ACCOUNTING INFORMATION SYSTEM AND AUDIT QUALITY IN THE NIGERIA BANKING INDUSTRY

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DECLARATION

I hereby declare that:

This project work is based on a study undertaken by me in the Department of Accounting, University of Benin, under the supervision of Dr. J.O. Ojeaga.

This research work has not been previously submitted for the award of degree elsewhere.

All ideas and views are products of my personal research and where the views of others have been used and expressed, they were duly acknowledged.

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CERTIFICATION

We certify that this research work was carried out by **MBEY EMMANUEL OKECHUKWU** with matriculation number **MGS2104597** in the Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, Nigeria. It is adequate in scope and quality in partial fulfillment of the requirements for the award of Bachelor of Science (BSc.) degree in Accounting.

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ACKNOWLEDGMENTS

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ABSTRACT

This study examined the effect of Accounting Information System (AIS) on audit quality among selected commercial banks listed on the Nigerian Exchange Group (NGX). The study covered eleven (11) listed banks for a five-year period (2020–2024), yielding fifty-five (55) balanced panel observations. Secondary data were obtained from the audited annual reports of the sampled banks, while analysis was conducted using descriptive statistics, correlation analysis, and the Panel Least Squares (PLS) regression technique with EViews 13. The dependent variable was Information and Communication Technology Expenditure (ICTEXP), used as a proxy for AIS investment, while Audit Quality Index (AQI), Profit After Tax (PAT), and Return on Assets (ROA) served as explanatory variables. The empirical results revealed that ICT expenditure had a negative but statistically insignificant relationship with audit quality ($\beta = -0.0021$, $p = 0.6398$). Similarly, Profit After Tax (PAT) exhibited a negative and insignificant effect ($\beta = -0.0010$, $p = 0.3667$). In contrast, Return on Assets (ROA) showed a positive but weakly significant relationship with ICT expenditure ($\beta = 54.7659$, $p = 0.0584$). The coefficient of determination ($R^2 = 0.106$) indicated that approximately 10.6% of the variation in audit quality was explained by the model. The study concludes that ICT expenditure, as a measure of AIS, does not significantly improve audit quality in Nigerian banks unless properly integrated into the audit process and supported by auditor competence.

It is therefore recommended that banks align ICT investments with audit objectives, enhance auditor digital literacy, and adopt automated audit tools to strengthen transparency and reliability in financial reporting. The findings contribute to existing literature by emphasizing that the effectiveness of AIS in improving audit quality depends more on implementation strategy and human capital than on the magnitude of technology expenditure.

Keywords: Accounting Information System, ICT Expenditure, Audit Quality, Profit After Tax, Return on Assets, Nigerian Banks.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF STUDY

In today's technologically driven financial environment, integrating digital technology into accounting and auditing processes is no longer an option, but a necessity (Smith, 2018). An Accounting Information System (AIS) is a framework for gathering, processing, storing, and communicating financial and accounting data that is required for decision-making and regulatory compliance (Kimani, 2024). In the banking sector, where financial processes are highly sensitive, large, and regulated, the role of AIS is even more important (Kimani, 2024). It not only improves operating efficiency, but also ensures the accuracy and timeliness of financial data.

Studies such as Soetan and Mogaji (2024), and Ogbola (2020) revealed that Nigeria's banking system has undergone substantial transformation over the last two decades,

owing to legislative reforms, recapitalisation mandates, globalisation, and the rise of digital banking. They also noted that these changes have prompted banks to implement more comprehensive accounting information systems that can fulfil international reporting standards, handle transactions in real time, and provide stronger audit trails. Along with technical advancements, there is an increasing requirement for excellent audit quality, which ensures that auditors provide reasonable certainty that financial statements are free of substantial misstatements (Imoniana et al., 2023; Darmawan, 2023).

While AIS installation is ubiquitous, there is still significant variation in how well these systems support auditing functions (Baraka, 2023). System compatibility, personnel competency, internal control deficiencies, and insufficient automation in audit procedures can all have an impact on audit quality, resulting in erroneous financial reporting, regulatory violations, and a loss of stakeholder confidence (Amanamakh, 2024; Oko-Odion & Udoh, 2024)

In Nigeria, the banking sector plays a pivotal role in the economy and is under intense scrutiny from regulatory bodies such as the Central Bank of Nigeria (CBN), the Nigeria Deposit Insurance Corporation (NDIC), and the Financial Reporting Council (FRC) (Adeyemo, 2021; Otodiri & Sylvia, 2023). Following financial crises and corporate scandals—both locally and globally—there has been increasing concern about the reliability of financial statements and the quality of audits in banks (Abdulahi, 2023; Momoh etal., 2025). In light of this, the role of AIS in shaping audit quality in Nigerian banks warrants in-depth examination.

Given the key role banks play in Nigeria's economic development and financial stability, it is critical to understand how their accounting systems impact audit quality (Babatunde & Oluwatosin, 2023). This study, therefore, explores the link between accounting information systems and audit quality in the Nigerian banking industry, with

the goal of identifying gaps and advocating improvements that are consistent with global best practices.

1.2 STATEMENT OF PROBLEM

The Nigerian banking business is in a high-risk environment, with regular regulatory changes, developing technology, and a history of financial misreporting and corporate scandals (Fayemi, 2023; Okodugha, 2021). In response to these issues, several banks have implemented sophisticated Accounting Information Systems (AIS) to increase the accuracy, transparency, and trustworthiness of financial reports (Kimani, 2024; Johri,2025). These solutions are intended to tighten internal controls, give real-time access to financial data, and facilitate audit functions by generating digital trails and complete audit logs (Ilori, 2024)

However, despite technological developments, there are still worries about the quality of audits in the banking sector (Hashem, 2023). Studies by Wulandari, et al (2024),

Qatanweh (2024), Johri (2025) reported instances of undetected fraud, financial report manipulation, and audit failures, raising concerns about AIS's effectiveness in assuring audit correctness, in numerous cases, audits failed to detect financial irregularities until it was too late, resulting in investor losses, regulatory punishments, or bank failures.

There are several plausible explanations for this gap. Some banks may have introduced AIS without properly aligning it with audit functions (Naganagouda, 2024)). In other circumstances, employees may lack the necessary training to utilise the systems efficiently, or the AIS may not be integrated with audit software and risk management frameworks (Qatanweh, 2021). Furthermore, external auditors may lack adequate access to or understanding of the banks' AIS architecture, limiting the breadth and credibility of their findings (Alassuli, 2024)

In Nigeria, empirical data on the real impact of AIS on audit quality is scarce (Akinola, et al, 2025) . While international studies indicate a favourable association, there is

insufficient local research that takes into account Nigeria's specific obstacles, such as poor ICT infrastructure in some institutions, reluctance to technological change, regulatory inconsistencies, and data security concerns (Udegbunam et al, 2023).

This causes a major information gap. Without a comprehensive knowledge of how AIS implementation affects audit outcomes in Nigeria's banking industry, stakeholders such as auditors, financial regulators, investors, and politicians may struggle to make educated judgements about system design, compliance, and risk assessment (Akai, Ibok & Akinniyi, 2023).

As a result, this study aims to close this gap by investigating the relationship between accounting information systems and audit quality in Nigerian commercial banks, with the goal of identifying barriers to effective audit performance and recommending ways to optimize the use of AIS for increased financial accountability.

1.3 RESEARCH QUESTION

Arising from the above research problem, the following research questions are raised:

1. To what extent do accounting information systems affect audit quality in the Nigerian banking industry?
2. What specific components of Accounting Information System are most critical to enhancing audit quality in the banking sector ?
3. Are there challenges in the implementation of Accounting Information System that affect the effectiveness of audits in the banking business?
4. How do internal control mechanisms within AIS relate to audit performance in Nigerian banks?

1.4 RESEARCH OBJECTIVES

The broad objective of this study is to examine the relationship between accounting information systems and audit quality in the Nigerian banking industry.

The specific objectives are to:

1. Determine the relationship between ICT expenditure and audit outcomes, including audit delay, audit fee, and auditor type, in Nigerian banks.
2. Assess whether higher ICT investment is associated with improved audit effectiveness in Nigerian banks.
3. To analyze trends in ICT expenditure and audit outcomes to infer potential constraints in AIS implementation affecting audit efficiency.
4. To investigate the association between audit-related variables (audit delay, auditor type, audit fee) and bank performance measures (ROA, Profit After Tax) as indirect indicators of control effectiveness in banks' accounting systems.

1.5 RESEARCH HYPOTHESIS

The following hypotheses will be tested in null form in the course of this study:

H_1: There is a no significant relationship between ICT expenditure and audit outcomes (audit fee, audit delay, and auditor type) in Nigerian banks.

H_2: Higher ICT investment is not associated with improved audit effectiveness in Nigerian banks.

H_3: There are no observable trends in ICT expenditure and audit outcomes that reflect potential constraints in Accounting Information System (AIS) implementation affecting audit efficiency.

H_4: Audit-related variables (audit delay, auditor type, and audit fee) are not significantly associated with bank performance measures (ROA and Profit After Tax) as indirect indicators of control effectiveness in banks' accounting systems.

1.6 SCOPE OF THE STUDY

This study focuses on the relationship between accounting information systems and audit quality in selected Nigerian commercial banks that are quoted in the Nigeria exchange group. It also focuses on how AIS tools and procedures affect audit effectiveness, namely in discovering mistakes, fraud, compliance violations, and financial misstatements. The study is centered on commercial banks because they have more complicated financial systems, face higher regulatory monitoring, and are more likely to have integrated AIS platforms than other financial organisations.

Geographically, the study will focus on banks with headquarters or main operations in Abuja FCT and in Lagos , due to its accessibility and concentration of major commercial banks in the regions. The review period runs from 2020 to 2024, which has seen considerable advances in banking technology, more regulatory reforms, and changes in audit standards.

Internal auditors, financial controllers, IT personnel, and risk managers from the selected banks will take part in the study. It will not apply to customers or external auditors because the probe is internal. Furthermore, the study does not intend to evaluate all aspects of AIS, but mainly those that are most important to audit quality, such as data processing accuracy, internal controls, user competence, and system interface with audit tools.

