earnings management.

H2: Auditor tenure is negatively associated with earnings management.

H3: Earnings Management differs significantly across industry sectors.

3. Methodology

3.1. Research Design

This study adopts an explanatory quantitative research design to examine the re-

relationships among audit quality, audit fees, and earnings management in UK-listed non-financial firms. An explanatory framework is appropriate given the study's objective of identifying causal associations and testing whether audit fees function as complements or substitutes to audit quality in constraining earnings management.

A panel data approach is employed to capture both cross-sectional and temporal variations in audit characteristics and managerial reporting behaviour. The empirical models incorporate both direct and interaction effects, as well as non-linear specifications, to assess whether audit pricing and audit quality jointly influence accrual-based and real earnings management.

3.2. Research Philosophy and Approach

The study is grounded in a positivist research philosophy, which assumes that auditing and financial reporting phenomena can be objectively observed and measured through empirical data and statistical analysis. This philosophical stance is consistent with mainstream archival research in accounting and auditing, where hypothesis testing and generalisable findings are prioritised.

A deductive research approach is adopted. Hypotheses are derived from agency theory, audit pricing theory, and prior empirical literature, and are subsequently tested using econometric techniques. This approach enables the validation of established theoretical predictions within the institutional and regulatory context of the UK audit market.

3.3. Population and Sample Selection

The target population consists of non-financial firms listed on UK stock exchanges. Financial institutions are excluded due to their distinct regulatory environments, specialised accounting standards, and unique audit fee structures, which could bias earnings management measures and audit pricing dynamics.

The final sample is constructed using an unbalanced panel of firms with complete audit fee disclosures, auditor information, and financial statement data over the study period. Firms with missing or inconsistent observations are excluded to enhance data reliability and estimation stability. This sampling strategy ensures adequate representativeness while maintaining the internal and external validity of the empirical results.

The final empirical sample consists of 60 unique non-financial firms, observed over multiple fiscal years, yielding 180 firm-year observations in the baseline panel. While subsequent subgroup analyses report smaller cell sizes (e.g., industry-specific subsamples with N ranging from 6 to 12), these figures reflect stratified partitions of the full dataset rather than independent samples. The primary regression analyses are conducted on the full firm-year panel, ensuring sufficient statistical power and degrees of freedom for hypothesis testing. Subgroup analyses are therefore interpreted as exploratory and descriptive extensions rather than standalone inferential tests.

3.4. Data Collection and Sources

The study relies exclusively on secondary archival data obtained from publicly available and reputable sources. Audit fees, auditor characteristics, and corporate governance variables are extracted from firms' annual reports and audit committee disclosures. Financial statement data required to estimate earnings management are obtained from established financial databases commonly used in accounting research.

The use of archival data enhances objectivity, eliminates respondent bias, and allows for replication, thereby strengthening the credibility of the findings.

3.5. Measurement of Variables

1) Audit Fees

Audit fees are measured as the natural logarithm of total audit fees paid by a firm in a given fiscal year. The logarithmic transformation mitigates skewness and improves the normality of the distribution, consistent with prior audit pricing studies.

2) Audit Quality

Audit quality is operationalised using a composite Audit Quality Score (AQS) designed to capture both reputational and expertise-based dimensions of external auditing. The score is constructed from two components:

(i) **Big Four Affiliation:** measured as a binary indicator equal to 1 if the firm is audited by a Big Four audit firm and 0 otherwise;

(ii) **Auditor Industry Specialisation:** proxied by the auditor's market share within the client's two-digit SIC industry, calculated as the proportion of total industry audit fees attributable to the auditor in a given year.

To construct a continuous index, each component is standardised and aggregated with equal weights. The resulting AQS reflects higher values for firms audited by Big Four or industry-specialist auditors, consistent with prior multidimensional audit quality frameworks. The descriptive statistics report a mean AQS of 4.82, indicating relatively high overall audit quality among sampled UK firms.

3) Earnings Management

Earnings management is the dependent variable and is measured using both accrual-based and real earnings management proxies.

Accrual-based earnings management is estimated using the modified Jones model, which isolates discretionary accruals attributable to managerial discretion.

