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Determinants of Audit Quality in United Kingdom Banking Sector

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A B S T R A C T

This study examines the determinants of audit quality in United Kingdom listed banks. The study employed secondary data sourced from the publicly available annual financial reports and audit inspection reports. The sample includes 40 companies listed on the London Stock Exchange, representing all banks covering 2020-2022. The study used a Random-Effects Model as baseline model and incorporates both POLS and quantile regressions for sensitivity analysis and robustness testing. The findings provide strong evidence that the presence of several large owners, the use of data analytics, and regular audit committee meetings are positively correlated with improved audit quality. The study emphasises the need for more investigation into assessing the proficiency of auditors and the particular elements of auditor independence that are particularly crucial in the UK setting. This study enhances the current knowledge by investigating a wider group of individuals involved and use sensitivity analysis to reinforce the results. These significant findings are relevant for policymakers, audit firms, and corporate governance structures that want to improve the quality of audits and boost the credibility of financial reporting in the banking sector of the United Kingdom.

A R T I C L E   I N F O

1. INTRODUCTION

Audit quality has continued metamorphose as a significant concern in recent years. The presence of financial statements that significantly misrepresent the true financial state of a company remains a persistent issue in the financial sector despite auditors consistently rendering unqualified opinions (Tagne et al., 2023). The enormous accounting controversies surrounding Patisserie Valerie and Enron serve as evidence that this has substantially eroded public trust in the auditing profession (Ciger, 2020; Win et al., 2024). Also, Detzen and Gold (2021); Samagaio and Felício (2023) researched on the factors that influence audit quality, focusing primarily on the role and limitations of auditors. However, these issues continue to persist, underscoring the necessity for a more comprehensive comprehension of the constituent elements.

The objective of this study is to address this substantial knowledge gap by investigating the impact of stakeholders (the auditor himself and other relevant key stakeholders) on the audit quality of listed banks in the United Kingdom. Several factors make the United Kingdom an enthralling subject for case studies. It is critical to acknowledge that the countries possess a firmly established audit profession that dates back to the era of the Industrial Revolution (Dinarjito & Febriansyah, 2020). In addition, recent accounting controversies involving renowned British audit firms have raised concerns about the effectiveness of current audit methodologies in the United Kingdom (Damitio, 2023; Marizqi & Dharma, 2023). These factors underscore the importance of scrutinising diverse perspectives on audit quality in the banking sector of the United Kingdom (Marizqi & Dharma, 2023). While prior research has shed light on the several determinants of audit quality, some aspects remain unresolved (Kzykeva, 2022; Marizqi & Dharma, 2023). Continuous discourse pertains to the influence of a multitude of influential proprietors on the calibration of audits (Khairunnisa et al., 2023).

Based on previous studies, the existence of a considerable number of influential proprietors may yield advantageous outcomes through active supervision and managerial conduct, ultimately leading to more reliable financial reporting (Wilamsari et al., 2024). In contrast, a number of scholarly investigations indicate that influential shareholders might partake in collusion with management to manipulate outcomes and taint the integrity of audits (Alsaleem & Husin, 2024). This emphasises the necessity for further investigation of the complex relationship between the presence of large shareholders and audit quality (Nuansa-ard et al., 2024). Similarly, inconclusive results have resulted from the impact of variables including the competency of auditors and the frequency of audit committee meetings (Awinbugri & Prince, 2019; Jaggi, 2020; Wahyuningsih, 2024).

Furthermore, Hazaea et al. (2020); Al-Okaily and Naueihed (2019) and Belhouchet and Chouaibi (2024), the association between the frequency of audit committee meetings and the probability of transpiring financial misconduct is inverse and was also confirmed by the work of McLaughlin et al. (2021). Other previous studies suggests a positive association between the number of meetings conducted and the standard of financial disclosures (Dakhlallh et al., 2020; Leng et al., 2022; Paolone et al., 2023). A similar dispute persists regarding the influence

of auditor competence on the calibration of audits (Vitalis et al., 2023). There is conflicting research on whether experience enhances an auditor's ability to identify errors and resist management influence (Daoust & Malsch, 2020; Parker et al., 2021; Samagaio & Felício, 2022). While some research suggests that experience may render auditors more susceptible to confirmation bias and less likely to challenge management, other studies suggest the opposite (Chang & Luo, 2021; Daoust & Malsch, 2020)

