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RISK FACTORS OF AUDIT FEES OF LISTED FINANCIAL SERVICES IN NIGERIA

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ABSTRACT: *The volatile nature of Nigeria's business environment, marked by high regulatory intensity and inherent risks, poses challenges for financial service firms, particularly in meeting mandatory audit obligations. This study examined the effect of risk factors (liquidity risk and operational risk) on audit fees purposely selected among 26 listed financial service firms in Nigeria. Using an ex-post facto research design and panel Least regression model, secondary data from 286 observations (2013–2023) were analyzed. Findings revealed that liquidity risk significantly and negatively affects audit fees (Coefficient = -0.110635, p = 0.0288), indicating firms with better liquidity management incur lower audit costs. Operational risk (Coefficient = 0.025628, p = 0.2899) showed no significant effect. With an R-squared value of 0.472829, the model explained 47.3% of audit fee variations. These findings conclude that liquidity risk is a determinant of audit fees, while operational risk exerts an indirect influence moderated by regulatory frameworks and internal controls mechanisms. The study recommended managers adopt effective liquidity and operational management practices to mitigate perceived risks and negotiate lower audit fees, urging policymakers to emphasize liquidity-focused frameworks. This study contributes to the limited empirical literature on audit fee determinants in Nigeria, offering practical implications for managers, auditors, and regulators.*

KEYWORDS: Liquidity risk, Operational risk, Audit fees, Liquidity preference theory, Nigerian financial service firms.

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INTRODUCTION

Inherently, financial services are exposed to various risks in their business operations, with liquidity and operational risks being critical to their financial stability. Liquidity risk arises when an institution cannot meet financial obligations without significant losses, while operational risk involves potential losses from failed processes, systems, human errors, or external events (Drehmann & Nikolaou, 2013; Morgan, 2023). Poorly managed risks can lead to financial losses, erode stakeholder confidence, and increase external audit costs (Agbaje et al., 2021; Akpan et al., 2024a). To address these challenges, the Central Bank of Nigeria (CBN, 2007), issued a comprehensive guideline emphasizing robust risk management frameworks for liquidity and operational risk, aligning with Basel Committee recommendations (2006). Effective liquidity management, ensuring adequate short-term liquid assets, and addressing operational risks reduce audit complexities and influence audit fees (Kajola et al., 2022; Fadun & Oye, 2020).

Audit fees represent the financial consideration paid to auditors for providing assurance services, and their determination is influenced by a wide array of factors including firm-specific factors and the inherent risks associated with the audit engagement (CAMA, 2020; Lawal & Ibrahim, 2022). The pricing of audit services is critical, not only because it reflects the complexity and scope of the auditing process, but also because it offers insights into a firm's operational and financial health (Simunic, 1980; Hay et al., 2006). In developing economies like Nigeria, where financial service firms play fundamental roles in driving economic growth and stability, understanding audit fee determinants remains essential. Nigerian financial service firms, which include deposit money banks, insurance companies, and other financial institutions, operate in a regulatory environment characterized by stringent compliance requirements and high levels of scrutiny (Central Bank of Nigeria, 2023).

The significance of audits is more pronounced in financial service firms due to their complex financial structures, high transaction volumes, and regulatory requirements (Abubakar et al., 2023). These complexities necessitate rigorous audit procedures to ensure transparency, operational stability, and financial accountability. Audit fees are not merely an operational expense but also reflect the quality and depth of the audit process. Thus, audit fees, tend to increase as the complexity of the audit engagement grows (Ali, 2020; Ardianingsih & Setiawan, 2022). Risk factors encompass various intrinsic and extrinsic characteristics that influence strategic decisions, financial stability, and operational behaviours, thereby affecting the nature and scope of audit engagements (Hussaini & Fadjarenie, 2022). Understanding how these risk factors influence audit fees is vital for both corporate internal control systems and audit fee management. Audit fee determinants have been widely studied globally, but research focusing on the Nigerian business environment remains limited (Kajola et al., 2022; Rajgopal et al., 2021; Field et al., 2004).