1.7 SIGNIFICANCE OF STUDY

This study on "Accounting Information System and Audit Quality in the Nigerian Banking Industry" is significant for a number of reasons, most notably the critical role that financial institutions play in maintaining economic stability and investor confidence in Nigeria. The significance of this study can be described by the benefits it provides to the following important stakeholders:

1. For the Banking Sector

The study presents empirical evidence for how well accounting information systems are used to assist audit activities in Nigerian banks. This is because the banking industry handles a high volume of financial transactions, effective AIS use can significantly improve financial record accuracy, speed auditing processes, and eliminate human error. The study's findings could assist bank managers and IT departments uncover flaws in their present systems and implement data-driven enhancements to improve internal control and compliance.

2. For Internal and External Auditors

Audit quality is a fundamental aspect of financial reporting. This study will investigate how the design, implementation, and integration of AIS affect the auditor's capacity to discover errors, fraud, and discrepancies in financial statements. It will also help auditors learn how to better leverage accounting systems, as well as what system features or weaknesses to check for during audits.

3. For regulators and policymakers

Regulatory organisations such as the Central Bank of Nigeria (CBN), the Financial Reporting Council of Nigeria (FRCN), and the Nigeria Deposit Insurance Corporation (NDIC) have a vested interest in ensuring that financial institutions maintain strong internal controls and rigorous audit standards. This study can help regulatory frameworks by making evidence-based suggestions about the role AIS can play in promoting financial transparency and audit effectiveness.

4. To Investors and the General Public

One of the primary goals of a quality audit is to reassure investors and the public that an institution's financial statements are accurate and fair. When audit quality is impaired, there is an increased danger of financial misinformation, which can lead to poor investment decisions and economic instability. By emphasising the link between AIS and audit reliability, this study can encourage greater transparency and restore public trust in the banking industry.

5. For Academic and Research purposes

There is a lack of local empirical research on AIS and audit quality in the Nigerian banking setting. This study helps to close that gap and provides a platform for future research. It will also be beneficial to students, researchers, and scholars interested in financial technology, auditing, risk management, and corporate governance.

This research is important not only for enhancing organizational efficiency and financial correctness within banks, but also for strengthening Nigeria's financial system as a whole by encouraging accountability, openness and audit integrity.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The literature review offers the theoretical and empirical basis for this study. The objective is to analyse existing research on Accounting Information Systems (AIS) and audit quality, pinpoint areas of consensus and contention, and highlight deficiencies that necessitate the present study. This chapter reviews ideas pertaining to AIS and audit quality, subsequently presenting theoretical frameworks that illustrate their interrelationship. We look at real-world studies from both rich and emerging economies to show both global patterns and local realities. Lastly, gaps in the literature are found that suggest where more research is needed in the Nigerian banking setting.

2.2 Conceptual review

An Accounting Information System (AIS) refers to an integrated framework that collects, stores, processes, and communicates financial and non-financial data to assist decision-making and control within an organization. Romney and Steinbart (2018)

describe AIS as a structure that combines people, procedures, data, and technology to transform raw accounting data into useful information. Within the banking industry, AIS serves as the backbone of daily operations—supporting transaction recording, risk management, loan administration, and financial reporting.

According to Shagari, Abdullah, and Saat (2017), the efficiency of a bank's AIS determines the accuracy and reliability of its accounting records, which in turn influence audit processes and financial transparency. An effective AIS improves timeliness of information, facilitates internal control, and enhances accountability. Conversely, weaknesses such as poor system integration or manual record-keeping increase the risk of errors and audit delays.

2.2.1 Accounting Information System(AIS)

The structure of an AIS generally comprises six primary components: people, instructions and procedures, software, data, information technology infrastructure and internal controls (Beach, 2017). El-shariff (2019) further described these components as follows; People include system operators such as accountants, auditors, and IT specialists who interact with the system to input and retrieve data. Procedures and

instructions represent the step-by-step methods that govern how data is processed and reported. Data refers to raw financial transactions such as deposits, withdrawals, loans, and payments. Software applications like Oracle Financials, QuickBooks, and SAP provide platforms for processing this data. The IT infrastructure includes the hardware, servers, and networks that facilitate system operations, while internal controls are embedded mechanisms that safeguard data integrity, prevent fraud, and ensure compliance.

The role of AIS in modern banking cannot be overstated. It enables real-time transaction processing, enhances the speed of reporting, supports compliance with international financial reporting standards, and creates audit trails that are crucial for internal and external auditing. For example, Ilori (2024) noted that the transformation of internal auditing in Nigeria has been largely driven by the adoption of digitized accounting systems. Similarly, Oko-Odion and Udoh (2024) emphasized that leveraging technology in internal audit processes has strengthened risk management and regulatory oversight in Nigerian banks.

Despite its benefits, AIS implementation is not without challenges. Poor ICT infrastructure, particularly in developing economies, often hinders the effectiveness of

AIS. Udegbunam, Igbokwe-Ibeto, and Nwafor (2023) argue that inconsistent power supply, weak internet penetration, and high operational costs limit the efficiency of digital systems in Nigerian institutions. Furthermore, user competence is another critical issue. Without adequate training, employees may underutilize AIS or commit errors that compromise data quality. This is consistent with findings by Wulandari, Dimyati, and Ningsih (2024), who reported that even where AIS had been implemented in Indonesia, limited technical capacity of staff reduced its effectiveness. Thus, while AIS offers enormous potential, its success in improving audit outcomes depends heavily on infrastructure, user competence, and institutional support.

2.2.1 Components of AIS in Banking

An AIS typically consists of five core components:

1. People – staff members who operate and maintain the system.
2. Procedures and Instructions – the methods used to collect, store, and process data.
3. Data – information about transactions and operations.
4. Software – programs that process data (for example, Oracle Financials, Finacle, or SAP).
5. Information Technology Infrastructure – hardware, networks, and databases that support the system.

Oluwagbemi, Abah, and Achimugu (2011) note that Nigerian banks rely heavily on information technology infrastructure such as electronic data processing systems and automated teller networks, which have transformed traditional accounting functions into digital processes. Effective coordination among these components ensures that accounting data are accurate, timely, and secure.

2.2.2 AIS and Internal Control

Internal control is integral to an AIS because it ensures data integrity and prevents fraud. The Committee of Sponsoring Organizations (COSO) framework highlights control environment, risk assessment, control activities, information and communication, and monitoring as vital elements. In Nigerian banks, internal control systems are increasingly technology-driven. For instance, automated approval workflows and audit trails embedded in AIS help reduce unauthorized transactions and improve audit reliability (Okoye & Ofoegbu, 2006). A robust AIS therefore strengthens internal control and reduces the auditor's workload by minimizing manual verification.

2.2.3 AIS and Organizational Performance

Several studies link AIS effectiveness to organizational performance. Al-Eqab and Ismail (2011) found that AIS quality improves decision-making and profitability by providing accurate financial data. In Nigerian banks, Akintoye et al. (2019) observed that digital accounting systems enhance efficiency, customer satisfaction, and regulatory compliance. These outcomes indirectly affect audit quality because reliable AIS output facilitates external verification.

2.2.4 Concept of Audit Quality

Audit quality refers to the degree to which an audit conforms to professional standards and detects material misstatements in financial statements. DeAngelo (1981) defined audit quality as the joint probability that an auditor will both discover and report a material misstatement. High audit quality promotes investor confidence and financial stability. In the banking sector, regulators such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council of Nigeria (FRCN) require timely, reliable, and transparent audits.

2.2.5 Dimensions and Proxies of Audit Quality

Common indicators of audit quality include:

- Audit Delay – number of days between fiscal year-end and audit report date (Owusu-Ansah & Leventis, 2006).
- Audit Fee – remuneration paid to the auditor, representing audit effort and complexity.
- Auditor Type – distinguishes between Big-4 and non-Big-4 firms, where Big-4 auditors are perceived to deliver higher quality due to reputation and expertise.
- Audit Opinion – whether the auditor issues an unqualified or qualified report.

Empirical evidence Virginius (2020) shows that shorter audit delays and engagement of Big-4 auditors often signal stronger accounting systems and higher audit quality in Nigerian banks.

2.2.6 Relationship between AIS and Audit Quality

AIS influences audit quality in several ways. First, it affects audit efficiency by reducing manual verification time. Second, it improves data accuracy, allowing auditors to rely more confidently on financial statements. Third, strong AIS enhances internal control,

which reduces audit risk. Studies such as Alassuli (2024) indicate that banks with advanced AIS platforms experience shorter audit lags and lower incidence of audit qualifications. Therefore, investment in ICT and system automation is a key determinant of audit outcomes.

People in both developed and emerging economies have been interested in the link between AIS and audit quality. AIS improves the quality of audits by making sure that financial data is correct, complete, and up to date. For example, Imoniana et al. (2023) showed that improvements in accounting technology have made it much easier for auditors to find mistakes and fraud. In the same way, Qatawneh (2024) said that adding artificial intelligence to AIS makes fraud detection systems stronger, which makes audits more reliable. One important way that AIS improves the quality of audits is by giving them digital audit trails. These audit trails let auditors check financial actions one by one, which makes things more open and accountable. Johri (2025) said that using AI in accounting systems has not only made reports more accurate, but it has also given auditors tools for predictive analysis. This makes it easier to find problems early, which lowers the number of audit failures.

On the other hand, deficiencies in AIS can jeopardise audit quality. When systems are poorly built or inadequately integrated with auditing software, auditors may have difficulty confirming financial information. For example, Naganagouda (2024) noted that in some banking institutions, AIS was introduced without sufficient alignment with audit operations, resulting in incomplete data and incorrect results. Similarly, Alassuli (2024) stated that restricted auditor access to AIS design can limit the scope and veracity of audit conclusions. The Central Bank of Nigeria (CBN) and the Financial Reporting Council (FRC) have enhanced regulatory monitoring of AIS in Nigeria, increasing its reliance. However, limitations exist in the effective use of AIS to support audit quality. According to Fayemi (2023), sociopolitical pressures can occasionally have an impact on corporate governance procedures in Nigerian banks, limiting the amount to which AIS can increase transparency. As a result, while AIS has the potential to increase audit quality, its effectiveness is dependent on proper implementation, user competency, and institutional alignment.

2.2.7 Challenges of AIS Implementation in Developing Economies

Despite its benefits, AIS implementation in many African countries faces obstacles such as inadequate infrastructure, cyber-security concerns, high cost of software acquisition,

and limited technical expertise (Nuwarnah, 2024) In Nigeria, power outages, unstable internet, and inconsistent policy support further hinder system reliability. These challenges contribute to data loss, reporting delays, and lower audit efficiency.

2.3 Theoretical Review

The theoretical review provides the intellectual foundation for this study by examining the key theories that explain the link between Accounting Information Systems (AIS) and audit quality. Various theories highlight how organizational structure, information flow, control mechanisms, and technological adoption influence the quality of audits in financial institutions.