This study endeavours to address these research gaps by employing a novel methodology. By analysing the potential individual effects of three key stakeholders– owners (multiple large shareholders); governance (audit committee meetings, usage of data analytics) and auditors (independence, competence, audit fee)–on the quality of audits in UK listed banks, we diverge from the traditional focus on only auditors (Chang & Luo, 2021; Leng et al., 2022; Wahyuningsih, 2024). By examining stakeholders' actions in conjunction with audit quality inspection outcomes from the Financial Reporting Council (FRC), our objective is to offer a more comprehensive understanding of the factors that influence accurate financial reporting. This shift in perspective yields crucial insights into how the entire financial ecosystem, extending beyond the auditor-client relationship, impacts audit quality (Ciger, 2020; Khairunnisa et al., 2023). Specifically, the objectives of the study are (1) to investigate the relationship between multiple large shareholders and audit quality on UK listed banks; (2) to check whether making the best use of data analytics tools influences audit quality in UK listed banks; (3) to ascertain how the frequency of audit committee meetings in UK listed firms relates to audit quality; (4) to study whether auditor competence has any impact on audit quality among UK listed banks; (5) to see if the auditor's independence affects audit quality among UK listed banks; and (6) to examine whether engagement context as measured by audit fees affects audit quality in UK listed banks.

2. METHODS

This study employs a quantitative methodology to investigate the influence of various stakeholders on audit effectiveness in publicly traded institutions in the UK. This study utilises secondary data analysis of publicly available information from annual financial reports and audit inspection reports. The sample includes 217 companies listed on the London Stock Exchange, representing all banks by the end of 2022. Purposive sampling was used to ensure that the sample was aligned with the research objective. The selected companies are audited by FRC Tier 1 audit firms from the G7 nations, and only organisations with consistent financial reports from 2020 to 2022 are included for data comparability. Companies with financial reports in languages other than English were excluded from the study. The final sample consisted of 40 companies, providing a representative sample of G7 banks audited by reputable firms with accessible financial data in English. This study aims to establish correlations between variables such as auditor characteristics, shareholder representation, audit committee activity, and the quality of financial reporting assessed through audit inspection outcomes. This methodology ensures data consistency and reliability through rigorous standards and requirements.

The annual financial reports of the selected institutions provide the main source of information on the number of major shareholders, frequency of audit committee meetings, and engagement/audit fees. The variable "Multiple Large Shareholders (MLS)" is specified as a nominal variable. The value "1" represents stockholders that own more than 20% of the total shares in a firm, whereas the value "0" indicates the reverse (Earle et al., 2005). The Audit Committee frequency of meetings (ACFM) is a variable that measures the number of audit committee meetings conducted in a certain year based on information from annual reports. The Engagement/Audit Fee (AF) is a ratio variable calculated by taking audit fee paid by the client (Wilamsari et al., 2024). Engagement partner profiles on auditing firms' websites provide information on auditors' competence (AC). Khairunnisa et al. (2023) opine that auditor competence is a ratio variable that quantifies the number of years of experience had by the engagement partner in charge. The fee-to-revenue ratio has been extensively used as a measure in past research to evaluate auditor independence (AI) (Hwang et al., 2022; Awinbugri & Prince, 2019; Wilamsari et al., 2024). The number of meetings held by the audit connotes the frequency of audit committee meetings (ACFM) (FRC, 2016). Utilizing the software/IT asset to the entire asset is how data analytics is measured (Chu & Yong, 2021). The Financial Reporting Council's (FRC) yearly inspection reports serve as the ultimate source of information on audit quality (AQ). According to Alhammadi (2023), a binary variable represented by "1" indicates an improvement in financial reporting compared to the previous year, whereas "0" indicates the reverse.

Data were initially collected and processed using Microsoft Excel for basic cleaning and organisation. This step likely involves tasks such as removing duplicates, correcting errors, and structuring the data in a coherent manner. Subsequently, the data were imported into Stata for advanced statistical analysis. Descriptive statistics were then used to provide a concise summary of the key variables included in the study.