The costs associated with ensuring high-quality audits - audit fees, especially in financial services are fundamental components of corporate financial management. However, the risks associated with misaligned incentives and inadequate scrutiny in auditor-client relationships emphasize the need for a robust audit framework that prioritizes transparency and accountability. This underscores the importance of carefully establishing and assessing audit fees to ensure they accurately reflect the value of the audit services provided (Schilit & Perler, 2010). Audit fees are generally determined by factors such as the time required for the engagement, the level of expertise needed, and the risks inherent in the audit process (Ask &

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Holm, 2013). Audits are essential not only for meeting the information needs of investors but also for enhancing corporate accountability by safeguarding against material misstatements in financial reports (Ezeoha, 2011; Monye-Emina & Jeroh, 2022).

Audit quality can often be inferred from the fees paid by companies, with higher fees typically signifying more thorough audit processes (Hallak & Silva, 2012). Establishing reasonable audit fees is essential for providing auditors with the incentive to ensure that certified public accountants perform a thorough information assurance process, which significantly improves the quality and reliability of audit reports (Xin, 2020). Thus, the determination of audit fees and audit quality remains a complex and challenging process. The intangible nature of audit services makes it more difficult to align the client's expectations with the cost of services rendered. This absence of clear benchmarks often results in varying perceptions of value, further complicating the evaluation of the quality of the audit in relation to the associated fees.

The volatile nature of Nigeria's business environment, characterized by high regulatory intensity, exposes financial service firms to significant liquidity and operational risks (CBN, 2023). These risks directly influence the cost of audit services by increasing the scope and complexity of audit engagements (Fields et al., 2004). Liquidity risk often arises from mismatched maturities of assets and liabilities, inefficient cash flow management, and economic instability. Auditors are required to dedicate substantial effort to assessing liquidity positions, evaluating cash flow projections, and reviewing working capital management practices. These additional audit procedures increase the resources required for risk assessment, leading to higher audit fees (Pardede & Laksito, 2022; Abubakar, 2013).

Operational risk, arising from uncertainties in internal processes, systems, and compliance requirements, adds further complexity to audit engagements. In financial service firms, these risks are intensified by extensive branch networks, reliance on advanced technology, and stringent regulatory frameworks. Auditors must evaluate the effectiveness of internal control systems, ensure compliance with complex regulations, and assess the robustness of IT systems. These activities demand specialized expertise and additional resources, contributing to the rising cost of audit services (Jongh et al., 2013; Fadun & Oye, 2020).

Despite the influence of liquidity and operational risks on audit costs, limited empirical research has focused on their role as risk factors' determinants of audit fees within Nigeria's financial services sector. Most existing studies have examined broader determinants or concentrated on other geographic regions, leaving a gap in understanding the sector-specific challenges faced by Nigerian firms (Fields et al., 2004; Olutokunbo, 2020). This lack of attention is concerning, as these risks continue to affect the stability of financial service firms and contribute to the disparities in audit fee pricing.

Liquidity risk challenges extend beyond the banking subsector (Akpan et al., 2024b). Insurance companies face delays in claims settlements and premium collection, while savings and loans institutions deal with cash flow constraints and insufficient capitalization (Carson et al., 2021). Mortgage banks and microfinance institutions encounter additional pressures from high levels of non-performing loans. These liquidity challenges necessitate rigorous and resource-intensive audit procedures, leading to increased audit costs (Apadore & Letchumanan, 2016; Septiani & Suryana, 2018). Operational risk presents equally significant challenges across financial service firms. In the insurance sector, high underwriting risks and compliance burdens require detailed audit scrutiny. Savings and loans institutions face issues related to weak