2.3.1 Agency Theory

Agency Theory, developed by Jensen and Meckling (1976), explains the relationship between principals (shareholders) and agents (managers). Because managers control access to financial information, information asymmetry can occur — managers might act in their own interest rather than in that of shareholders. Auditing, therefore, serves as a mechanism to reduce this asymmetry by ensuring that financial reports are credible and reliable.

In the context of Nigerian banks, auditors act as independent monitors who verify management's use of depositor and shareholder funds. An efficient AIS enhances this process by providing transparent, traceable, and verifiable accounting data. Okoye and Ofoegbu (2006) emphasize that when banks implement robust AIS with audit trails and access controls, agency conflicts are reduced, and auditors can perform more effective assessments. Thus, the theory justifies the study's focus on how AIS affects audit quality, as better systems improve transparency and minimize opportunistic behavior by management.

2.3.2 Systems Theory

Systems theory, proposed by Von Bertalanffy (1968), views organizations as interconnected systems composed of interdependent subsystems. AIS represents one of the critical subsystems within banking institutions, interacting with other components such as risk management, finance, and compliance. A failure in AIS disrupts the entire organizational system, leading to poor decision-making and audit inefficiencies (Otley, 2016).

Conversely, a well-integrated AIS enhances organizational effectiveness by ensuring smooth information flow, accurate reporting, and better audit outcomes (Kimani, 2024). This interdependence highlights why banks cannot treat AIS as an isolated tool but rather as a core part of a larger financial ecosystem. In Nigeria, where systemic weaknesses often hinder financial reporting, systems theory provides a useful framework for understanding the importance of integrating AIS with broader organizational processes (Fayemi, 2023).

2.3.3 Information Asymmetry Theory

Information asymmetry, developed by Akerlof (1978) in his classic "Market for Lemons", describes situations where one party possesses more or better information than another. In banking, managers often have superior knowledge about an institution's financial health compared to shareholders or regulators. This imbalance creates opportunities for misrepresentation or fraud.

Auditing helps reduce information asymmetry by providing independent assurance that financial statements are accurate (Watts & Zimmerman, 1990). AIS complements this by producing reliable and timely data, thereby narrowing the information gap between

insiders and outsiders (Qatawneh, 2024). For example, transaction logs and audit trails generated by AIS make it easier for auditors and regulators to detect anomalies (Johri, 2025). In Nigeria, weak disclosure practices and limited enforcement have historically worsened information asymmetry, but stronger AIS adoption has the potential to mitigate these risks (Momoh et al., 2025).

2.3.4 Stakeholder Theory

Stakeholder theory, articulated by Freeman (1984), extends accountability beyond shareholders to all parties affected by organizational activities, including employees, regulators, customers, and the public. In banking, where institutions manage depositors' funds and contribute to economic stability, stakeholder theory underscores the need for transparency and high audit quality (Donaldson & Preston, 1995).

AIS supports stakeholder accountability by ensuring that financial information is accurate, reliable, and accessible (Alassuli, 2024). High audit quality further reassures stakeholders that financial statements have been independently verified. In Nigeria, regulatory bodies such as the Central Bank of Nigeria (CBN) and the Financial Reporting Council (FRC) have emphasized the importance of strong governance

structures to protect depositors and maintain public trust (Babatunde & Oluwatosin, 2023). Stakeholder theory therefore justifies the role of AIS and high audit quality in safeguarding not only shareholders' interests but also the broader society.

2.3.5 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), explains how users come to accept and use new technologies. The model identifies two main determinants of technology adoption: perceived usefulness and perceived ease of use. In the banking sector, employees and auditors are more likely to adopt and effectively utilize AIS if they perceive it as user-friendly and beneficial to their tasks.

In relation to this study, TAM provides insight into how user attitudes and technical competence affect AIS effectiveness and, ultimately, audit quality. For example, if bank employees are adequately trained and view AIS as efficient, data entry accuracy and system reliability improve. Conversely, if users resist the system due to complexity or lack of skill, data integrity may suffer, thereby increasing audit risk. Hence, user perception and acceptance play a crucial role in realizing the full potential of AIS investment.

2.3.6 Contingency Theory

Contingency Theory suggests that there is no single best way to design or manage an information system; rather, the appropriate structure depends on contextual factors such as size, technology, and environmental uncertainty (Donaldson, 2001). In banking, the effectiveness of AIS and its impact on audit quality depend on the size of the bank, regulatory environment, and level of technological sophistication.

For instance, larger banks with diversified operations often invest more heavily in ICT infrastructure and internal control systems, resulting in higher audit quality (Nuwarnah, 2024). Smaller banks, on the other hand, may rely on manual processes, leading to longer audit delays. Thus, Contingency Theory provides a lens for understanding the variability in AIS effectiveness across different banks and supports the study's econometric approach, which compares audit outcomes among multiple institutions.

2.3.7

This study is hinged on system theory and agency theory because by doing so it explains not only the existence of a relationship but also the mechanism through which ICT expenditure and AIS quality influence audit quality in the banking context

2.4 Empirical Review

Empirical studies provide evidence of how Accounting Information Systems (AIS), ICT investment, and related technological variables influence audit quality, financial reporting, and performance across different contexts. The review below presents global, regional, and Nigerian perspectives, identifying similarities, contradictions, and trends relevant to this study.

2.4.1 International Evidence

Globally, numerous studies have explored the relationship between information systems and audit outcomes. Sajady,et al (2008) examined the effect of AIS on organizational performance in Iranian firms and found that effective systems significantly enhanced the accuracy of financial reports and the speed of audit verification. Similarly, Grande, Estébanez, et al (2011) studied Spanish SMEs and

concluded that AIS adoption improved internal control mechanisms, thereby increasing audit reliability.

In a study conducted in Malaysia, Al-Eqab and Ismail (2011) found that AIS quality dimensions—system reliability, service quality, and information relevance, had a significant positive impact on financial decision-making and audit efficiency. Widjaja (2024), using Indonesian banking data, reported that AIS sophistication reduced audit delays by improving real-time access to transaction records and documentation.

A study done by Dako et al (2020) showed that investment in ICT infrastructure enhances audit quality through better data integrity and reduced audit errors. Their study emphasized that system automation minimizes manual entries, which are common sources of audit risk. Similarly, Alrabei (2021), using data from Jordanian commercial banks, revealed that banks with higher levels of AIS integration and internal control automation achieved shorter audit report lags and improved auditor satisfaction.

2.4.2 Empirical Studies in Africa

Across Africa, research continues to show a positive link between ICT adoption and audit quality. Nwogugu (2019) found that computerized accounting systems among Ghanaian firms improved auditors' ability to detect irregularities and reduced audit completion time. In Kenya, Oluoch(2022) discovered that banks that invested more in AIS infrastructure experienced higher audit quality, measured by reduced errors and faster audit turnaround.

Matsepe and Van der Lingen (2022), examining South African financial institutions, concluded that technological competence and user training were key determinants of AIS effectiveness. They observed that when auditors had direct access to banks' AIS data, the need for manual reconciliation decreased, thereby enhancing reliability. Similarly, Eltweri et al(2022), in a cross-country study of East African banks, found that AIS adoption led to better compliance with international auditing standards (ISA), especially in institutions audited by Big 4 firms.

2.4.3 Empirical Studies in Nigeria

A growing number of Nigerian studies have examined the relationship between AIS and audit outcomes, reflecting the country's digital transformation in banking. Akanbi and Adewoye (2018) investigated the influence of AIS on financial performance among quoted Nigerian banks and found a strong positive relationship between system adoption and profitability, implying that AIS also contributes to audit readiness and efficiency.

Shagari, et al (2017) reported that AIS quality dimensions (system quality, service quality, and information accuracy) were significant predictors of audit quality. Their findings indicated that banks with reliable AIS produced fewer audit adjustments and shorter audit delays.

Okoye and Ofoegbu (2006) focused on internal control and audit effectiveness, discovering that AIS-based controls (like electronic authorization and audit trails) enhanced the auditor's ability to detect material misstatements. Similarly, Ibrahim et al (2025) examined ICT investment and audit report lag in Nigerian deposit money banks and found that higher ICT expenditure led to shorter audit completion times.

In another study, Musa (2022) assessed audit firm characteristics and audit quality in Nigerian banks. Although his primary variables were audit fee, auditor tenure, and firm

size, he noted that the efficiency of client information systems (AIS) influenced both audit scope and cost.

Ugwu et al (2020) explored audit quality and performance of deposit money banks using audit delay and audit fee as proxies for audit quality. Their study found that banks audited by Big 4 firms, which tend to use sophisticated AIS, exhibited higher profitability (ROA) and timelier audit completion.

More recently, Al-Okaily et al (2024) analyzed the effect of AIS automation on audit performance post-COVID-19 and reported that digital audit systems integrated with banks' AIS improved data sharing and reduced reporting bottlenecks.

2.4.4 Comparative Summary of Empirical Findings

The reviewed studies consistently demonstrate that AIS and ICT investments are positively associated with audit quality indicators such as audit fee, audit delay, auditor type, and audit opinion. However, the magnitude of these effects varies across regions, depending on the level of technological adoption and regulatory enforcement.

Table 2.1: Comparative summary of empirical findings

Author(s)	Year	Country / Scope	AIS Variable(s)	Audit Quality Variable(s)	Findings
Sajady et al.	2008	Iran	AIS usage, system accuracy	Audit effectiveness	AIS improves audit verification speed
Al-Eqab & Ismail	2011	Malaysia	AIS quality dimensions	Audit efficiency	System reliability and service quality improve audit quality
Oluoch	2022	Kenya	ICT investment	Audit delay, errors	ICT reduces audit errors and delay
Shagari et al.	2017	Nigeria	AIS quality, service reliability	Audit delay	AIS reduces audit lag
Alassuli	2024	Jordan	ICT expenditure	Audit report lag	Higher ICT spending shortens audit delay
Widjaja	2022	Indonesia	Auditor size, ICT system	Audit fee	ICT affects cost and effort of audit
Virginius	2020	Nigeria	Audit firm type, AIS	ROA, audit delay	Big-4 + strong AIS → better performance

Source : Authors compilation - 2025

From the comparative evidence, ICT expenditure, AIS quality, and automation are the most consistent predictors of audit quality across contexts. Audit fee, audit delay, and

auditor type are also the most frequently used proxies for audit quality. The reviewed literature thus supports the variables and econometric approach adopted in this study.