To explore whether multiple large shareholdings, data analytics, audit committee frequency of meetings, auditors' competence and independence, and audit fees affect audit quality, we specify our logistic binary regression model below.

$$P(Y=1)= \frac{1}{1+e^{-(\beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6)}}$$

Thus,

P(Y=1) = is the probability that the dependent variable Y (*audit quality*) is one.

The logistic function, represented by $\frac{1}{1+e^{-}}$ transforms a linear combination of the independent variables and their coefficients into a probability between 0 and 1. $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$, and β_6 are the coefficients to be estimated for each variable.

X_1: Multiple Large Shareholders (MLS)

X_2: Data Analytics (DA)

X_3: Audit Committee Frequency of Meetings (ACFM) X4: Auditor's Competence (AC)

X_5: Auditor's Independence (AI)

X_6: Engagement Fee /Audit Fee (AF)

3. RESULTS AND DISCUSSION

The results and discussion presented in this section cover descriptive statistics, correlation analysis, and panel regression analysis using the logistic random effect model after confirmation of the Hausman test as a suitable model for the data. The study also conducted sensitivity analysis and robustness testing using a quartile regression model.

Descriptive Statistics

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
AQ	120	0.442	0.499	0.000	1.000
MLS	119	0.126	0.333	0.000	1.000
DA	120	0.004	0.005	0.000	0.041
ACFM	120	13.958	13.746	0.000	62.000
AC	120	21.583	7.810	4.000	39.000
AI	120	0.011	0.014	0.000	0.072
lnAF	119	15.380	1.626	10.597	18.050

Note: AQ: Audit Quality, MLS: Multiple Large Shareholders, DA: Data Analytics, ACFM: Audit Committee Frequency of Meetings, AC: Auditor's Competence, AI: Auditor's Independence, lnAF: Natural logarithm of Audit Fee
Source: London Stock Exchange (2022)

The descriptive statistics in Table 1 provide an overview of the fundamental characteristics of the data used in the study. Based on the mean audit quality (AQ) score of 0.442, it can be inferred that audit reports for slightly less than 50% of bank-year observations improved. The prevalence of multiple main shareholders (MLS) is infrequent (mean = 0.126), and the application of data analytics (DA) is relatively insignificant (mean = 0.004). The average level of auditor competence (AC) is 21.58 years of experience, whereas the mean frequency of audit committee meetings (ACFM) is approximately 14. Audit fees (lnAF) and auditor independence (AI) had relatively low mean values of 0.011 and 15.380, respectively. The findings presented here offer a foundational understanding of the data and establish a framework for subsequent research on the influence of these attributes on audit quality.

Correlation analysis

Table 2. Pearson Correlation Matrix

	AQ	MLS	DA	ACFM	AC	AI	ln_AF
AQ	1						
MLS	0.023	1					
DA	-0.048	-0.065	1				
ACFM	0.114	0.024	-0.094	1			
AC	0.009	-0.309[**]	0.108	-0.089	1		
AI	-0.054	-0.221[**]	-0.134	-0.013	0.274[**]	1	
lnAF	-0.005	-0.275[**]	-0.159	-0.206[**]	0.189[**]	0.511[**]	1

*Note: ** indicates significance at the 5% level; AQ: Audit Quality, MLS: Multiple Large Shareholders, DA: Data Analytics, ACFM: Audit Committee Frequency of Meetings, AC: Auditor competence; AI: auditor independence; lnAF: natural logarithm of audit fees.*
Source: London Stock Exchange (2022)

The correlation matrix (Table 2) allows for the identification of interesting correlations between the variables. Although there is no strong positive link between audit quality (AQ), there is a weak positive relationship between auditor independence (AI) and the natural logarithm of audit fees (lnAF). This implies that raising costs might motivate the execution of audits that are characterised by a higher degree of independence. The likelihood of a negative link between auditor competence (AC) or independence (AI) and the number of large shareholders (MLS) warrants further investigation. Correlations are often used as a starting point for regression analysis to determine the factors that have a statistically significant impact on audit quality.