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internal controls and inadequate governance. Similarly, mortgage and microfinance banks grapple with inefficiencies, system breakdowns, and potential fraud. These risks demand heightened audit effort to ensure accuracy and regulatory compliance, further increasing audit fees (Carson et al., 2021). This study aims to empirically investigate how liquidity risk and operational risk influence audit fees in Nigerian financial service firms. By focusing on these core risks, the study contributes to a deeper understanding of the factors driving audit fees. It also provides insights for developing audit practices that are adequately tailored to address these unique challenges, ultimately ensuring the stability and resilience of Nigeria's financial services sector.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Risk Factors of Audit Fees

The risk factors of audit fees refer to the various elements influencing the pricing of external audit services, reflecting the scope, complexity, and risk associated with a firm's audit engagement. These risk factors encompass client-specific attributes, auditor-specific characteristics, and external conditions. Client-specific factors include firm size, financial performance, governance structure, and risk exposure. For example, larger firms with complex operations and higher transaction volumes incur higher audit fees due to the increased effort required for thorough examinations (Santhosh & Ganesh, 2020; Musa et al., 2021). Firms with heightened risks such as liquidity risk and operational risk, demand more rigorous audit procedures, leading to higher costs (Owolabi & Obida, 2012; Yulianti et al., 2019; Chernobai et al., 2011).

Santhosh and Ganesh (2020) identified industry classification, corporate governance practices, financial performance, operational complexity, ownership structure, risk profile, and internal control strength as risk factors influencing audit fees. Similarly, Apadore and Letchumanan (2016) and Urhoghide and Izedonmi (2015) emphasized that these factors define the scale and scope of audit efforts necessary to ensure financial accuracy and regulatory compliance. They dictate the intensity of the audit process. For instance, firms with robust governance structures and internal controls often face lower audit costs due to reduced audit risk, whereas those with higher liquidity and operational risks undergo more extensive audit scrutiny.

In this study, liquidity risk and operational risk are specifically examined as risk factors for audit fees. These risks underscore the critical relationship between a firm's risk profile and the audit effort required to address potential vulnerabilities. By focusing on liquidity and operational risks, this study explores how these particular risk factors influence audit costs in the context of Nigerian financial service firms.

Liquidity Risk and Audit Fees

Liquidity risk, defined as the potential inability of a firm to meet its short-term obligations due to insufficient cash flow, significantly influences the operations and audit processes of financial service firms (Afesha, 2015; Field et al., 2004). The financial services sector in Nigeria is particularly vulnerable to liquidity risk due to economic volatility, inflation, fluctuating exchange rates, and the significant reliance on financial institutions to manage liquidity effectively. Auditors must conduct comprehensive evaluations of a firm's liquidity

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management practices, assessing the firm's ability to meet its financial obligations, which often necessitates additional audit procedures (Barakat & Hussainey, 2013).

Liquidity risk directly impacts audit fees because it increases the complexity and scope of the audit engagement. Firms with higher liquidity risk require auditors to perform detailed procedures, such as stress testing, sensitivity analysis, and verification of cash flow adequacy, to evaluate the firm's ability to meet short-term obligations without incurring significant losses (Pardede & Laksito, 2022). These procedures demand additional time, resources, and expertise, contributing to higher audit costs. Moreover, firms facing liquidity challenges are often subject to increased regulatory scrutiny. For instance, the Central Bank of Nigeria (CBN) mandates that financial institutions maintain minimum liquidity ratios and submit periodic liquidity reports. Auditors are tasked with verifying these reports' accuracy and ensuring compliance with regulatory standards, further expanding the audit scope and increasing fees (CBN, 2007; Osemeke & Adegbite, 2016). The heightened audit complexity associated with liquidity risk arises from its integral role in a firm's financial stability. Firms operating under liquidity constraints may pose increased audit risk due to the heightened probability of financial misstatements or going concern issues. Auditors must thoroughly evaluate liquidity ratios, cash flow statements, and financial risk management practices to ensure the firm can sustain its short-term obligations. These additional audit requirements inevitably lead to higher audit fees (Abata & Migiro, 2016; Hay et al., 2006).