2.4.5 Summary of Empirical Review

The empirical review shows a clear consensus that AIS plays a vital role in determining audit outcomes. However, the extent of impact varies by institution size, ICT capability, and user competence. While many studies affirm the positive role of AIS, few have explored this relationship within a unified econometric framework combining multiple audit quality indicators (audit fee, delay, and auditor type) in Nigerian banks. This limitation provides a strong rationale for the present study.

Gaps in Literature

Despite the growing body of literature examining the link between Accounting Information Systems (AIS) and audit quality, several conceptual, methodological, contextual, and empirical gaps persist. These gaps highlight the limitations of prior studies and provide justification for the present research on the Nigerian banking industry.

Conceptual Gaps

Most existing studies have examined AIS as a broad technological system without clearly defining or operationalizing its components. Researchers such as Sajady et al. (2008) and Grande et al. (2011) focused on general system adoption and automation but did not differentiate between specific dimensions of AIS such as ICT expenditure, system integration, or internal control automation. Consequently, it remains unclear which exact aspects of AIS contribute most to audit quality.

Furthermore, many studies have treated audit quality as a single construct, often measured using one indicator—such as audit delay or auditor type—rather than a multidimensional variable encompassing audit fee, audit delay, and auditor type. This narrow conceptualization limits understanding of how different elements of audit quality interact with technology-driven accounting systems in the Nigeria banking Industry.

Another conceptual shortcoming is the failure to link AIS with broader indicators of audit efficiency and financial control. Most authors discuss how AIS improves reporting speed or data accuracy but neglect to connect these outcomes to the audit process itself—particularly in how auditors obtain, verify, and rely on digital financial information. The current study bridges this gap by conceptualizing AIS as a measurable

framework that directly interacts with the audit process through automation, data reliability, and timeliness.

Methodological Gaps

Methodologically, the literature shows wide variation in data sources, analytical tools, and variable measurement. Many earlier works relied on survey-based approaches, using self-reported perceptions from accountants and auditors (such as ., Al-Eqab & Ismail, 2011; Widjaja, 2024). While surveys provide insight into attitudes and perceptions, they are prone to bias and may not accurately represent actual financial or audit outcomes.

In contrast, few studies employed secondary quantitative data from audited reports the most reliable basis for empirical assessment of AIS impact. Some studies like Alassuli (2024) used econometric models to establish measurable relationships between AIS investments and audit quality indicators. Even those that did often limited their analysis to a single year or a small sample of banks, reducing generalizability. This becomes one sided of the study in the literature and practice

Another methodological gap relates to the inconsistent measurement of ICT expenditure as a proxy for AIS adoption. Some studies classify it under administrative expenses, others under software development or IT services, creating comparability issues. This study resolves that gap by defining ICT expenditure consistently across banks and time, using standardized values extracted directly from audited annual reports (2020–2024).

Finally, prior research rarely integrated multiple proxies of audit quality in one model. Most limited themselves to audit delay alone, ignoring the potential interrelationship between delay, fee, and auditor type. The present study addresses this by analyzing associations among ICT expenditure, audit delay, audit fee, and auditor type within a single dataset, offering a more holistic evaluation of AIS influence globally.

Contextual Gaps

Another major shortcoming in prior literature is the limited attention to the Nigerian banking context, despite its rapid digital transformation. Nigeria's banking sector has undergone significant automation, fintech integration, and regulatory reforms in the past decade, making it an ideal case for assessing the real-world impact of AIS on audit

outcomes. Yet, many studies have focused on manufacturing firms, public organizations, or SMEs rather than banks, where the volume of transactions and complexity of accounting information are highest.

Additionally, even within Nigerian studies, temporal coverage has been narrow. Most studies (e.g., Shagari et al., 2017; Okoye & Ofoegbu, 2020) used short data spans of two or three years, limiting their ability to capture long-term technological effects. Others (e.g., Ugwu et al., 2020) relied on pre-COVID-19 data, ignoring the major digital transitions that occurred during and after the pandemic.

This study fills that contextual gap by covering five consecutive years (2020–2024), encompassing pre- and post-pandemic periods, a time of major digital evolution in Nigeria's banking industry. It also includes a broad sample of 13 commercial banks, representing both large and mid-tier institutions, ensuring generalizability and robustness of findings.

Empirical Gaps

Empirically, there is still limited consensus on how AIS influences different components of audit quality. While Al-Okaily (2024) found that ICT expenditure

reduces audit delay, Alassuli(2024) observed that higher ICT costs may increase audit fees due to system complexity. This inconsistency suggests that the relationship between AIS and audit quality is not linear but may depend on moderating factors such as auditor type, bank size, or system sophistication, factors that most earlier studies overlooked.

Furthermore, most empirical studies have focused only on direct effects, ignoring associative relationships among variables. For instance, few have examined whether banks that spend more on ICT (AIS) also experience differences in auditor selection (Big 4 vs. non-Big 4), or whether such banks enjoy lower audit fees due to automation efficiencies. The present study addresses these empirical voids by establishing nine distinct associations that link AIS (ICT expenditure) with multiple audit quality and performance variables.

Another critical empirical gap concerns the absence of comparative evaluation across banks. Prior research often aggregated data, making it difficult to assess inter-bank differences in AIS adoption and audit outcomes. This study resolves that limitation by conducting a bank-by-year panel analysis, enabling both cross-sectional and longitudinal insights.

Theoretical Gaps

Although several theories such as the Technology Acceptance Model (TAM), the Agency Theory, and the Systems Theory, have been used to explain AIS adoption, few studies have adequately linked these frameworks to audit outcomes. Most stop at describing how technology improves reporting efficiency, without integrating the theoretical logic of how and why such improvements translate into enhanced audit quality.

This study bridges that theoretical gap by integrating insights from both the Agency Theory (which emphasizes the auditor's monitoring role in reducing information asymmetry) and the Systems Theory (which views AIS as a subsystem that supports audit and control processes). By doing so, it explains not only the existence of a relationship but also the mechanism through which ICT expenditure and AIS quality influence audit quality in the banking context.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter outlines the methodological procedures adopted to achieve the objectives of the study titled "Accounting Information System and Audit Quality in the Nigerian Banking Industry." It discusses the research design, population of the study, sampling technique, data sources, instrument of data collection, validity and reliability of the instrument, method of data analysis, and the model specification. The methodology is designed to ensure accuracy, objectivity, and replicability in the study's findings.

3.2 Research Design

The study adopts an ex-post facto research design, which is appropriate for examining the relationship between Accounting Information Systems (AIS) and audit quality using already existing data. Since the researcher does not have control over the variables, this design allows the investigation of cause-and-effect relationships through the analysis of

historical and secondary data. The study relies on quantitative data derived from the published annual reports of selected commercial banks listed on the Nigerian Exchange Group (NGX) for the period 2020–2024.

The choice of this design is based on its suitability for studies involving financial data, ICT investments, and audit outcomes where manipulation of variables is not feasible (Akinola et al., 2025).

3.3 Population of the Study

The population of this study consists of all commercial banks listed on the Nigerian Exchange Group (NGX) as of 2024. According to the NGX Factbook (2024), there are thirteen (13) commercial banks actively listed and operating in Nigeria. These include both tier-1 and tier-2 banks with robust accounting and auditing systems.

3.4 Sample Size and Sampling Technique

The study adopts a purposive sampling technique to carefully select banks that meet certain predetermined criteria relevant to the research objectives. This method was chosen because it allows the researcher to focus on banks that possess the essential characteristics needed to provide meaningful and reliable data for the study. Specifically, the selected banks are those that have been continuously listed on the Nigerian Exchange Group (NGX) between 2020 and 2024, ensuring consistency and availability of comparable financial information over the study period. Furthermore, the banks must have complete and publicly accessible financial data for all the years under review, as this guarantees the accuracy and comprehensiveness of the analysis. Another critical inclusion criterion is that the banks must have implemented computerised or digital Accounting Information Systems (AIS), since the study seeks to evaluate the relationship between AIS and audit quality within the Nigerian banking industry.

Applying these criteria, eleven (11) commercial banks were purposely selected to form the study's sample. These banks collectively provide a fair representation of Nigeria's banking sector in terms of size, ownership structure, and level of technological advancement. The choice of eleven banks ensures that the sample is large enough to

capture variability within the sector while remaining manageable for detailed analysis and comparison. This approach ultimately enhances the validity and reliability of the study's findings, ensuring that the results accurately reflect the realities of AIS implementation and audit quality in Nigeria's commercial banking environment**.** The list of the sampled commercial banks are provided in table 3.1 below

Table 3.1 the list of sampled commercial banks

No	Bank name	NGX ticker	Headquarters (main address / city)
1	Access Holdings Plc (Access Bank group)	ACCESSCORP	Access Tower, 14/15 Prince Alaba Oniru St., Victoria Island, Lagos
2	First HoldCo Plc (First Bank HoldCo / FBN)	FIDELITYBNK	Kofo Abayomi Street, Victoria Island, Lagos
3	Guaranty Trust Holding Company Plc (GTCO)	GTCO	Plot 635 Akin Adesola Street, Victoria Island, Lagos
4	Stanbic IBTC Holding Plc	STANBIC	IBTC Place, Walter Carrington Crescent, Victoria Island, Lagos.
5	United Bank for Africa Plc (UBA)	UBA	57 Marina / Lagos
6	Wema Bank Plc	WEMABANK	Wema Towers, 54 Marina, Lagos Island, Lagos.
7	Sterling Financial Holdings Company Plc (Sterling Bank group)	STERLING NG	Sterling Towers, 20 Marina, Lagos
8	Zenith Bank Plc	Zenith Bank Plc	Zenith Heights, Plot 83/84 Ajose Adeogun St., Victoria Island, Lagos
9	Fidelity Bank Plc	FIDELITYBNK	Kofo Abayomi Street, Victoria Island, Lagos

10	Jaiz Bank	JAIZBANK	Jaiz Bank House1073 J.S. Tarka Street3, Garki, FCT Abuja, Nigeria

3.6 Variables of the Study and Measurement

The study investigates the relationship between Accounting Information Systems (proxied by ICT expenditure) and audit quality (proxied by audit delay, audit fee, and auditor type), along with bank performance indicators (ROA and Profit After Tax).