Regression analysis
Hausman Test

The results of the Hausman test, presented in Table 6, were used to select the appropriate logistic model for the study.

Table 3. Hausman Test

Test	Value
χ^2	3.85
Prob> χ^2	0.5712

Test: H0: difference in coefficients not systematic

Determining the optimal model for evaluating the impact of various stakeholders on audit quality requires using the Hausman test (Table 3). The null hypothesis (H0) states that the coefficients of the random effects and fixed effects models do not differ in a measurable manner. The prob> χ^2 = 0.5712 indicates that the χ^2 value of 3.85 is statistically insignificant. In the absence of sufficient evidence to reject the null hypothesis, the random effects model appears to be the most appropriate choice for our investigation. This implies that there could be undisclosed variables specific to particular institutions that have an impact on audit quality. The random effects model incorporates these potential institutional differences.

Table 4. Results of Random-effects and Fixed-Effects Logistic Regressions on Factors Affecting Audit Quality

	Dependent Variable: Audit Quality	
	REM	FEM
MLS	38.149***	3.497*
	(0.000)	(0.079)
DA	21.574***	0.591**
	(0.000)	(0.036)

	Dependent Variable: Audit Quality	
	REM	FEM
ACFM	19.633***	6.689***
	(0.000)	(0.000)
AC	8.420***	0.0007
	(0.000)	(0.852)
AI	0.046***	0.001
	(0.000)	(0.989)
lnAF	0.649***	0.089***
	(0.000)	(0.000)
Firm Fixed Effect	Yes	Yes
Time Fixed Effect	Yes	Yes
Wald χ^2	147.98***	
LR χ^2		196.38***
Log likelihood	-275.942	-219.472
Firms	40	40
Observation	118	118

*Note: *,**, and *** indicate significance at the 10 %, 5 %, and 1% levels, respectively. AQ: Audit Quality, MLS: Multiple Large Shareholders, DA: Data Analytics, ACFM: Audit Committee Frequency of Meetings, AC: Auditor competence; AI: auditor independence; lnAF: natural logarithm of audit fees. REM: Random-Effects Model, FEM: Fixed-Effects Model*

The results in Table 4 reveal that Wald chi-square tests show that independent factors significantly impact audit quality in both models. Additionally, the LR χ^2 tests indicate a good model fit for both FEM and REM, with higher log-likelihood values suggesting a better model approximation. Negative log-likelihood values, typical of logistic regression, were observed in both models. The comparison of log likelihood values reveals that FEM (-219.472) provides a more precise fit than REM (-275.942). Overall, the analysis suggests that the FEM model is more suitable for predicting audit quality based on the statistical significance of the Wald chi-square tests and higher log-likelihood value.

Relationship between multiple large shareholders and audit quality on UK listed banks

The results of the study presented in Table 4 show a positive relationship between multiple large shareholders and audit quality (β= 38.149, p< 0.001). This finding aligns with prior research suggesting that improved financial reporting could be a consequence of a concentrated ownership structure (Wilamsari et al., 2024). Large shareholders have a vested interest in the continued success of the organisation, and their diligent supervision could inspire executives to prioritise accurate financial disclosure. This is particularly relevant in the United Kingdom, where shareholder activism has a well-established history (Dinarjito & Febriansyah, 2020). However, it is critical to acknowledge that the relationship between MLS and audit quality may be complex. Alsaleem and Husin (2024) conducted research which

presents evidence suggesting that influential shareholders might conspire with management to manipulate financial statements.

This study contributes to the literature by examining the impact of stakeholders, apart from auditors, on audit quality. Throughout history, academic enquiries have predominantly focused on scrutinising the obligations and limitations that auditors face (Chang & Luo, 2021; Wahyuningsih, 2024). This study presents an exhaustive examination of the influence of stakeholders and FRC audit quality outcomes on accurate financial reporting. The objective is to augment our understanding of the myriad factors that impact precise financial reporting (Ciger, 2020; Khairunnisa et al., 2023). This shift underscores the importance of considering the entire financial ecosystem to ensure audit quality.