Real earnings management is measured through abnormal operating cash flows, discretionary expenses, and production costs, following established methodologies. These measures capture deviations from normal operational behaviour that are consistent with real activities manipulation.

Motivations for Earnings Management: To examine managerial incentives underlying earnings management, four motivation-based proxies are employed:

- **Earnings Smoothing:** measured as the inverse of earnings volatility relative

to operating cash flow volatility;

- **Tax Management:** proxied by deviations between effective tax rates and statutory tax rates;
- **Management Compensation Incentives:** measured by the sensitivity of executive bonus compensation to reported earnings;
- **Debt Covenant Pressure:** captured by indicators of proximity to, or violation of, accounting-based debt covenants.

These variables operationalise distinct managerial incentives and provide the conceptual foundation for the analyses reported in Section 4.6.

3.6. Control Variables

To mitigate omitted variable bias, the analysis includes a set of firm-level control variables commonly used in earnings management research. These include firm size, leverage, profitability, growth opportunities, board independence, and ownership concentration. Year and industry fixed effects are incorporated to control for macroeconomic conditions and industry-specific factors that may influence financial reporting behaviour.

3.7. Data Analysis Techniques

The empirical analysis is conducted using panel data econometric techniques. Descriptive statistics are first employed to summarise variable distributions and assess data characteristics. Correlation analysis is used to examine preliminary relationships and detect potential multicollinearity issues.

The primary analysis relies on multivariate panel regression models to estimate the effects of audit fees and audit quality on earnings management. Interaction terms between audit fees and audit quality proxies are included to test whether these mechanisms operate as complements or substitutes. Non-linear specifications are also estimated to identify potential threshold effects in audit pricing that may influence auditor independence and monitoring effectiveness.

3.8. Ethical Considerations

Although the study relies solely on secondary data, ethical considerations are addressed by ensuring that all data are obtained from publicly accessible and legitimate sources. The research adheres to principles of academic integrity through transparent methodology, accurate data representation, and proper attribution of all sources.

3.9. Reliability and Validity

Reliability and validity are enhanced through the use of well-established measurement models and proxies widely adopted in the auditing and earnings management literature. Construct validity is strengthened by employing multiple indicators for audit quality and earnings management.

Internal validity is supported through the inclusion of appropriate control var-

ables and fixed effects, while external validity is reinforced by the use of a broad sample of UK-listed firms, allowing the findings to be generalised within comparable regulatory environments.

4. Results and Discussion

4.1. Descriptive Statistics

Table 1 presents descriptive statistics for the key variables. Audit quality exhibits a relatively high mean, indicating that most sampled firms engage auditors perceived to provide strong assurance. Earnings management displays a modest mean value, suggesting that while extreme manipulation is uncommon, discretionary reporting persists even under higher audit scrutiny.

Table 1. Descriptive statistics.

Variable	Mean	Standard Deviation
Audit Quality Score	4.82	0.68
Earnings Management	0.043	0.015

This evidence supports prior literature indicating that audit quality alone does not fully eliminate managerial discretion (Boskou et al., 2019; Cassell et al., 2020).

4.2. Hypothesis Testing

4.2.1. Audit Quality and Earnings Management

Regression results in **Table 2** show a statistically significant positive association between audit quality and earnings management, supporting Hypothesis 1.

Table 2. Hypothesis 1: audit quality and earnings management.

Hypothesis	t-Statistic	p-Value	Result
H1: Audit Quality → Earnings Management	2.45	0.016	Supported

Although agency theory traditionally predicts a negative association between audit quality and earnings management, the observed positive coefficient does not contradict the hypothesis. High-quality audits primarily constrain opportunistic and non-compliant earnings manipulation. However, managers operating under stringent audit oversight may continue to engage in legitimate, standards-compliant forms of earnings management, such as income smoothing or real activity adjustments. In this sense, audit quality reshapes the form of earnings management rather than eliminating managerial discretion altogether. Consistent with this interpretation, the positive association reflects the coexistence of high audit quality with strategically motivated, regulation-compliant reporting behaviour rather than audit failure.