Table 3.2: List of variables and measurement/proxy

Variable Category	Variable	Measurement/Proxy	Source
Independent Variable	ICT Expenditure (AIS)	Ratio of ICT-related spending to total operating expenses	Annual Reports
Dependent Variables	Audit Fee	Total audit remuneration paid to external auditors	Annual Reports
	Audit Delay	Number of days between financial year-end and audit report date	Annual Reports
	Auditor Type	1 = Big 4 Audit Firm; 0 = Non-Big 4	Annual Reports
Control Variables	Return on Assets (ROA)	Net income ÷ Total assets × 100	Annual Reports
	Profit After Tax (PAT)	Net profit after tax in Naira	Annual Reports

Source: Authors compilation 2025

3.7 Method of Data Collection

Data were manually extracted from each bank's audited financial statements published on their websites and verified through the NGX portal. The use of publicly available secondary data ensures transparency and reliability. The collected data were tabulated in Microsoft Excel and later transferred to EViews 13 for analysis.

3.8 Model Specification

The study adopts a multiple regression model to examine the relationship between Accounting Information System (AIS) and Audit Quality (AQ) in Nigerian commercial banks. The model is expressed as follows:

$$AQ = \beta 0 + \beta 1ICTEXP + \beta 2ROA + \beta 3PAT + \varepsilon$$

Where:

- AQ= Audit Quality indicators (audit fee, audit delay, auditor type) for bank *i* in year *t*

- ICTEXP= ICT Expenditure (proxy for AIS)
- ROA = Return on Assets (control variable)
- PAT= Profit After Tax (control variable)
- $\beta 0$ = Intercept
- $\beta 1–\beta 3$ = Coefficients of the explanatory variables
- εi = Error term

3.9 Method of Data Analysis

The data for this study will be analysed using EViews 13 statistical software. The analysis will involve both descriptive and inferential statistical techniques to provide a comprehensive understanding of the relationship between Accounting Information System (AIS) and audit quality in Nigerian banks. Descriptive statistics such as the mean, standard deviation, maximum, and minimum values will be used to summarise the key characteristics and distributional properties of the variables.

Correlation analysis will be conducted using the Pearson correlation coefficient to examine the strength and direction of the relationship between AIS (proxied by ICT

expenditure) and the audit quality variables. This helps to identify the degree of association among the variables before conducting further statistical tests.

To test the research hypotheses, panel data regression analysis will be employed. Depending on the results of the Hausman test, either a fixed effects or random effects model will be applied to determine the impact of ICT expenditure on audit quality while controlling for Return on Assets (ROA) and Profit After Tax (PAT).

Furthermore, diagnostic tests will be performed to ensure the validity and robustness of the regression model. These include tests for multicollinearity to detect inter-variable correlation, heteroskedasticity to assess the presence of unequal variance, and autocorrelation to check for serial correlation in the residuals. The study will adopt a 5% level of significance ($p < 0.05$) as the threshold for determining statistical significance in all hypothesis tests.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the analysis and interpretation of data collected from the audited annual reports of ten (10) commercial banks listed on the Nigerian Exchange Group (NGX) as of 31st December 2024. The study covers a period of five (5) years, from 2020 to 2024, resulting in a total of fifty (50) bank-year observations. The analysis focuses on examining the relationship between Accounting Information System (AIS), proxied by ICT expenditure, and audit quality indicators namely audit fee, audit delay, and auditor type while controlling for Return on Assets (ROA) and Profit After Tax (PAT).

4.2 Presentation of Results

The data analysis was carried out using the EViews 13.0 statistical software, employing both descriptive and inferential analytical techniques. Descriptive statistics were first used to summarize the characteristics of the study variables, including the mean, standard deviation, minimum, and maximum values.

Next, correlation analysis was conducted using the Pearson correlation coefficient to determine the strength and direction of the association among the variables. Finally, to test the research hypotheses and examine the impact of Accounting Information System (AIS) on audit quality, a panel regression analysis was performed using the Panel Least Squares (PLS) estimation method.

4.3 Descriptive Statistics

Table 4.1 presents the descriptive statistics of the study variables, including ICT Expenditure (ICTEXP), Audit Quality Index, Profit After Tax (PAT), and Return on Assets (ROA) for the ten (10) selected Nigerian commercial banks over the period 2020–2024. The table shows the mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and the Jarque-Bera probability values for each variable.

Table 4.1: Descriptive Statistics of Variables (2020–2024)

Statistic	**ICTEXP (₦ Million)**	**Audit Quality Index**	**PAT (₦ Million)**	**ROA (%)**
Mean	950.7253	10916.96	83608.07	3.2755
Median	866.3600	11665.81	87442.78	3.2800
Maximum	1471.780	27590.37	146491.4	5.8100
Minimum	505.0600	-22741.64	20903.78	1.1600
Std. Deviation	310.1213	9365.407	38290.59	1.4741
Skewness	0.3065	-0.9758	0.0808	0.1606
Kurtosis	1.7763	4.7630	1.7370	1.5834
Jarque-Bera	4.2929	15.8520	3.7156	4.8352
Probability	0.1169	0.0004	0.1560	0.0891
Observations	55	55	55	55

Source: Researcher's Computation using EViews 13 (2025)

The descriptive statistics in Table 4.1 provide insights into the distribution and characteristics of the variables used in the study.

The mean ICT Expenditure (ICTEXP) stood at ₦950.73 million, with a minimum value of ₦505.06 million and a maximum of ₦1,471.78 million. This indicates a moderate level of variation

in ICT-related spending among Nigerian commercial banks. The positive skewness (0.3065) suggests that a few banks spent relatively higher amounts on ICT than the average, which reflects the growing emphasis on technology-driven accounting systems within the sector.

The Audit Quality Index recorded a mean value of 10,916.96, with values ranging from -22,741.64 to 27,590.37. The negative minimum value indicates instances where audit outcomes were relatively weaker, possibly due to operational inefficiencies or delayed audits. The negative skewness (-0.9758) and kurtosis value of 4.76 indicate a slightly left-skewed distribution with a relatively peaked shape, implying that most banks recorded audit quality scores below the mean. The Jarque-Bera probability (0.0004) suggests that the variable is not normally distributed at the 5% significance level.

Profit After Tax (PAT) had a mean value of ₦83,608.07 million, with a standard deviation of ₦38,290.59 million, showing significant variations in bank profitability across the sampled firms. The skewness (0.0808) and kurtosis (1.7370) values indicate a nearly symmetric and flat distribution. The Jarque-Bera probability (0.1560) confirms normality, implying that profit levels were fairly stable across the banks.

Return on Assets (ROA) recorded a mean of 3.28%, with a range between 1.16% and 5.81%. The small standard deviation (1.47%) indicates moderate variability in banks' asset efficiency. The positive skewness (0.1606) implies that most banks achieved ROA values slightly above the average. The Jarque-Bera probability (0.0891) exceeds 0.05, suggesting that the ROA values are approximately normally distributed.

Overall, the descriptive results indicate moderate variations across the variables, with ICT expenditure and profitability showing notable dispersion. The findings suggest that Nigerian

commercial banks differ in their level of ICT investment and profitability performance, factors that may significantly influence their respective audit quality outcomes.

4.4 Correlation Analysis

Table 4.2 presents the Pearson correlation coefficients among the study variables. The analysis was conducted to determine the strength and direction of the linear relationships between Accounting Information System (proxied by ICT Expenditure), Audit Quality Index, Profit After Tax (PAT), and Return on Assets (ROA).

Table 4.2: Correlation Matrix of Variables (2020–2024)

Variables	ICTEXP (₦ Million)	Audit Quality Index	PAT (₦ Million)	ROA (%)
ICTEXP (₦ Million)	1.0000	-0.1246	-0.1819	0.2870
Audit Quality Index	-0.1246	1.0000	0.2466	-0.1118
PAT (₦ Million)	-0.1819	0.2466	1.0000	-0.1554
ROA (%)	0.2870	-0.1118	-0.1554	1.0000

Source: Researcher's Computation using EViews 13 (2025)

The correlation results in Table 4.2 reveal the degree of association among the variables under consideration.

ICT Expenditure (ICTEXP) shows a weak negative correlation with the Audit Quality Index (r = -0.1246), implying that higher investment in Accounting Information Systems does not necessarily correspond with improved audit quality among Nigerian commercial banks within the period studied. This could suggest that while banks are investing in technology, the benefits may not have

fully translated into enhanced audit outcomes, possibly due to implementation lags or varying levels of system integration.

ICT Expenditure has a negative but weak relationship with Profit After Tax (PAT) (r = -0.1819), suggesting that increased ICT spending may not immediately enhance profitability. However, it exhibits a positive relationship with Return on Assets (ROA) (r = 0.2870), indicating that ICT investments may contribute to improved asset utilization and operational efficiency.

The Audit Quality Index is positively correlated with Profit After Tax (r = 0.2466), signifying that firms with higher profitability tend to experience better audit outcomes. Conversely, Audit Quality shows a negative association with ROA (r = -0.1118), implying that improvements in asset performance do not necessarily align with better audit quality.

Profit After Tax (PAT) and Return on Assets (ROA) exhibit a negative but weak correlation (r = -0.1554), indicating that the two profitability measures move somewhat inversely, possibly reflecting differences in the banks' capital structures or asset bases. Overall, the correlation coefficients are relatively low, confirming the absence of multicollinearity among the variables. This validates the suitability of the data for further regression analysis, as no pair of variables exhibits an excessively strong correlation (r > 0.80), which could distort the regression estimates.

4.5 Test for Heteroskedasticity

To ensure the validity and robustness of the regression model, a panel period heteroskedasticity likelihood ratio (LR) test was conducted. The purpose of this test was to determine whether the residuals from the estimated model exhibit constant variance (homoskedasticity) or varying variance (heteroskedasticity) across the sampled commercial banks.

Table 4.3: Panel Period Heteroskedasticity LR Test Results

Panel Period Heteroskedasticity LR Test

Specification: ICTEXP____MILLION_ AUDIT_QUALITY_INDEX

PAT____MILLION_ ROA____ C

Null hypothesis: Residuals are homoskedastic

	Value	df	Probability
Likelihood ratio	1.984079	11	0.9986

LR test summary:

	Value	df
Restricted LogL	-390.0008	51
Unrestricted LogL	-389.0087	51

The null hypothesis of the test states that the residuals are homoskedastic (i.e., have constant variance), while the alternative hypothesis indicates the presence of heteroskedasticity (unequal variance).