Influence of data analytics tools on audit quality in UK listed banks

The results also revealed that data analytics positively and significantly influences audit quality (β= 21.574, p< 0.001). This aligns with the growing body of research that highlights the use of data analytics by management to enhance the accuracy of financial information, which will ultimately ensure audit effectiveness (Al-Ateeq et al., 2022). By obtaining better and more accurate information generated through data analytics in form of audit evidences, auditors' cumbersome and tedious responsibility will be reduced as well as reducing the risk of human error in the said audit evidences gathered. By offering more comprehensive insights into an organization's systems and controls, more reliable performance information for management, and more effective and efficient interactions between auditors and management, data analytics presents a chance to significantly improve audit quality.

However, it is crucial to recognise certain constraints. The effectiveness of data analytics tools depends on two crucial factors: users' expertise and competence in using these tools and the quality and extent of accessible data (Barr-Pulliam et al., 2023). Moreover, it is crucial to consider ethical issues related to data privacy and security when integrating data analytics to generate and present audit evidences. This study provides an academic contribution by empirically examining the relationship between audit quality and data analytics in banks that are publicly listed in the United Kingdom. While some studies have explored the potential benefits of data analytics in auditing (Al-Ateeq et al., 2022), there is a dearth of understanding of the practical consequences of audit quality. This study reinforces the idea that data analytics may greatly enhance the auditing profession by demonstrating a statistically significant positive connection.

Relationship between frequency of audit committee meetings and audit quality in UK listed firms

Furthermore, the results reveal a significant positive relationship between the frequency of audit committee meetings and audit quality (β= 19.633, p< 0.001). This finding is consistent with previous research, suggesting that an audit committee that is more actively involved in the process could potentially enhance its efficiency (Dakhlallh et al., 2020; Leng et al., 2022). Consistent gatherings of the audit committee facilitate vigilant oversight by both

management and auditors, thereby fostering a more robust milieu for financial reporting. In the United Kingdom's jurisdiction, where publicly traded companies are required to constitute an audit committee, the frequency of meetings significantly influences the committee's efficacy. By augmenting the frequency of meetings, the committee is able to conduct a more comprehensive analysis of financial statements, collaborate with auditors to discuss any potential risks and warning signs, and enforce management accountability for the precision of financial reporting.

Nonetheless, it is essential to consider the potential constraints. Increased meeting frequency alone does not guarantee improved audit quality. The effectiveness of the audit committee relies on several factors, including the composition of the committee, competence of its members, and quality of its interactions with both management and auditors (Ayers et al., 2018). Additional enquiries could potentially delve deeper into these complexities. Identifying and bridging research gaps. By examining the precise correlation between the frequency of audit committee meetings and audit quality in UK-listed institutions, this study contributes to the existing body of knowledge. Consistent with findings from recent research (Dakhlallh et al., 2020), this study provides empirical evidence to support the notion that an active audit committee meeting frequency has a discernible positive effect (Handayati et al., 2022). This underscores the importance of providing adequate time and resources to audit committees so that they can effectively execute their supervisory responsibilities.

Effect of auditor competence on audit quality among UK listed banks

The results revealed a significant positive effect of auditor competence on audit quality (β= 8.420, p< 0.001). This finding resonates with other research suggesting that seasoned auditors have enhanced abilities to detect risks, identify anomalies, and maintain a sense of professional scepticism throughout the audit process (Daoust & Malsch, 2020; Parker et al., 2021). Through the accumulation of years of expertise, auditors may gain a deeper understanding of accounting standards, industry best practices, and possible signs of financial reporting misstatements. Auditor competence is a crucial factor in ensuring high-quality audits in the United Kingdom, which has a strong and well-established audit profession (Dinarjito & Febriansyah, 2020). Experienced auditors have likely honed their skills in rigorously scrutinising management statements, using analytical judgement, and engaging in critical thinking.