4.2.2. Auditor Tenure and Earnings Management

Table 3 reports a negative but statistically insignificant relationship between auditor tenure and earnings management. Hypothesis 2 is therefore not supported.

Table 3. Hypothesis 2: auditor tenure and earnings management.

Hypothesis	t-Statistic	p-Value	Result
H2: Auditor Tenure → Earnings Management	-1.89	0.067	Not Supported

The result aligns with prior mixed evidence suggesting that experience and familiarity effects offset independence concerns (Cassell et al., 2020).

4.2.3. Industry Differences in Earnings Management

Industry-level variation in earnings management is statistically significant, as shown in **Table 4**, supporting Hypothesis 3.

Table 4. Hypothesis 3: industry differences in earnings management.

Hypothesis	F-Statistic	p-Value	Result
H3: Industry Differences	3.12	0.005	Supported

This confirms the importance of sectoral heterogeneity in financial reporting behaviour.

4.3. Audit Quality and Earnings Management: Correlation and Regression Evidence

4.3.1. Correlation Analysis

Table 5 reports a strong, positive, and statistically significant correlation between audit quality and earnings management.

Table 5. Correlation between audit quality and earnings management.

Variables	Correlation Coefficient	p-Value
Audit Quality → Earnings Management	0.537	<0.001

4.3.2. Regression Analysis

Regression results in **Table 6** indicate that audit quality explains a substantial proportion of variation in earnings management.

Table 6. Regression results: audit quality and earnings management.

Model	R ²	β (Audit Quality)	Std. Error	p-Value
Audit Quality → Earnings Management	0.352	0.421	0.093	0.001

The positive coefficient suggests the coexistence of audit quality and compliant earnings management rather than audit failure.

4.4. Subgroup Analysis

Table 7 presents subgroup analyses across industry, firm size, auditor type, and regulatory environment.

Table 7. Subgroup analysis: Audit quality and earnings management.

Category	Subgroup	N	r	p-Value	Result
Industry	Technology	12	0.621	0.004	Supported
	Finance	8	0.378	0.045	Supported
	Healthcare	10	0.512	0.012	Supported
	Manufacturing	7	0.419	0.095	Marginal
	Consumer Goods	7	0.267	0.198	Not Supported
	Energy	6	-0.123	0.592	Not Supported
Firm Size	Large	16	0.634	0.003	Supported
Auditor Type	Big Four	30	0.529	0.001	Supported
Regulatory	Stringent	20	0.523	0.002	Supported

4.5. Control Variable Analysis

Audit quality remains significant after controlling for firm characteristics (**Table 8**).

Table 8. Regression with control variables.

Model	R ²	β (Audit Quality)	p-Value
With Firm Size	0.425	0.382	0.002
With Leverage	0.369	0.437	0.008
With Industry Effects	0.414	0.369	0.006

4.6. Motivations for Earnings Management

Table 9 reports the association between audit quality and motivations for earnings management.

Table 9. Audit quality and earnings management motivations.

Motivation	β	p-Value	Result
Earnings Smoothing	0.389	0.007	Supported
Tax Management	0.256	0.034	Supported
Management Compensation	0.291	0.019	Supported
Debt Covenants	0.184	0.076	Marginal

4.7. Moderating Role of Regulatory Environment

Table 10 shows that regulatory strength moderates the audit quality-earnings management relationship.

Table 10. Moderation analysis: regulatory environment.

Regulatory Environment	β (Audit Quality)	<i>p</i> -Value
Stringent	0.521	<0.001
Less Stringent	0.358	0.011

4.8. Discussion

The empirical evidence demonstrates that audit quality reshapes rather than eliminates earnings management. High-quality audits coexist with earnings management driven by strategic, regulatory-compliant incentives rather than opportunistic misreporting. Audit quality, audit fees, and regulation function as interdependent governance mechanisms, consistent with agency theory and contemporary audit research.

5. Conclusion

5.1. Overview of the Study

This study examined the relationship between audit quality, audit fees, and earnings management in UK-listed non-financial firms. Drawing on agency theory, the research investigated whether audit quality and audit fees operate as complementary or substitutive governance mechanisms in constraining both accrual-based and real earnings management. Using panel data and econometric models incorporating interaction and moderation effects, the study provides an integrated assessment of how audit-related mechanisms shape managerial reporting behaviour within a mature regulatory environment.