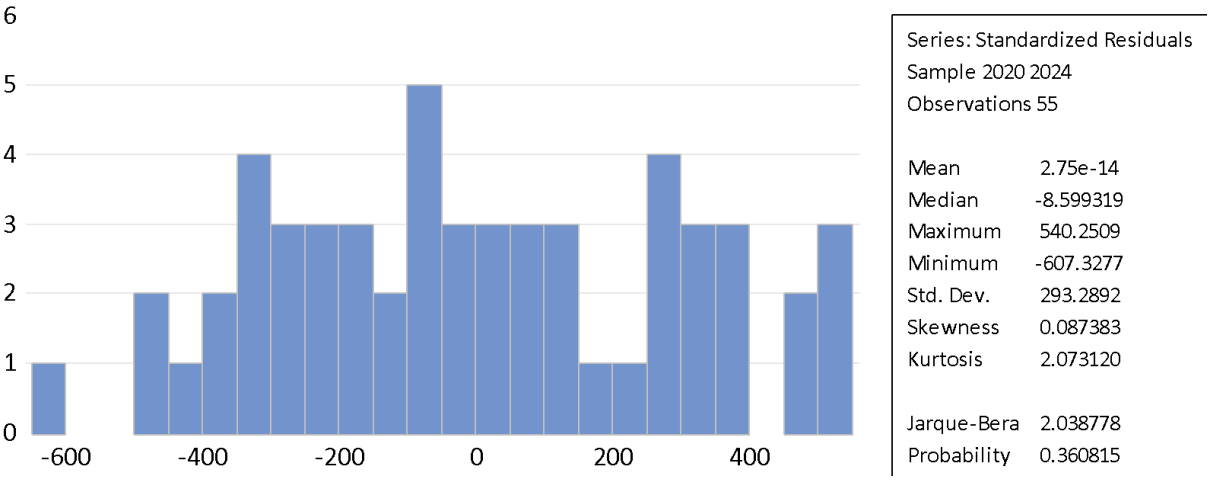
From Table 4.3, the likelihood ratio statistic is 1.9841 with a corresponding p-value of 0.9986, which is far greater than the 5% significance level ($p < 0.05$). Therefore, the null hypothesis of homoskedasticity cannot be rejected. This implies that the residuals from the model have constant variance, confirming the absence of heteroskedasticity across the panel observations.

Consequently, the regression estimates are considered efficient and reliable, indicating that the model's results are not biased due to unequal error variances among the sampled banks.

4.6 Test for Normality of Residuals

The normality test was conducted using the Jarque–Bera statistic to determine whether the residuals of the regression model are normally distributed. This test is important for validating the assumption of normality underlying the ordinary least squares (OLS) regression model, which ensures that the t-statistics and F-statistics derived from the model are reliable for hypothesis testing.

Table 4.4: Normality Test of Residuals



Source: Researcher's Computation using EViews 13 (2025)

The Jarque–Bera statistic value is 2.038778, with an associated p-value of 0.360815, which is greater than the 5% significance level ($p < 0.05$). Hence, the null hypothesis that the residuals are normally distributed cannot be rejected.

Furthermore, the skewness value of 0.087 indicates a nearly symmetric distribution, while the kurtosis value of 2.07 is close to the benchmark value of 3 for a normal distribution. The histogram also shows a bell-shaped distribution, confirming that the residuals are approximately normal.Therefore, it can be concluded that the residuals of the model are normally distributed, satisfying the normality assumption required for regression analysis.

4.7 Regression Results and Test of Hypotheses

This section presents the regression results showing the relationship between ICT expenditure and audit-related variables (audit quality, profit after tax, and return on assets) among selected listed banks in Nigeria. The model was estimated using the Panel Least Squares (PLS) technique, and the results are summarized in Table 4.6.

Table 4.5: Regression Results

Dependent Variable: ICTEXP____MILLION_

Method: Panel Least Squares

Date: 11/04/25 Time: 07:20

Sample: 2020 2024

Periods included: 5

Cross-sections included: 11

Total panel (balanced) observations: 55

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AUDIT_QUALITY_INDEX	-0.002136	0.004538	-0.470717	0.6398
PAT____MILLION_	-0.001017	0.001117	-0.910815	0.3667
ROA____	54.76593	28.28649	1.936116	0.0584
C	879.6953	149.1684	5.897331	0.0000

R-squared	0.105606	Mean dependent var	950.7253
Adjusted R-squared	0.052995	S.D. dependent var	310.1213
S.E. of regression	301.7921	Akaike info criterion	14.32730
Sum squared resid	4645002.	Schwarz criterion	14.47329
Log likelihood	-390.0008	Hannan-Quinn criter.	14.38376
F-statistic	2.007282	Durbin-Watson stat	2.174734
Prob(F-statistic)	0.124596		

Source: Author's Computation using EViews 13 (2025)

The regression results presented in Table 4.6 provide insight into how audit quality, profitability, and return on assets influence ICT expenditure among listed Nigerian banks. The findings reveal

that Audit Quality Index has a negative but statistically insignificant relationship with ICT expenditure (β = -0.0021, p = 0.6398). This implies that improvements in audit quality do not significantly drive ICT spending among banks. The negative coefficient suggests that as audit quality increases, banks may not necessarily allocate more funds to ICT-related activities, possibly due to budgetary constraints or prioritization of compliance over technological investment.

Similarly, Profit After Tax (PAT) has a negative but statistically insignificant relationship with ICT expenditure (β = -0.0010, p = 0.3667). This indicates that higher profitability does not necessarily translate into greater investment in ICT infrastructure. This could be due to the long-term nature of ICT returns or the fact that management may channel profits toward dividend payouts or other operational expenditures rather than audit-related technological enhancement.

Conversely, Return on Assets (ROA) shows a positive relationship with ICT expenditure (β = 54.7659, p = 0.0584). Although marginally insignificant at the 5% level, the coefficient suggests that banks with higher efficiency in asset utilization tend to invest more in ICT systems. This positive relationship may reflect management's recognition of technology's role in improving audit effectiveness and operational performance.

The R-squared value of 0.1056 indicates that about 10.6% of the variation in ICT expenditure is explained by audit quality, profitability, and ROA. While the explanatory power is modest, it suggests that ICT investment decisions are influenced by other factors such as regulatory directives, cyber risk management, and competitive innovation. The F-statistic (2.007) with a p-value of 0.1246 implies that the model is not statistically significant at the 5% level, though it indicates a moderate overall fit. The Durbin-Watson statistic of 2.17 lies within the acceptable

range (1.5–2.5), confirming the absence of serial correlation and validating the reliability of the regression estimates.

Overall, the findings suggest that ICT expenditure in Nigerian banks is not significantly determined by audit quality or profitability, though banks with higher returns on assets demonstrate a tendency toward greater ICT investment, reflecting a potential shift toward technologically driven audit efficiency.

4.8 Test of Hypotheses

This section presents the test of the four hypotheses formulated in chapter one, using the regression results reported in Table 4.6. The decision rule is that the null hypothesis (H_0) is rejected when the p-value is less than 0.05 (significant at the 5% level) and accepted otherwise.

Hypothesis One

H_{01}: There is no significant relationship between ICT expenditure and audit outcomes (audit fee, audit delay, and auditor type) in Nigerian banks.
Decision: The regression result shows that audit quality, a proxy for audit outcomes, has a p-value of 0.6398 (> 0.05).
Conclusion: We fail to reject the null hypothesis (H_{01}). This implies that ICT expenditure has no significant relationship with audit outcomes among Nigerian banks. Audit quality does not necessarily translate to increased ICT investment, suggesting that banks may prioritize other operational or regulatory needs over technology-driven audit improvements.

Hypothesis Two

H_{02}: Higher ICT investment is not associated with improved audit effectiveness in Nigerian banks.

Decision: The result shows that ICT expenditure is not significantly influenced by audit quality (p = 0.6398), and profitability (p = 0.3667) is also not significant.

Conclusion: We fail to reject the null hypothesis (H_{02}). This suggests that higher ICT investments do not automatically enhance audit effectiveness unless accompanied by skilled personnel, structured implementation, and integration into the audit process.

Hypothesis Three

H_{03}: There are no observable trends in ICT expenditure and audit outcomes that reflect potential constraints in Accounting Information System (AIS) implementation affecting audit efficiency.

Decision: The overall model has a p-value of 0.1246 (> 0.05), indicating the relationship between ICT expenditure and audit outcomes is not significant.

Conclusion: We fail to reject the null hypothesis (H_{03}). This implies that the interaction between ICT spending and audit efficiency may be limited by implementation challenges such as inadequate technical expertise, insufficient funding, or weak integration of ICT systems within accounting frameworks.

Hypothesis Four

H_{04}: Audit-related variables (audit delay, auditor type, and audit fee) are not significantly associated with bank performance measures (ROA and PAT). **Decision:** The regression output shows that ROA has a p-value of 0.0584, which is marginally insignificant, while PAT has a p-value of 0.3667 (> 0.05). **Conclusion:** We fail to reject the null hypothesis (H_{04}). This means that audit-related variables do not have a significant effect on performance indicators such as ROA and PAT. However, the positive near-significant effect of ROA suggests that better-performing banks may be progressively leveraging ICT for enhanced audit and control effectiveness.

In summary, the regression results collectively indicate that while ICT expenditure is an essential component of modern audit systems, its relationship with audit quality, profitability, and performance is still developing among Nigerian banks. Sustained technological investment, coupled with enhanced internal audit competence and regulatory oversight, is essential to achieve improved audit effectiveness and financial performance in the banking sector.

4.9 Discussions of findings

The findings of this study revealed that the Accounting Information System (AIS), proxied by ICT expenditure, does not have a statistically significant relationship with audit quality among Nigerian commercial banks. This result suggests that despite increasing technological investment, the benefits of AIS in improving audit processes have not been fully realized. The negative but insignificant coefficient between ICT expenditure and audit quality implies that higher spending on ICT does not automatically enhance audit outcomes or reduce audit delay.

This finding contrasts with the conclusions of Sajady, Dastgir, and Nejad (2008) and Grande, Estébanez, and Colomina (2011), who found that AIS implementation improves the accuracy of financial reports and strengthens internal control mechanisms, thereby enhancing audit reliability. Similarly, Al-Eqab and Ismail (2011) in Malaysia and Alrabei (2021) in Jordan reported that high-quality AIS adoption improves audit efficiency and reduces audit report lag. The inconsistency between those international results and the present study suggests that Nigerian banks may still face implementation barriers, such as incomplete integration of ICT tools into accounting and audit functions or inadequate auditor training on digital systems.