Empirical studies provide mixed findings on the relationship between liquidity risk and audit fees. Schneider and Tran (2013) measured liquidity risk by examining the ratio of short-term liabilities (maturing in less than one year) to long-term liabilities (maturing in more than one year). Their study concluded that firms with higher liquidity risk require more extensive audits, leading to increased fees. Similarly, Pardede and Laksito (2022) found that liquidity risk significantly influences audit fees due to the added complexity of verifying compliance with liquidity regulations. Conversely, Reschiwati et al. (2020) reported a negative relationship between liquidity risk and audit fees, suggesting that firms with effective liquidity management may incur lower audit costs. Shim and Siegel (2008) and Agarwal and Mishra (2007) emphasized that liquidity remains an essential determinant of audit fees due to its impact on the firm's overall risk profile and audit engagement requirements.

The regulatory framework in Nigeria emphasizes effective liquidity risk management for financial service firms. The CBN requires financial institutions to comply with minimum liquidity ratios and report their liquidity positions regularly, which auditors must verify (CBN, 2007). Additionally, Nigeria's volatile economic environment, characterized by high inflation and unpredictable government policies, exacerbates liquidity challenges. Under such conditions, auditors are compelled to adopt rigorous approaches to evaluate liquidity-related disclosures, further increasing audit costs (Field et al., 2004; Pardede & Laksito, 2022). Financial institutions, particularly those operating on narrow margins, are highly susceptible to liquidity shocks, compelling auditors to conduct more detailed assessments to ensure regulatory compliance and financial stability.

Liquidity risk is a critical determinant of audit fees because it affects the audit's scope and the level of assurance required. Firms with significant liquidity constraints are more likely to face heightened audit scrutiny to verify financial disclosures, risk management practices, and regulatory compliance. The increased effort and resources required for these audits translate into higher fees. On the other hand, firms with effective liquidity management and lower risk

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profiles may benefit from reduced audit complexity and associated costs. However, in a challenging economic environment like Nigeria's, even firms with robust liquidity practices may incur higher audit fees due to the need for more detailed evaluations to address regulatory and market-specific risks.

Based on the foregoing, this study hypothesized that:

H_{01}: Liquidity risk is not a determinant of audit fees of listed financial service firms in Nigeria.

Operational Risk and Audit Fees

Operational risk poses a significant concern for financial service firms, particularly in Nigeria, where challenges such as economic volatility, regulatory changes, and technological advancements are prevalent. Losses from operational risk often result from inadequate or failed internal processes, systems, or external events, encompassing issues like fraud, system failures, and natural disasters (Segal et al., 2024). These risks are embedded in the daily operations of financial service firms, including banks, insurance companies, and microfinance institutions, which face challenges such as insufficient infrastructure, regulatory compliance pressures, and increased stakeholder scrutiny. Operational risks can lead to financial losses that negatively affect a firm's performance and reputation, requiring auditors to evaluate internal controls, operational processes, and risk management frameworks to assess these risks comprehensively (Barakat & Hussainey, 2013).

Operational risk directly influences audit fees due to the added complexity and scope of audits required for firms with higher operational risk profiles. Financial service firms with significant exposure to operational risks often necessitate detailed examinations of their internal control systems, governance practices, and compliance measures. These processes require additional audit time, resources, and expertise, resulting in higher audit fees (Hay et al., 2006). For instance, firms with weak internal controls or significant operational deficiencies are subject to more rigorous audit procedures to ensure financial accuracy and compliance with regulatory requirements, thereby increasing audit costs.

In Nigeria, the regulatory bodies such as the Central Bank of Nigeria (CBN) and insurance regulators impose stringent compliance requirements to mitigate operational risks. For example, the Basel II Accord emphasizes operational risk management in financial institutions. Firms with inadequate controls or high operational risk are subjected to closer scrutiny, requiring auditors to verify compliance with these regulations. This verification process expands the audit scope and contributes to increased audit fees (CBN, 2007). Empirical studies have shown mixed findings regarding the relationship between operational risk and audit fees. Segal et al. (2024) found a positive association, suggesting that higher operational risk necessitates increased audit effort, leading to higher fees. Conversely, Wahyuni et al. (2024) noted that operational risk is not a significant determinant of audit fees in certain contexts, suggesting that regulatory frameworks and auditor practices may moderate its impact.