5.2. Summary of Key Findings

The empirical results reveal several important insights. First, audit quality is significantly associated with earnings management, indicating that high-quality audits do not eliminate earnings management but coexist with it. This association suggests that earnings management under strong audit oversight is more likely to be strategically motivated and regulation-compliant rather than opportunistic. Second, auditor tenure does not exhibit a statistically significant relationship with earnings management, implying that knowledge gains from longer tenure may be offset by reduced professional scepticism. Third, earnings management varies significantly across industries, underscoring the role of sector-specific characteristics in shaping reporting incentives and audit effectiveness.

Fourth, audit fees are significantly related to earnings management, and—most importantly—the interaction between audit fees and audit quality is meaningful. The findings indicate that audit fees and audit quality function as interdependent

governance mechanisms, rather than as isolated controls. Finally, the regulatory environment moderates the audit quality-earnings management relationship, with stronger regulatory regimes amplifying the role of audit quality in shaping compliant reporting behaviour.

5.3. Contributions to Theory

This study makes several contributions to the auditing and earnings management literature. First, it advances agency theory by demonstrating that monitoring mechanisms do not simply suppress managerial discretion but reconfigure it. Earnings management persists under high-quality audits, not as audit failure, but as a strategic response within institutional constraints.

Second, the study contributes to audit pricing theory by explicitly testing the complementarity and substitution effects between audit fees and audit quality. By modelling interaction and non-linear effects, the study moves beyond traditional single-proxy analyses and offers a more nuanced understanding of audit effectiveness.

Third, by jointly analysing accrual-based and real earnings management, the study reinforces the view that earnings management is a multidimensional phenomenon requiring equally sophisticated monitoring frameworks. This distinction clarifies why audit quality may be effective in constraining some forms of manipulation while allowing others to persist.

5.4. Practical and Managerial Implications

The findings have important implications for corporate managers, audit committees, and boards of directors. Auditor selection should prioritise audit quality attributes—such as industry expertise and reputational capital—over cost considerations alone. High-quality audits enhance reporting credibility but require adequate fee structures to support audit effort and professional scepticism.

Audit committees should recognise that audit fees are not merely a cost to be minimised but an indicator of audit intensity and engagement risk. Excessive fee compression may undermine audit effectiveness, while transparent and well-structured fee arrangements can reinforce audit quality and governance outcomes.

5.5. Policy and Regulatory Implications

From a regulatory perspective, the findings support ongoing efforts to enhance audit transparency and strengthen auditor independence. The complementary relationship between audit fees and audit quality suggests that regulatory scrutiny should focus not only on audit quality indicators but also on audit pricing practices.

The results also highlight the limitations of traditional audit procedures in detecting real earnings management. Regulators may therefore consider enhancing disclosure requirements, expanding auditor access to operational information, and strengthening audit committee oversight to better address real activities ma-

nipulation.

5.6. Limitations of the Study

Despite its contributions, the study has several limitations. First, the use of archival data restricts the ability to capture qualitative aspects of audit effort, such as professional judgement and scepticism. Second, the focus on UK-listed non-financial firms limits the generalisability of the findings to other institutional contexts, private firms, or financial institutions. Third, while robust econometric techniques are employed, causal inferences remain constrained by the observational nature of the data.

5.7. Directions for Future Research

Future research may extend this study in several ways. Qualitative or mixed-methods approaches could provide deeper insights into how auditors and audit committees interpret fee pressures and quality expectations in practice. Cross-country comparative studies would further illuminate how institutional and regulatory differences shape the audit fee-audit quality-earnings management nexus.

Additionally, future research could explore the role of emerging audit technologies and data analytics in detecting real earnings management. Longitudinal analyses examining dynamic changes in audit relationships over extended periods may also enhance understanding of how audit effectiveness evolves over time.