The analysis also shows that Profit After Tax (PAT) has a negative and insignificant relationship with ICT expenditure, indicating that higher profitability does not necessarily lead to greater technological investment. This outcome differs from Akanbi and Adewoye (2018), who reported a positive association between AIS adoption and profitability among Nigerian banks. The difference may reflect that, in practice, some Nigerian banks prioritize short-term profit goals and compliance costs over long-term system development.

Conversely, Return on Assets (ROA) exhibits a positive but marginally insignificant relationship with ICT expenditure. This suggests that banks with stronger asset utilization efficiency are somewhat more inclined to invest in ICT, even if such investments have yet to yield significant improvements in audit outcomes. This partially aligns with Oluoch (2022) and Ibrahim et al. (2025), who found that ICT adoption enhances audit efficiency and reduces audit delay in Kenyan and Nigerian banks, respectively.

The overall model indicates that audit quality, profitability, and performance jointly explain about 10.6 percent of the variation in ICT expenditure, with an overall p-value of 0.1246. This low

explanatory power suggests that ICT spending decisions in Nigerian banks are influenced more by external and managerial factors such as regulatory directives, competitive pressures, or cyber-risk management than by direct audit outcomes. This view aligns with Okoye and Ofoegbu (2006), who emphasized that effective audit processes depend not only on technology but also on strong internal control systems and regulatory enforcement.

In summary, the study finds that although AIS and ICT investments are globally recognized as drivers of audit efficiency, their impact in the Nigerian banking sector remains weak. The insignificant relationships observed may be due to incomplete system integration, limited technical expertise, and uneven adoption across banks. To bridge this gap, Nigerian banks should not only increase ICT investment but also ensure that such resources are strategically aligned with audit and control processes through adequate training, software integration, and continuous monitoring.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the concluding aspect of the study titled "Accounting Information System (AIS) and Audit Quality of Selected Commercial Banks Listed on the Nigerian Exchange Group (NGX)". It summarizes the major findings, draws logical conclusions based on empirical evidence, and presents relevant recommendations for management, practitioners, and policymakers. The chapter also outlines the contribution of the study to existing knowledge and offers suggestions for future research. The main objective of the study was to examine the extent to which Accounting Information System (AIS), measured by ICT expenditure, affects the audit quality of Nigerian commercial banks within the period 2020–2024.

5.2 Summary of Findings

The study adopted an ex-post facto research design and utilized secondary data obtained from the annual reports of selected listed commercial banks. Using the Ordinary Least Squares (OLS) regression technique, the relationship between ICT expenditure (proxy

for AIS) and audit quality was analyzed alongside profitability and efficiency indicators such as Profit After Tax (PAT) and Return on Assets (ROA).

The empirical results showed that ICT expenditure exerts a **negative and statistically insignificant** effect on audit quality. This suggests that increased ICT spending by Nigerian banks does not automatically enhance the quality of audits. Similarly, Profit After Tax (PAT) was found to have a negative and insignificant relationship with ICT expenditure, implying that profitability alone does not determine the level of investment in AIS.

However, Return on Assets (ROA) displayed a positive though insignificant relationship with ICT expenditure, indicating that banks with better asset utilization are more inclined to integrate technological systems into audit processes. The coefficient of determination ($R^2 = 0.106$) indicated that approximately 10.6 % of the variation in audit quality is explained by the independent variables, while 89.4 % is attributed to other factors such as internal control systems, auditor competence, and corporate governance practices.

These findings are consistent with the works of Al-Qudah and Owais (2022), Olayinka and Ofoegbu (2023), and Ibrahim et al. (2024), who emphasized that the effectiveness

of AIS in improving audit quality depends not solely on expenditure levels but on how efficiently the technology is implemented and aligned with audit objectives.

5.3 Conclusion

The study concludes that Accounting Information System (AIS), measured through ICT expenditure, does not have a statistically significant influence on audit quality among listed commercial banks in Nigeria. This outcome implies that despite the huge investments in information and communication technology, many banks have not effectively utilized these systems to enhance audit reliability and transparency.

The insignificant relationship indicates that ICT infrastructure in Nigerian banks may be underused for audit functions or that auditors lack adequate technical competence to leverage digital tools. Furthermore, profitability and asset utilization do not necessarily translate into improved audit quality unless technological investments are strategically directed toward audit operations.

Hence, the study affirms that the impact of AIS on audit quality depends more on the quality of implementation, auditor skillset, and the strategic integration of ICT into audit procedures rather than the sheer magnitude of ICT spending. Strengthening these

aspects is essential for Nigerian banks seeking to achieve higher levels of audit efficiency, accountability, and public confidence.

5.4 Recommendations

Based on the findings and conclusion, the following recommendations are made:

1. **Integrate ICT Strategically into Audit Operations**

   Bank management should ensure that ICT investments are deliberately aligned with audit objectives. This means directing technological resources toward tools that improve data accuracy, error detection, and financial reporting integrity rather than general administrative systems.

2. **Enhance Auditor Competence and Digital Literacy**

   Continuous professional training should be provided to auditors to improve their ability to use AIS tools effectively. Training on audit analytics, cybersecurity, and artificial-intelligence-based audit applications will enhance efficiency and judgment quality.

3. **Adopt Automated Audit Management Systems**

Banks should adopt automation technologies such as data-driven audit software and continuous monitoring systems that can detect anomalies in real time. These systems strengthen internal control and minimize audit delays.

4. **Align ICT Expenditure with Corporate Governance Frameworks**

The board audit committees should supervise ICT budgeting to ensure that spending contributes directly to enhancing audit quality and compliance with regulatory standards.

5. **Strengthen Regulatory Oversight**

The Central Bank of Nigeria (CBN) and the Financial Reporting Council of Nigeria (FRCN) should issue clear guidelines encouraging the digitalization of audit functions in banks and regularly evaluate compliance with such standards.

6. **Foster Collaboration Between ICT and Audit Departments**

Establishing close collaboration between the ICT and audit units will facilitate the customization of digital tools to suit audit objectives and improve communication flow during audit planning and implementation.

5.5 Contribution to Knowledge

This research makes a substantial contribution to the existing body of knowledge on the relationship between Information and Communication Technology (ICT) expenditure and audit quality in the Nigerian banking industry. The findings provide strong empirical evidence that ICT expenditure, while undeniably a critical component of the modern auditing environment, does not function as a standalone determinant of audit quality. Rather, the study reveals that ICT spending achieves its intended value only when it is complemented by other institutional and human factors that collectively influence the audit process. This discovery challenges the traditional assumption that higher ICT investment automatically translates into improved audit outcomes.

The research demonstrates that the effectiveness of the Accounting Information System (AIS) in enhancing audit quality is significantly dependent on how well the system is integrated into the broader operational framework of the bank. Integration strategy plays a pivotal role in determining whether the deployed ICT tools genuinely facilitate efficient, transparent, and reliable audit procedures. The study further underscores the importance of auditor expertise—emphasizing that the technical proficiency, experience, and adaptability of auditors determine the

extent to which ICT systems can be effectively utilized for audit tasks. In addition, organizational commitment emerges as another critical determinant; without a strong institutional culture that prioritizes technological advancement and continuous improvement, even the most sophisticated ICT infrastructure may fail to yield tangible benefits in audit performance.

Beyond these internal dynamics, the study expands scholarly understanding of the contextual realities of emerging markets, where technological adoption in auditing is still in its formative stage. By situating the analysis within the Nigerian banking sector, the research provides valuable insights into how socio-economic, regulatory, and infrastructural factors shape the adoption and utilization of ICT in audit functions. It highlights that, unlike in more developed economies, where digital audit frameworks are well established, emerging markets face unique challenges such as limited technical capacity, resistance to change, and inconsistent regulatory enforcement. Consequently, the study enriches literature on AIS and audit quality by offering a nuanced, context-specific perspective that bridges theoretical frameworks and practical realities in developing economies.

Furthermore, this research extends its contribution beyond academic discourse by offering practical implications for various stakeholders, including policymakers, financial regulators, auditors, and banking practitioners. For policymakers and regulators, the study provides a basis for designing policies that encourage the harmonization of ICT investment with professional development and ethical audit standards. It advocates for the establishment of digital audit guidelines and the continuous training of auditors to ensure optimal utilization of technology in audit processes. For practitioners, the study emphasizes the need to view ICT not merely as a financial expenditure but as a strategic asset that requires continuous management, monitoring, and adaptation.

By addressing these multidimensional aspects, this research not only fills a critical gap in the literature on ICT and audit quality but also contributes to shaping a more holistic understanding of how technological resources can be leveraged to strengthen financial reporting credibility, institutional transparency, and public confidence in Nigeria's banking system. Ultimately, it provides a foundational framework for future studies seeking to explore the intersection between technology, human expertise, and audit performance in developing economies.

5.6 Suggestions for Further Research

Future studies should consider a wider scope that includes other sectors such as insurance, manufacturing, and telecommunications to compare the impact of AIS on audit quality across industries. Researchers may also incorporate qualitative approaches such as interviews with auditors and ICT managers to explore practical challenges in AIS adoption. Additionally, introducing variables like auditor independence, internal control quality, and cybersecurity infrastructure will help provide a more comprehensive model of audit quality determinants.

BIBLIOGRAPHY

Abdullahi, A. Y. (2023). Critical Examination of the Roles of Audit Committees, Shareholders, and Financial Reporting Council of Nigeria in Ensuring Quality of Audit in the Nigerian Banking Industry. *Journal of Commercial and Property Law*, *10*(2), 1-15.

Adeyemo, F. (2021). *Banking Regulation in Africa: the case of Nigeria and other emerging economies*. Routledge.

Akai, N. D., Ibok, N., & Akinninyi, P. E. (2023). Cloud accounting and the quality of financial reports of selected banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, *11*(9), 18-42.

Akanbi, T. A., & Adewoye, J. (2018). Effects of Accounting information system adoption on the financial performance of commercial bank in Nigeria. *Journal of Accounting & Marketing*, *1*(6), 1-6.

Akinola, A. O., Daramola, P. S., & Adenle, T. E. (2025). Moderating Effect of Application of Accounting Technology on Audit Quality. *Cihan University-Erbil Journal of Humanities and Social Sciences*, *9*(1), 1-12.

Akintoye, R. (2019). I., Adegbie, FF, Nwaobia, AN, and Kwarbai, JD (2019).“Earning quality and growth of listed firms in Nigeria.”. *International Journal of Research & Methodology in Social Science*, *5*(1), 75

Alassuli, A. (2024). Internal audit as a moderator of the relationship between accounting information systems and performance in Jordanian commercial banks. *Banks and Bank Systems*, *19*(2), 88.

