Forensics Management Techniques and Fraud Investigation in Financial Institutions: A Case Study of Nigeria

Ugochukwu Daniel Onyemachi[1], Christian Asante[2], Funminiyi Olajide[1]
[1]*University of Portsmouth*
[2]*NHS England*
UK

Abstract

This study examines the efficacy and difficulties of forensic management strategies and fraud investigation procedures in Nigerian financial institutions. It draws attention to how common fraud is and stresses the need for effective detection and prevention techniques. Using a qualitative research methodology, the study addresses constraints including regulatory flaws and insufficient technology while identifying and assessing the efficacy of typical forensic procedures used in banks. Important conclusions show that while forensic management is essential in the fight against fraud, systemic problems seriously impair its overall efficacy. To restore the integrity of Nigeria's financial industry, the report ends with suggestions for improving fraud management techniques, such as attempts to create capacity and changes to policies.

Keywords: *fraud investigation, Nigerian banking sector, forensics management, forensic auditing, internal controls, fraud risk management, regulatory compliance, forensic accounting*

1. Introduction

The banking industry in Nigeria is still plagued by financial fraud, which includes a variety of fraudulent practices such as insider trading, embezzlement, and cybercrime [1]. To tackle these difficulties, forensic management, which includes investigative procedures to discover, prevent, and settle fraud cases, is essential [2, 3]. To find fraudulent financial activity, fraud investigation, a subset of forensic accounting, applies auditing methods and accounting principles. Maintaining confidence, protecting assets, and reducing the detrimental effects of fraud on financial institutions all depend on this investigation [4].

In the financial industry, forensic management is essential to combating [5]. To identify and stop fraudulent activity, scientific procedures and investigative tactics are applied. A further aspect of forensic management is fraud investigation, in which experts such as forensic accountants carefully review financial documents to find any anomalies [6]. This procedure guarantees that evidence is gathered for court proceedings and that fraudulent actions are identified early [7], [8].

Fraud has increased in Nigeria, especially in the banking industry, which has seen multiple incidences of ATM fraud, cybercrimes, and fraudulent insider activities, which calls for sophisticated and reliable forensic management systems activities [9], [10]. If left unchecked, fraudulent activity can lead to economic instability, reputational harm, and monetary losses [11]. Strategies for detecting and preventing fraud are essential for protecting financial institutions and the whole economy, [12].

2. Related work of literature review

The stability of economies around the world is seriously threatened by financial institution fraud, with Nigerian financial institutions being especially at risk. Because of systemic flaws, technology gaps, and insufficient governance frameworks, fraud has become more common in these organizations over time. This section examines the body of research on the frequency of fraud, the difficulties in managing it effectively, and the forensic management strategies used to address these problems. The examined studies give a complete understanding of how these elements intersect, underlining the crucial need for stronger fraud detection and management systems in Nigerian financial institutions.

The frequency and complexity of fraudulent operations have significantly increased, according to studies, raising concerns about the prevalence of fraud in Nigerian financial institutions. Nigerian banks are rife with financial fraud, which can take many forms, such as electronic fraud, ATM fraud [13]. Moreover, fraudsters have become more sophisticated, using technological breakthroughs to circumvent conventional security measures in financial institutions [14]. The number of fraud incidents in Nigerian financial institutions has significantly increased, according to a 2017 report by the Nigeria Deposit Insurance Corporation (NDIC). The number of fraud and forgery instances recorded rose by 36.42% between 2015 and 2016, although banks' real losses dropped because of better oversight and security measures. The NDIC does stress that fraud remains a significant problem, frequently due to bad company governance and foreign exchange violations. These actions put Nigeria's overall economic stability as well as the financial sector at danger." [15].

Systemic flaws in financial institutions' internal control systems are one of the causes of the high incidence of fraud. In Nigeria's banking industry, fraud flourishes due to a lack of transparency, weak regulatory frameworks, and insufficient supervisory systems [16]. Employees in Nigerian banks continue to commit insider fraud, taking advantage of internal weaknesses for their own benefit, [17]. The industry's high turnover rate, in addition to inadequate background checks and training, raises the possibility of fraud. Internal audits are essential to reducing these risks. By detecting organizational vulnerabilities to both internal and external fraud, internal audits seek to evaluate fraud risks [18]. Internal controls are essential for both preventing and identifying fraud, and regular audits as well as unplanned surprise audits aid in their scrutiny.

Nigerian financial institutions have a few challenges when it comes to putting in place efficient fraud management and investigation systems, despite efforts to prevent fraud. The absence of sufficient forensic accounting knowledge is one major issue. Many financial institutions lack the equipment and skilled staff needed to carry out thorough forensic examinations [19]. Furthermore, Nigeria continues to underuse forensic accounting as a tool for identifying fraudulent financial activity, in part because of the high expense of obtaining the required equipment and expertise, [20].