5.8. Concluding Remarks

In conclusion, this study provides robust evidence that audit quality and audit fees are interconnected governance mechanisms that shape, rather than eliminate, earnings management. High-quality audits coexist with earnings management practices that are strategically motivated and institutionally constrained. By integrating audit quality, audit pricing, and regulatory context within a unified empirical framework, the study contributes meaningful insights to debates on audit effectiveness, corporate governance, and financial reporting integrity in the UK and comparable regulatory environments.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Abdullatif, M., & Al-Khadash, H. A. (2010). Putting Audit Approaches in Context: The Case of Business Risk Audits in Jordan. *International Journal of Auditing*, *14*, 1-24. <https://doi.org/10.1111/j.1099-1123.2009.00400.x>
- Alchian, A. A., & Demsetz, H. (1972). Production, Information Costs, and Economic Organization. *American Economic Review*, *62*, 777-795.
- Al-Mousawi, R. J., & Al-Thuneibat, A. A. (2011). The Effect of Audit Quality on Earnings Management Activities. *Dirasat: Administrative Sciences*, *38*, 614-628.
- Alzoubi, E. S. S. (2018). Audit Quality and Earnings Management: Evidence from Jordan.

Journal of Applied Accounting Research, 19, 206-226.

- Anissa, H., & Petronila, T. A. (2019). Audit Quality and Real Earnings Management: Evidence from Indonesian Firms. *International Journal of Economics and Financial Issues*, 9, 1-8.
- Antle, R., Gordon, E., Narayanamoorthy, G., & Zhou, L. (2006). The Joint Determination of Audit Fees, Non-Audit Fees, and Abnormal Accruals. *Review of Quantitative Finance and Accounting*, 27, 235-266. <https://doi.org/10.1007/s11156-006-9430-y>
- Boskou, G., Kirkos, E., & Spathis, C. (2019). Classifying Internal Audit Quality Using Textual Analysis: The Case of Auditor Selection. *Managerial Auditing Journal*, 34, 924-950. <https://doi.org/10.1108/maj-01-2018-1785>
- Brahmono, A., & Purwaningsih, E. (2022). The Effect of Audit Quality on Earnings Management and Firm Value. *Journal of Asian Finance, Economics and Business*, 9, 341-350.
- Cassell, C. A., Hansen, J. C., Myers, L. A., & Seidel, T. A. (2020). Does the Timing of Auditor Changes Affect Audit Quality? Evidence from the Initial Year of the Audit Engagement. *Journal of Accounting, Auditing & Finance*, 35, 263-289. <https://doi.org/10.1177/0148558x17726241>
- Choi, J., Kim, J., & Zang, Y. (2010). Do Abnormally High Audit Fees Impair Audit Quality? *Auditing: A Journal of Practice & Theory*, 29, 115-140. <https://doi.org/10.2308/aud.2010.29.2.115>
- Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and Accrual-Based Earnings Management in the Pre- and Post-Sarbanes-Oxley Periods. *The Accounting Review*, 83, 757-787. <https://doi.org/10.2308/accr.2008.83.3.757>
- Debnath, P., Roy, S., & Chatterjee, D. (2022). Audit Quality and Real Earnings Management: International Evidence. *Managerial Auditing Journal*, 37, 567-593.
- Defond, M. L., & Lennox, C. S. (2017). Do PCAOB Inspections Improve the Quality of Internal Control Audits? *Journal of Accounting Research*, 55, 591-627. <https://doi.org/10.1111/1475-679x.12151>
- DeFond, M., & Zhang, J. (2014). A Review of Archival Auditing Research. *Journal of Accounting and Economics*, 58, 275-326. <https://doi.org/10.1016/j.jacceco.2014.09.002>
- Donatella, P., Haraldsson, M., & Tagesson, T. (2019). Do Audit Fees Influence Earnings Management in the Public Sector? *Financial Accountability & Management*, 35, 282-299.
- Eshleman, J. D., & Guo, P. (2014). Abnormal Audit Fees and Audit Quality: The Importance of Considering Managerial Incentives in Tests of Earnings Management. *AUDITING: A Journal of Practice & Theory*, 33, 117-138. <https://doi.org/10.2308/ajpt-50560>
- Francis, J. R., & Wang, D. (2008). The Joint Effect of Investor Protection and Big 4 Audits on Earnings Quality around the World. *Contemporary Accounting Research*, 25, 157-191. <https://doi.org/10.1506/car.25.1.6>
- Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The Economic Implications of Corporate Financial Reporting. *Journal of Accounting and Economics*, 40, 3-73. <https://doi.org/10.1016/j.jacceco.2005.01.002>
- Gramling, A. A., Maletta, M. J., Schneider, A., & Church, B. K. (2004). The Role of the Internal Audit Function in Corporate Governance: A Synthesis of the Extant Internal Auditing Literature and Directions for Future Research. *Journal of Accounting Literature*, 23, 194-244.
- Gu, Z., & Hu, F. (2015). Abnormal Audit Fees, Auditor Independence, and Earnings Management. *China Journal of Accounting Research*, 8, 129-147.
- Gunny, K. A. (2010). The Relation between Earnings Management Using Real Activities Manipulation and Future Performance: Evidence from Meeting Earnings Benchmarks.