Operational risks also heighten the likelihood of financial misstatements or internal control deficiencies, necessitating more exhaustive audit procedures. The 2008 financial crisis illustrated the consequences of inadequate operational risk management, as firms like Lehman Brothers exhibited systemic operational failures that required auditors to intensify their evaluations of internal controls (Wiggins et al., 2019). In such scenarios, auditors are compelled to deploy additional resources and expertise, further increasing audit costs. It is magnified in

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Nigeria by economic volatility, technological disruptions, and regulatory challenges. Auditors must assess these risks within the broader context of compliance requirements, such as those mandated by the CBN's operational risk guidelines. Failure to manage operational risk effectively can expose firms to financial losses, reputational damage, and regulatory penalties, which increase the complexity of audits and lead to higher fees. The heightened scrutiny required for operational risk assessments reflects its critical role as a determinant of audit costs.

Operational risk significantly influences audit fees by increasing the scope and complexity of the audit process. Firms with elevated operational risks necessitate detailed evaluations of control systems, risk management frameworks, and compliance practices. These additional audit procedures, driven by the potential for financial misstatements and regulatory non-compliance, directly contribute to higher audit fees. Moreover, operational risk interacts with other factors, such as liquidity and governance risks, further complicating audit engagements.

Based on these varying findings, this study hypothesized that:

H_{02}: Operational risk is not a major determinant of audit fees of listed financial service firms in Nigeria.

Liquidity Preference Theory

This study is anchored on Keynes' liquidity preference theory, which posits that individuals and firms hold liquidity for transaction, precaution, and speculative motives (Keynes, 1936). The transaction motive addresses daily financial obligations, such as paying salaries and suppliers, while the precautionary motive involves maintaining liquidity to handle unforeseen contingencies. The speculative motive focuses on retaining liquid assets to seize future investment opportunities or avoid losses in other asset classes. These motives highlight liquidity's role in ensuring operational stability, mitigating risks, and supporting financial sustainability.

Liquidity risk occurs when a firm struggles to meet obligations due to insufficient liquid assets, necessitating enhanced audit procedures to evaluate reserves, short-term obligations, and regulatory compliance. These procedures expand audit scope, leading to higher fees (Barakat & Hussainey, 2013; Pardede & Laksito, 2022). The precautionary and speculative motives further link liquidity management with operational risk, as firms holding liquidity reserves to counter disruptions require rigorous auditor evaluations. Regulatory compliance, such as the Central Bank of Nigeria's minimum liquidity ratios (CBN, 2007), demands comprehensive audits, increasing fees.

Speculative activities like investments in high-risk assets elevate operational risks, prompting auditors to assess risk disclosures and adherence to accounting standards. Additionally, operational risks such as fraud or system failures necessitate detailed evaluations, raising audit costs (Segal et al., 2024). In summary, the liquidity preference theory provides a framework for understanding how liquidity and operational risks influence audit fees. By emphasizing liquidity's role in risk mitigation and resilience, the theory explains how these risks shape audit scope and costs in regulated sectors like financial services.

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Empirical Reviews

Larbi et al. (2024) examined determinants of mandatory joint audit fees in France using 696 observations from 116 firms (2017–2022). Generalized estimating equations (GEE) revealed that larger firms, Big Four auditors, and industries like telecommunications incurred higher fees. Mixed Big Four/non-Big Four audit teams made up 52.3% of the sample, while governance structure and internal control frameworks showed no significant effect. Firm size, industry type, and audit team composition were identified as critical determinants of audit fees.