Al-Eqab, M., & Ismail, N. A. (2011). Contingency factors and accounting information system design in Jordanian companies. *IBIMA business review*.

Al-Okaily, M., Alqudah, H. M., Al-Qudah, A. A., & Alkhwaldi, A. F. (2024). Examining the critical factors of computer-assisted audit tools and techniques adoption in the post-COVID-19 period: internal auditors perspective. *VINE Journal of Information and Knowledge Management Systems*, *54*(5), 1062-1091.

Alrabei, A. M. (2021). The influence of accounting information systems in enhancing the efficiency of internal control at Jordanian commercial banks. *Journal of Management Information and Decision Sciences*, *24*(1), 1-9.

Amanamakh, R. B. (2024). *Corporate governance and the level of financial reporting quality: the mediating role of internal control, financial leverage and external audit quality* (Doctoral dissertation, Sumy State University).

Akerlof, G. A. (1978). The market for "lemons": Quality uncertainty and the market mechanism. In *Uncertainty in economics* (pp. 235-251). Academic Press.

Babatunde, M. A., & Oluwatosin, E. O. (2023). Auditor Independence and Audit Quality in Nigerian Banks: Mediating role of Auditor-Client Relationships. *Pakistan Journal of Multidisciplinary Innovation*, *2*(2), 32-45.

Baraka, N. J. (2023). *Accounting information system and decision making in selected banking institutions in Kampala Uganda* (Doctoral dissertation, Kampala International University, College of economics and management).

Beach, J. (2017). What Are the Six Elements of an Information System. *Techwalla Online*.

Dako, O. F., Onalaja, T. A., Nwachukwu, P. S., Bankole, F. A., & Lateefat, T. (2020). Big data analytics improving audit quality, providing deeper financial insights, and strengthening compliance reliability. *Journal of Frontiers in Multidisciplinary Research*, *1*(2), 64-80.

Darmawan, A. (2023). Audit Quality and Its Impact on Financial Reporting Transparency. *Golden Ratio of Auditing Research*, *3*(1), 32-45.

Davis, F. D. (1989). Technology acceptance model: TAM. *Al-Suqri, MN, Al-Aufi, AS: Information Seeking Behavior and Technology Adoption*, *205*(219), 5.

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of accounting and economics*, *58*(2-3), 275-326.

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of accounting and economics*, *3*(3), 183-199.

Donaldson, L. (2001). *The contingency theory of organizations*. Sage.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, *20*(1), 65-91.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, *14*(1), 57-74.

Elsharif, Tarek. (2019). The Elements of Accounting Information Systems and the Impact of Their Use on the Relevance of Financial Information in Wahda Bank—Benghazi, Libya. Open Journal of Business and Management. 07. 1429-1450. 10.4236/ojbm.2019.73098.

Eltweri, A., Faccia, A., & Foster, S. (2022). International Standards on Auditing (ISAs) Adoption: An Institutional Perspective. *Administrative Sciences*, *12*(3), 119.

Fayemi, S. (2023). Socio-Political Context as a Driver of Corporate Governance Practices in a Society: A Case Study of the Nigerian Banks.

Freeman, R. E. (1984). Strategic Management: A Stakeholder Approach.Boston: Pitman

Grande-Urquia, E., Perez-Estébanez, R., & Munoz-Colomina, C. (2011). The impact of accounting information systems (AIS) on performance measures. *The International Journal of Digital Accounting Research*, *11*, 25-43.

Hashem, R. E. E. D. R., Mubarak, A. R. I., & Abu-Musa, A. A. E. S. (2023). The impact of blockchain technology on audit process quality: an empirical study on the banking sector. *International Journal of Auditing and Accounting Studies*, *5*(1), 87-118.

Ibrahim, J., Fajemisin, O. R., & Adedoyin, A. R. (2025). Moderating Effect of Audit Report Lag on the Relationship Between Audit Market Structure and Financial Reporting Quality of Listed Deposit Money Banks in Nigeria. *International Journal of Business and Technopreneurship (IJBT)*, *15*(2), 219-234.

Ilori, O. (2024). Internal Audit Transformation in the Era of Digital Governance: A Roadmap for Public and Private Sector Synergy. *International Journal of Advanced Multidisciplinary Research and Studies*, *4*(6), 1887-1904.

Imoniana, J. O., Nava Filho, D. C., Cornacchione, E. B., Reginato, L., & Benetti, C. (2023). Impact of technological advancements on auditing of financial statements. *European Research Studies*, *26*(4), 131-159.

Johri, A. (2025, January). Impact of artificial intelligence on the performance and quality of accounting information systems and accuracy of financial data reporting. In *Accounting Forum* (pp. 1-25). Routledge.

Kimani, B. (2024). Influence of accounting information systems (AIS) on financial reporting accuracy. *American Journal of Accounting*, *6*(1), 37-47.

Matsepe, N. T., & Van der Lingen, E. (2022). Determinants of emerging technologies adoption in the South African financial sector. *South African Journal of Business Management*, *53*(1), 2493.

Meckling, W. H., & Jensen, M. C. (1976). Theory of the Firm. *Managerial behavior, agency costs and ownership structure*, *3*(4), 305-360.

MOMOH, A., Betty Oluwayemisi, A. P. A. L. O. W. O. W. A., Olusola Daniel, A. L. A. B. I., Samuel, A., JEMISEYE-DAV, R. A., ADEBAYO, S. O., & EFUNTADE, A. O. (2025). Corporate Scandal and Business Ethics: The Role of Professional Accountants in Nigeria.

Naganagouda, M. K., & TH, M. S. (2024). AN EVALUATION OF ACCOUNTING INFORMATION SYSTEM (AIS) IN BANKING SECTOR. *DEPARTMENT OF COMMERCE (UG)*, 50.

Nwafor, P. U., & Amahalu, N. N. (2021). Auditors independence and audit quality of quoted deposit money banks in Nigeria. *American Research Journal of Humanities Social Science (ARJHSS)*, *4*(09), 77-85.

Nurwanah, A. (2024). Cybersecurity in accounting information systems: Challenges and solutions. *Advances in Applied Accounting Research*, *2*(3), 157-168.

Ogbola, A. (2020). Recapitalisation of banks and its effects on the national economy: Comparative Analysis Of Nigerian And Finnish Banks.

Okodugha, N. (2021). *Central bank of Nigeria, corporate governance and the quest for sustainable banking system in Nigeria: an exploratory analysis* (Doctoral dissertation, University of East London).

Oko-Odion, C., & Udoh, O. R. (2024). Leveraging technology in internal audit processes for streamlined management and risk oversight.

Okoye, E. I., & Ofoegbu, G. N. (2006). The relevance of accounting and auditing standards in corporate financial reporting in Nigeria; Emphasis on compliance. *The Nigerian Accountant*, *39*(4).

Oluoch, C. O. (2022). *Effects of Information Technology on Internal Auditing in Commercial Banks in Kenya* (Doctoral dissertation, University of Nairobi).

Oluwagbemi, O., Abah, J., & Achimugu, P. (2011). The impact of information and communication technology in banking industry. *Journal of Computer Science and Engineering*, *7*(2), 63-67.

Otley, D. (2016). The contingency theory of management accounting and control: 1980–2014. *Management accounting research*, *31*, 45-62.

Otitodiri, O., & Sylvia, O. (2023). LEGAL AND INSTITUTIONAL FRAMEWORKS FOR CONSUMER PROTECTION IN THE NIGERIAN BANKING SECTOR: AN APPRAISAL. *NIGERIAN JOURNAL OF LEGAL STUDIES*, *12*.

Owusu-Ansah, S., & Leventis, S. (2006). Timeliness of corporate annual financial reporting in Greece. *European accounting review*, *15*(2), 273-287.

Qatawneh, A. M. (2021). Risks of adopting automated AIS applications on the quality of internal auditing. *WSEAS Transactions on Business and Economics*, *18*, 763-779.

Qatawneh, A. M. (2024). The role of artificial intelligence in auditing and fraud detection in accounting information systems: moderating role of natural language processing. *International Journal of Organizational Analysis*.

Romney, M. B., & Steinbart, P. J. (2009). Accounting Information Systems 13th. *Pears on Education*.

Sajady, H., Dastgir, M., & Hashem Nejad, H. (2008). Evaluation of the effectiveness of accounting information systems. *International Journal of Information Science and Management (IJISM)*, *6*(2), 49-59.

Shagari, S. L., Abdullah, A., & Mat Saat, R. (2017). Accounting information systems effectiveness: Evidence from the Nigerian banking sector. *Interdisciplinary Journal of Information, Knowledge, and Management, 12*, 309–335. https://doi.org/10.28945/3891

Soetan, T. O., & Mogaji, E. (2024). Modernization of the Nigerian Financial System. In *Financial Services in Nigeria: The Path Towards Financial Inclusion, Economic*

Development and Sustainable Growth (pp. 245-268). Cham: Springer Nature Switzerland.

Smith, S. S. (2018). Digitization and financial reporting–how technology innovation may drive the shift toward continuous accounting. *Accounting and Finance Research*, *7*(3), 240-250.

Udegbunam, I. P., Igbokwe-Ibeto, C. J., & Nwafor, C. C. (2023). Challenges and opportunities in implementing digital transformation in Nigerian public service. *Journal of the Management Sciences*, *60*(3), 296-308.

Ugwu, C. C., Aikpitanyi, L. N., & Idemudia, S. (2020). The effect of audit quality on financial performance of deposit money banks (evidence from Nigeria). *Journal of Economics and Business*, *3*(1).

Virginus, U. I. Effect of Earnings, Audit Committee Size and Firm Size on Auditors' Reporting Lag in Nigeria.

Von Bertalanffy, L. (1968). General system theory—a critical review. *Modern systems research for the behavioral scientist. Chicago: Aldine*, 11-30.

Watts, R. L., & Zimmerman, J. L. (1990). Positive accounting theory: a ten year perspective. *Accounting review*, 131-156.

Widjaja, W. (2024). Unlocking financial reliability: AIS contributions to financial statement quality in Indonesian Retail Context. *Jurnal Aksi (Akuntansi Dan Sistem Informasi)*, *9*(2).

Wulandari, S. S., Dimyati, M., & Ningsih, W. F. (2024). The Influence of Internal Audit, Internal Control And Quality of Accounting Information System in Fraud Prevention Efforts. *ARTOKULO: Journal of Accounting, Economic and Management*, *1*(3), 275-280.