The disparity in technology presents another challenge. Globally, fraud detection technologies like artificial intelligence (AI), machine learning (ML), and data analytics are crucial for preventing fraud [21] but, in Nigeria, these technologies have not been fully adopted. The efficacy of fraud control initiatives is seriously hampered by this technology lag as well as the need for qualified individuals to evaluate forensic data. The sophisticated technologies required to identify complex fraud schemes, including those involving money laundering and cyberattacks, are often lacking in financial institutions. These difficulties are exacerbated by regulatory agencies' tardy reactions, which makes prosecution challenging, [22].

The Nigerian financial system's capacity to identify and stop fraud is severely limited [23]. The financial institutions will continue to be at risk unless substantial investments are made in anti-fraud technology and regulatory measures are adequately enforced, [24].

Internal audits, external forensic reviews, and data analytics are the main forensic management strategies used in Nigerian banks [18, 25]. Data analytics is essential for identifying irregularities in financial transactions and forecasting possible fraud risks [26]. Nevertheless, a lot of Nigerian institutions still struggle to obtain and use cutting-edge forensic techniques, which leaves gaps in fraud detection [27], [28], [29], [30]. Table 1 represents Tools and Technologies in Fraud Detection, while Table 2 represents challenges in forensic fraud investigation.

Table 1. Tools and technologies in fraud detection

Tool/Technology	Description
Auditing Tools	Systems that monitor financial records
Anti-Money Laundering (AML) system	Reporting, Monitoring and transactions that seem suspicious
Analytical Prediction	Instruments for predicting possible fraud risks
Data Analytics	Software for identifying transaction irregularities

Table 2. Challenges in forensic fraud investigation

Challenge	Description
Regulatory and Legal Obstacles	Inadequate legal structures for cybercrime prosecution
Challenges in Technology	Limited availability of sophisticated fraud detection technologies
Human Resource Training	Absence of qualified forensic investigators and accountants

It has been highlighted that artificial intelligence (AI) plays a crucial role in preventing financial crimes, especially because of its capacity to examine large datasets and identify complex fraud patterns. Understanding the developments in AI systems and how they are applied in real-world fraud detection initiatives is still lacking, though. This emphasizes the need for more research into how AI might be used in different financial scenarios [28].

Technology, especially AI and data analytics, has been shown to be important for enhancing fraud detection. Although these technologies have advanced, there are still issues with their long-term effectiveness and execution, which calls for more research into sustainable technical applications in fraud prevention [27].

Banks have improved staff training, adopted cutting-edge technologies, and partnered with global cybersecurity organizations in response to the growing cyber dangers brought on by the digital transformation of banking. The need for integrated cybersecurity policies, limited customer knowledge, and weak regulatory frameworks still present obstacles despite these efforts, creating opportunities for more proactive strategies [29].

Financial crime detection and mitigation have Been aided by forensic audits. For long-term effects and sustainability, however, sophisticated fraud detection technology and the incorporation of forensic procedures into banking operations are required [30], [31]**.** Nigeria's capacity to identify fraud has been greatly improved by combining cybersecurity with forensic accounting. However, more study is still needed to ascertain the approaches' broad application and impact in Nigeria's diverse industries [32]

Liquidity and financial stability are significantly impacted by the regulatory frameworks of the Nigerian banking system. However, research that assesses these frameworks' long-term effects is still needed because their capacity to adjust to changing difficulties in the banking sector has not been thoroughly investigated [33] Neural networks and clustering are two big data techniques that have shown promise in improving the identification of financial crimes. The high expense of infrastructure and human analysis, however, continues to be obstacles, indicating the need for economical and effective ways to apply big data techniques [26]. The following questions were addressed in this study:

- What are the common fraud management techniques used in Nigerian financial institutions?
- How effective are forensic techniques in curbing financial fraud in Nigeria?
- What are the limitations of forensic investigations in Nigeria’s financial institutions?

3. Methodology

This study examines forensic management practices in Nigerian financial institutions using qualitative research methodology. To analyse secondary data from journal articles, reports, and literature on fraud detection in Nigerian banks, the study used a case study design [34]

Using a descriptive research design [35], the study looks at how forensic management techniques are used in Nigerian financial institutions' fraud investigations. Since a descriptive approach offers a thorough grasp of the existing procedures, difficulties, and results associated with fraud detection and management in the Nigerian banking industry, it is suitable for this study. Secondary data sources, such as case studies, scholarly journals, industry reports, and publications from regulatory agencies, are the focus of the study. The paper intends to provide a factual and methodical review of forensic fraud detection methodologies currently used in Nigerian financial institutions by employing descriptive research.

Financial institution case studies from Nigeria provide useful information on real fraud cases and the techniques employed in their investigation. The difficulties that the institutions have in preventing financial crimes are also highlighted in these publications.

This study only uses secondary data collection method. The term "secondary data" describes information that has previously been gathered and published in databases, papers, or studies [36]. The decision to use secondary data was made because of the abundance of existing literature on forensic fraud detection and management, as well as the availability of financial reports and case studies from organizations such as the Nigerian Deposit Insurance Corporation (NDIC), the Central Bank of Nigeria (CBN), and private auditing firms.