Rimet and Syakirin (2024) analyzed audit fees in Indonesia's food and beverage sector using 45 observations from 15 companies listed on the IDX (2020–2022). Panel data regression showed that company complexity and board of commissioners significantly influenced audit fees, while profitability and company risk did not. The model explained 49% of audit fee variation, highlighting the importance of operational complexity and governance oversight.

Aji et al. (2023) explored the relationship between intellectual capital (IC) in human resource accounting and financial reporting quality, focusing on litigation risk. Using an ex-post facto design, data from 14 firms (2017–2021) showed a negative relationship between IC and litigation risk, and a positive relationship between IC and financial reporting quality. The study recommended enhancing employee relational skills and effective resource management to mitigate risks and improve reporting.

Saleh and Ragab (2023) assessed audit fees in Egyptian firms using panel data from 62 firms (2015–2020). Liquidity, audit committee independence, audit report lag, and audit firm status emerged as key determinants, collectively explaining 95.7% of audit fee variance. The findings stressed regulatory and governance factors in audit fee structures, recommending fee-setting frameworks aligned with these variables.

Xue and O'Sullivan (2023) studied audit fees in AIM-listed UK firms. Using correlation and t-tests, they found liquidity and listing length negatively influenced fees, while higher audit committee disclosures increased costs. Big Four auditors charged higher fees, particularly for smaller firms. The study highlighted how institutional contexts affect audit fee determinants. Lawal and Ibrahim (2022) investigated audit fee determinants in 26 Nigerian insurance companies using panel data (2011–2020). Random effects GLS regression revealed that client size and audit firm size positively influenced fees, while profitability, complexity, underwriting, and liquidity risks were insignificant. They recommended focusing on asset growth to enhance financial performance and influence audit fees.

Kanakriyah (2020) analyzed audit fees for manufacturing firms listed on the Amman Stock Exchange (2014–2018). Key determinants included audit report lag, client size, complexity, and audit firm status, while profitability and industry type showed negative associations. The study emphasized the importance of operational and governance factors in shaping audit fees.

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METHODOLOGY

The research design adopted in this study was an ex-post facto research design and this design was suitable for this study because the data used were historical. The population of this study comprised 45 financial service firms listed on NGX during the period from 2013 to 2023. The sample size for this study was 26 listed financial service firms which were purposively selected. Secondary data source was employed to generate the data for the analysis. This study employed Panel least square regression analysis to understand the interaction among the variables and estimate the relevant data.

Model Specification

The model used in this study was adapted from the work of Kajola (2022) and modified to suit this study as presented below;

$$ADF_{it} = \beta_0 + \beta_1 LQR_{it} + \beta_2 OPR_{it} + \epsilon_{it}$$

Where:

ADF = Audit Fees (dependent variable)

LQR = Liquidity Risk (measured by liquidity ratio)

OPR = Operational Risk (measured by insurance expenses)

β_0 = Intercept represents the baseline level of audit fees when all independent variables are zero.

$\beta_1 - \beta_2$ = Coefficients representing the strength and direction of the relationships

ϵ = Error term (stochastic disturbance)

i = Firm-specific identifier (cross-section)

t = Time period (2013–2023)

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RESULTS AND DISCUSSION

Table 4:1: Descriptive Statistics

Variables	ADF	LQR	OPR
Mean	4.826202	0.415298	7112.428
Median	2.356900	0.210000	189.0000
Maximum	8.660000	5.200000	241777.0
Minimum	-0.33000	0.000000	0.000000
Std. Dev.	2.536382	0.770409	32119.23
Skewness	0.122315	4.240561	5.640597
Kurtosis	1.627353	22.59121	35.19455
Jarque-Bera	12.36739	5411.969	13819.59
Probability	0.000866	0.000000	0.000000
Sum	1300.212	118.3600	2027042.
Sum Sq. Dev.	892.2314	168.5625	2.93E+11
Observations	286	286	286