However, it is crucial to acknowledge certain nuances and limitations of this study. Relying only on years of experience as a measure of competency may not fully capture the complexity of this issue. Furthermore, the quality of an auditor's education, continuous professional growth, and specific expertise in the audited business might have an impact (Vitalis et al., 2023). According to study conducted by Chang and Luo (2021), auditors with a significant amount of expertise may be more likely to make mistakes due to confirmation bias. This study contributes to academic discussion on the relationship between auditor competency and audit quality by providing a more in-depth analysis. Prior research has shown inconclusive findings (Awinbugri & Prince, 2019; Jaggi, 2020; Samagaio & Felício, 2023). Nevertheless, this study provides concrete evidence that there is a direct relationship within

the realm of UK-listed institutions. This highlights the need to create a conducive atmosphere that encourages continuous learning and professional growth in the audit industry.

Effect of auditor independence on audit quality among UK listed banks

The analysis revealed a significant and unexpected positive effect of the auditor independence relationship on audit quality (β= 0.046, p< 0.001). Since its demonstration by DeAngelo in 1981, there has been conventional wisdom that a substantial and favourable correlation exists between auditor independence and audit quality (Wahyuningsih, 2024). Hence, auditors who are not susceptible to undue client influence are more likely to deliver unbiased and accurate assessments of financial statements. Additional plausible hypotheses could account for this unexpected result (Barr-Pulliam et al., 2023). Although the approach used to evaluate auditors' independence is not explicitly defined in the published material, it might not comprehensively encompass the intricate nuances associated with this concept. In addition, the unique attributes of the auditing environment in the United Kingdom may account for the positive correlation. In 2023, the Institute of Chartered Accountants in England and Wales (ICAEW) stated that the implementation of rigorous regulatory supervision by the Financial Reporting Council (FRC) could potentially mitigate the risk of client pressure compromising auditors' independence.

This study contributes to the current corpus of knowledge by uncovering an intriguing finding that challenges the established notion of the direct relationship between auditor independence and audit quality. Ciger (2020) and Khairunnisa et al. (2023) are two prior investigations that have underscored the importance of independence. Nevertheless, this study posits that the inherent variability and approaches employed to measure independence could potentially influence the observed correlation.

Influence of audit fees on audit quality in UK listed banks

Audit fees have a significant positive influence on audit quality (β= 0.649, p< 0.001). This finding aligns with those of other studies that suggest a favourable association between higher audit fees and audit quality (Geiger & Blay, 2011). Raising fees allows audit companies to commit more resources to engagement, such as hiring auditors with higher levels of experience, conducting more thorough audit processes, and utilising state-of-the-art data analytics techniques. This may lead to a more comprehensive and rigorous audit, increasing the likelihood of detecting mistakes and enhancing the overall quality of the audit. In the United Kingdom, where audit companies compete, the extent to which fees vary may be used as a measure of audit service quality (Wilamsari et al., 2024). Clients willing to pay higher costs are likely to expect a more thorough and extensive audit, which may motivate audit firms to dedicate additional resources to engagement.

This study provides an academic addition by empirically examining the relationship between audit fees and audit quality in UK listed institutions. This study adds to the growing body of data that supports the favourable association previously explored by Awinbugri and Prince (2019) within a specific framework. This finding highlights the benefits of appropriate pricing structures that allow audit firms to commit sufficient resources to carry out high-

quality audits. However, it is important to recognise concerns about the direct relationship between audit fees and quality. A situation may arise when audit companies are reluctant to vigorously question management claims because of concerns about losing customers. This may be caused by excessive pressure to reduce fees (Wilamsari et al., 2024). In addition, greater prices are not always associated with better-quality audits. There may be an optimal charge range that maximises audit efficiency.

Sensitivity and robustness testing

Table 5. Results of POLS and Quantile Regressions on Factors Affecting Audit Quality

Variable	Dependent Variable: Audit Quality					
	POLS	Q.10	Q.25	Q.50	Q.75	Q.90
Constant	0.779***	0.376***	0.290***	1.413***	3.113***	5.228***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MLS	0.599***	0.472***	0.385***	0.102**	0.013	0.111***
	(0.000)	(0.000)	(0.000)	(0.005)	(0.931)	(0.000)
DA	0.933***	0.678***	0.447***	0.253***	1.109**	1.089***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ACFM	1.734***	0.283*	1.110***	1.033***	1.491**	1.390***
	(0.000)	(0.074)	(0.000)	(0.000)	(0.000)	(0.000)
AC	0.751***	1.103***	0.953***	0.983***	0.600**	0.205***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
AI	0.344***	0.139**	0.132*	0.244***	0.381**	0.315***
	(0.000)	(0.005)	(0.039)	(0.000)	(0.000)	(0.000)
lnAF	0.706***	0.069**	0.773***	0.805***	0.383**	0.122***
	(0.000)	(0.005)	(0.000)	(0.000)	(0.000)	(0.000)
R^2	0.746					
Pseudo R^2		0.711	0.703	0.524	0.436	0.479
F-test	63.74***					
Obs.	120	119	119	119	119	119