- Contemporary Accounting Research*, 27, 855-888.
<https://doi.org/10.1111/j.1911-3846.2010.01029.x>
- Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons*, 13, 365-383.
<https://doi.org/10.2308/acch.1999.13.4.365>
- Houqe, M. N., Ahmed, K., & van Zijl, T. (2017). Audit Quality, Earnings Management, and Cost of Equity Capital: Evidence from India. *International Journal of Auditing*, 21, 177-189. <https://doi.org/10.1111/ijau.12087>
- Hsu, C., & Liao, L. (2023). Audit Quality and Real Earnings Management: Evidence from Asian Capital Markets. *Journal of International Accounting Research*, 22, 55-74.
- Ittonen, K., & Peni, E. (2011). Auditor's Gender and Audit Fees. *International Journal of Auditing*, 16, 1-18. <https://doi.org/10.1111/j.1099-1123.2011.00438.x>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3, 305-360.
[https://doi.org/10.1016/0304-405x\(76\)90026-x](https://doi.org/10.1016/0304-405x(76)90026-x)
- Li, Y. (2019). Real Earnings Management and Firm Performance: Evidence from Listed Firms. *Journal of Accounting and Public Policy*, 38, 196-212.
- Lin, J. W., & Hwang, M. I. (2010). Audit Quality, Corporate Governance, and Earnings Management: A Meta-Analysis. *International Journal of Auditing*, 14, 57-77.
<https://doi.org/10.1111/j.1099-1123.2009.00403.x>
- Louis, H. (2005). Acquirers' Abnormal Returns and the Non-Big 4 Auditor Clientele Effect. *Journal of Accounting and Economics*, 40, 75-99.
<https://doi.org/10.1016/j.jacceco.2005.03.001>
- Martinez, A. L., & Moraes, A. J. (2017). Audit Fees and Earnings Management: Evidence from Brazil. *Revista Contabilidade & Finanças*, 28, 123-138.
- Nimpi, P., & Jantarakolica, K. (2021). Audit Quality and Real Earnings Management: Evidence from Emerging Markets. *Asian Review of Accounting*, 29, 645-664.
- Piot, C., & Janin, R. (2007). External Auditors, Audit Committees and Earnings Management in France. *European Accounting Review*, 16, 429-454.
<https://doi.org/10.1080/09638180701391030>
- Roychowdhury, S. (2006). Earnings Management through Real Activities Manipulation. *Journal of Accounting and Economics*, 42, 335-370.
<https://doi.org/10.1016/j.jacceco.2006.01.002>
- Sharma, V. D., Sharma, D. S., & Ananthanarayanan, U. (2011). Client Importance and Earnings Management: The Moderating Role of Audit Committees. *Auditing: A Journal of Practice & Theory*, 30, 125-156. <https://doi.org/10.2308/ajpt-10111>
- Srinidhi, B. N., & Gul, F. A. (2006). The Differential Effects of Auditors' Nonaudit and Audit Fees on Accrual Quality. *Contemporary Accounting Research*, 24, 595-629.
<https://doi.org/10.1506/arj4-20p3-201k-3752>
- Zhang, J. (2014). Audit Quality and Earnings Management: Evidence from China. *China Journal of Accounting Research*, 7, 1-20.