Source: *Researchers' Computations (2024)*

Table 4.1 presents the descriptive statistics of the variables of the study. These statistics provide a summary of the key characteristics of the dataset, including the mean and standard deviation, which reveal the central tendency and variability of each variable. The mean values of the variables were recorded as 4.826202 (ADF), 0.415298 (LQR) 7112.428 (OPR). The standard deviations were higher than the means for most variables, indicating significant volatility over the study period. Meanwhile, Jarque–Bera probabilities below the 1% threshold for each variable confirm non-normal distributions, underscoring the presence of skewness and kurtosis issues. Notably, LQR and OPR exhibit particularly high kurtosis, pointing to fat-tailed distributions and potential outliers. In practical terms, the variability in ADF highlights the range of audit complexities and risk profiles among Nigerian financial service firms, while the broad dispersion of OPR reflects a diverse operational risk environment in the sector.

Table 4.2: Hausman Test

Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	0.320968	26	0.7283

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LQR	0.110635	0.110635	-525.9672	0.5602
OPR	0.025628	0.025628	0.027569	0.0427

Source: *Researchers' Computations (2024)*

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Hausman Test and Model Specification

The Hausman Test was conducted to determine the most suitable model for analyzing Audit Fees (ADF) determinants in Nigerian financial service firms. This test assesses whether unique errors correlate with the regressors, guiding the choice between the Fixed Effects Model (FEM) and Random Effects Model (REM). Table 4.2 summarizes the test results, yielding a Chi-Square statistic of 0.320968 with 25 degrees of freedom (d.f.) and a p-value of 0.7283. As the p-value exceeds 0.05, the study fails to reject the null hypothesis, indicating no evidence of error correlation with regressors. Hence, the REM is deemed appropriate for this analysis.

Panel Data Random Effect Regression Model

The Panel Data Random Effects Regression Model, a key tool for analyzing datasets with cross-sectional and time-series dimensions, was employed to examine Audit Fees (ADF) determinants in Nigerian financial service firms. This approach integrates observations across multiple firms and time periods, offering robust insights. Table 4.3 presents the model results applied to data from 26 Nigerian financial service firms, effectively capturing the influence of liquidity and operational risks on audit fees while accommodating firm-specific variations over the 2013–2023 period.

Table 4.3: Panel Data Random Effect Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LQR	-0.110635	0.050354	-2.197148	0.0288
OPR	0.025628	0.024166	1.060469	0.2899
C	-2.802190	0.456563	-6.137582	0.0000
	Effects Specification			
			S.D.	**Rho**
Cross-section random			0.511586	0.6679
Idiosyncratic random			0.360740	0.3321
	Weighted Statistics			
R-squared	0.472829	Mean dependent var		0.876966
Adjusted R-squared	0.362792	S.D. dependent var		0.548592
S.E. of regression	0.323527	Sum squared resid		35.95379
F-statistic	55.10231	Durbin-Watson stat		1.796443
Prob(F-statistic)	0.000000			

Source*: Researchers' Computations (2024)*

Liquidity Risk and Audit Fees

The analysis of liquidity risk (LQR) and its relationship with audit fees (ADF) showed a negative coefficient of −0.110635 with a p-value of 0.0288, below the 0.05 significance level. This indicates that liquidity risk has a significant negative effect on audit fees among Nigerian financial service firms. The negative coefficient suggests that firms with higher liquidity (lower liquidity risk) incur reduced audit fees due to decreased audit complexity. Auditors perceive such firms as less likely to encounter solvency issues, requiring less audit effort and leading to lower costs.

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This finding aligns with Keynes's Liquidity Preference Theory (1936), which emphasizes the role of liquidity in meeting transactional, precautionary, and speculative needs. Firms with strong liquidity positions are better equipped to fulfill financial obligations, simplifying the audit process and reducing associated costs. Consequently, auditors devote fewer resources to evaluate financially stable firms, translating into lower fees.