*Note: *,**, and *** indicate significance at the 10 %, 5 %, and 1% levels, respectively. MLS, Multiple Large Shareholders, DA: Data Analytics, ACFM: Audit Committee Frequency of Meetings, AC: Auditor competence; AI, auditor's independence; lnAF, natural logarithm of audit fees.*

A sensitivity analysis was conducted to explore the potential impact of unobserved factors on REM outcomes. REM assumes that unique unobserved effects for each firm and time period are randomly distributed, but there may be systematic relationships between

certain unobserved attributes of a company and the variables under investigation. By using POLS and quantile regressions to relax the fixed-effects assumption, this study aimed to understand how these unseen elements could affect REM results. The results from the POLS and quantile regressions provide valuable insights into the strength and reliability of the REM findings. The alignment of the coefficients' signs and significance levels between the POLS and REM models suggested that unobserved factors had a minimal impact on the initial REM results. However, discrepancies were observed, such as the variable representing the frequency of audit committee meetings, showing different significance levels in the POLS regression compared to the REM model.

Quantile regressions revealed consistent positive effects of data analytics on audit quality across all quantiles, indicating a universal benefit, regardless of the baseline audit quality level. However, the impact of data analytics seems to diminish at higher percentiles of audit quality, suggesting that organisations with lower initial audit quality could benefit more from adopting data analytics. The congruence between the REM and POLS models enhances the credibility of the REM findings, while quantile regressions highlight potential variations in the relationships between factors and audit quality. By employing sensitivity analyses, this research addressed the limitations of the REM model and improved the understanding of how different variables influence audit quality. This comprehensive approach can streamline audit processes and enhance the reliability of financial statements.

4. CONCLUSION

This study examines the factors influencing audit quality in banks listed in the United Kingdom (UK). This study utilised a random-effects model and conducted sensitivity analyses using POLS and quantile regressions to achieve six main research objectives. The findings of this research contribute valuable insights into the ongoing discourse on ensuring accurate financial reporting. The results of the study highlight several key factors that positively and significantly influence audit quality in UK listed banks. The presence of multiple big shareholders (MLS), the use of data analytics (DA), and the frequency of audit committee meetings (ACFM) were identified as factors that enhance audit quality. These findings align with those of Dakhlallh et al. (2020), emphasising the importance of a robust corporate governance framework and the effective utilisation of technology in improving the auditing process. This research also sheds light on the nuanced impacts of auditor competence (AC) and auditor independence (AI) on audit quality. Although a correlation between audit quality and AC was observed, further investigation is needed to determine the most effective methods for assessing and enhancing auditor competence in a dynamic financial landscape. The discovery of a positive correlation between AI and audit quality, although unexpected, underscores the necessity for further research to identify the specific elements of auditor independence that hold significance in the UK context, potentially exploring the influence of regulatory oversight.

The use of POLS and quantile regressions in the sensitivity analysis bolstered confidence in the research findings. The consistency between the REM and POLS models

indicates that any unobserved corporate effects had a minimal impact on the initial REM results. Additionally, quantile regressions revealed intriguing variations in the relationships between certain factors and audit quality, such as the amplified positive effect of data analytics on organisations with lower initial audit quality. By investigating the collective impact of a broader range of external and internal variables on audit quality in UK listed banks, this research expands the current knowledge in the field. The emphasis on sensitivity analyses to assess result robustness and gain a deeper understanding of underlying connections, as well as the advocacy for leveraging data analytics and robust corporate governance practices to enhance audit quality, further enriches the insights provided by the study.

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