The findings align with studies like Xue and O'Sullivan (2023) and Saleh and Ragab (2023), which reported that better liquidity management reduces audit complexity, resulting in lower fees. Similarly, Musah (2017) noted that firms with strong liquidity attract reduced audit effort and costs. However, Qin (2020) suggested that firms with higher liquidity may face heightened scrutiny, leading to increased audit fees. Larbi et al. (2024) found no significant link between liquidity and audit fees, attributing cost variations to profitability and firm size. These mixed outcomes highlight differences in regulatory environments, sectoral norms, and regional practices influencing the role of liquidity in audit pricing.

Operational Risk and Audit Fees

The analysis of operational risk (OPR) and its relationship with audit fees (ADF) produced a positive coefficient of 0.025628 and a p-value of 0.2899, exceeding the 0.05 threshold. This indicates that operational risk does not significantly influence audit fees among Nigerian financial service firms. Although the positive coefficient suggests a minor direct relationship, its statistical insignificance implies that operational risk does not substantially impact audit fee determination. According to the Liquidity Preference Theory, operational risk indirectly affects operational stability and auditors' risk perceptions. The precautionary motive suggests firms facing high operational risks may hold liquidity buffers to address disruptions. However, in Nigeria's financial sector, regulatory frameworks and robust internal controls mitigate operational inefficiencies, reducing their direct influence on audit complexity and fees.

Auditors often assess operational risk as part of a broader risk profile rather than as a standalone determinant of audit fees. This aligns with Larbi et al. (2024) and Musah (2017), who found that operational risks have limited influence on audit fees due to a stronger focus on financial and governance risks. Conversely, Rimet and Syakirin (2024), Aji et al. (2023), and Kanakriyah (2020) identified operational inefficiencies as significant audit fee drivers, particularly in industries where such risks threaten stability.

The findings suggest operational risk is not a significant determinant of audit fees in Nigerian financial service firms, with regulatory frameworks and strong controls mitigating its effects. This reflects the sector's resilience and effective risk management practices.

CONCLUSION AND RECOMMENDATIONS

This study assessed the impact of liquidity and operational risks on audit fees among 26 Nigerian financial service firms from 2013 to 2023, using the Liquidity Preference Theory as its foundation. Panel least squares regression revealed that liquidity risk significantly and negatively affects audit fees, with firms exhibiting stronger liquidity management incurring lower audit costs due to reduced audit complexity. Conversely, operational risk had no significant effect, likely due to strong regulatory frameworks and effective internal controls in the sector. These findings emphasize liquidity management as a key determinant of audit fees,

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with operational risk playing an indirect role moderated by governance mechanisms. The study recommends enhancing internal controls and risk management frameworks to mitigate liquidity and operational risks. Such measures would reduce audit complexity, promote cost efficiency, and reinforce financial stability and investor confidence in the Nigerian financial services sector.

Contributions to Knowledge

This study adds to audit fee literature by revealing that, within the Nigerian context, liquidity risk significantly and negatively influences audit fees. It highlights the importance of liquidity management in emerging markets, where economic volatility amplifies auditors' focus on solvency risks. The finding that operational risk does not significantly affect audit fees offers a nuanced view, suggesting that stringent regulations and strong internal controls mitigate the direct influence of operational complexities on audit pricing. Framed within Liquidity Preference Theory, this research explains why firms with lower liquidity risk incur reduced audit costs, emphasizing auditors' perception of solvency and stability. Additionally, the study addresses a gap by examining Nigerian financial service firms, including banks, insurance companies, and microfinance institutions, showing how regulatory oversight and industry risks shape audit practices in this sector

SUGGESTIONS FOR FURTHER STUDIES

Future research could benefit from disaggregating operational risk into more granular categories, such as IT risk, fraud risk, and process risk, to ascertain whether certain operational vulnerabilities play a more pronounced role in influencing audit fees. This level of detail would enable investigators to discern the most critical operational components that drive variations in audit costs, thereby contributing to more targeted risk mitigation strategies and enhanced audit engagement design.

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