The qualitative analysis of the gathered data focuses on secondary source thematic interpretation. The objective of the qualitative study is to find patterns, trends, and weaknesses in Nigerian banks' fraud detection procedures by critically examining, contrasting, and comparing the results of numerous research. This method enables a more thorough comprehension of the difficulties and achievements these organizations have had in combating fraud.

The first step in data analysis is thematic analysis, which groups data into major themes such as regulatory roles, fraud detection methods, forensic audits, and fraud management difficulties. This finds recurrent themes and connections among researchers. Comparative study evaluates the efficacy and efficiency of Nigeria's fraud management systems by contrasting data from Nigerian financial institutions with international standards.

The use of secondary data and a purposeful selection process for case studies, papers, and scholarly publications guarantees that pertinent information regarding the frequency of fraud, forensic accounting, and the difficulties in preventing fraud in Nigerian banks is included. Institutions with notable fraud instances or strong fraud management systems are given preference. Credibility of sources, publication date, and author objectivity are used to evaluate validity and trustworthiness, giving priority to reports from research articles or document from the Nigeria Deposit Insurance Corporation (NDIC) and the Central Bank of Nigeria (CBN).

4. Results and discussion

This section explores Nigerian financial institutions' use of forensic management techniques, the efficacy of fraud investigations conducted there, and the shortcomings of present forensic procedures. While ongoing staff training is essential to enhancing forensic management capabilities, the analysis emphasizes the use of tools such as forensic audits, data analytics, and whistleblower programs to detect and stop fraud.

The Economic and Financial Crimes Commission's (EFCC) noteworthy case resolutions and other fraud investigative triumphs that have contributed to the public's renewed trust in the financial system are also discussed. Progress is hampered by issues including antiquated technology, lax regulatory frameworks, and delays in reporting fraud.

The limitations of modern forensic methods are finally examined, exposing regulatory enforcement loopholes, dependence on antiquated technology, and insufficient investigator training. To improve fraud detection and prevention, these problems highlight the pressing need for technology expenditures and capacity-building programs. In this section, the results are thoroughly summarized and placed within the larger context of forensic management in Nigeria.

To identify and stop fraud, Nigerian financial institutions use a variety of forensic management strategies, [37]. By carefully reviewing financial data and transaction traces, forensic auditing enables banks to investigate financial irregularities and unearth fraudulent activity. With methods like anomaly detection finding odd patterns in transaction data for early fraud detection, data analytics has become more popular. Programs for whistleblowers give staff members and clients a safe way to discreetly report questionable activity, which helps identify possible fraud cases early on. Furthermore, by giving staff members the tools as shown in Table 1, they need to recognize and properly report fraudulent activity, and continuous training programs on the newest fraud detection methods and ethical standards improve forensic management [38].

The Economic and Financial Crimes Commission (EFCC) reports noteworthy fraud case resolutions that contribute to regaining public trust in the financial system, demonstrating the efficacy of fraud investigations in Nigeria. The importance of forensic management is demonstrated by the example of a large bank using forensic audits to detect a multi-million-dollar fraud operation. Despite these achievements, issues like weak regulatory frameworks, outdated technology, and a lack of cooperation among financial institutions still exist as shown in table 2. Furthermore, many banks struggle to report fraud cases in a timely manner, which makes investigations and recovery attempts more challenging [39].

Nigerian forensic management methods now in use have significant drawbacks. The regulatory framework is frequently lax, with uneven enforcement and inadequate sanctions for financial crimes, which promotes impunity and compromises the efficacy of forensic methods. The ability of many financial institutions to identify intricate fraud schemes is further limited by their reliance on antiquated technology and weak cybersecurity safeguards. To increase fraud detection skills, current technological investment is necessary. Additionally, a lack of proper training for those conducting fraud investigations reduces efficacy because many banks find it difficult to retain an informed staff, which results in lost chances for fraud prevention and detection. To enhance forensic fraud management in Nigeria, several recommendations are crucial. Cooperation between regulatory agencies and financial institutions can be promoted and accountability increased by fortifying regulatory frameworks with explicit rules for fraud identification and prosecution. Investing in contemporary technologies will enhance fraud detection and allow for real-time monitoring, such as artificial intelligence and sophisticated data analytics. To give bank workers the essential abilities, ongoing training programs on the newest forensic methods and regulatory compliance are required.

Finally, promoting cooperation among banks can increase information exchange and teamwork in the fight against financial crimes.

5. Conclusion

According to an analysis of forensic management practices in Nigerian financial institutions, strategies like data analytics, forensic audits, and whistleblower programs successfully identify and stop fraud, leading to successful investigations and money recovery. Nevertheless, there are still issues that compromise the efficacy of these methods, such as insufficient laws, antiquated technology, and training gaps. Addressing these constraints through improved training initiatives, technology investments, and regulatory changes is crucial to enhancing fraud control in Nigeria. Future studies should concentrate on assessing the effects of these suggestions and investigating cutting-edge methods for improved fraud detection in the financial industry.

6. Recommendations

Several important recommendations are put out to improve fraud investigation and forensic management in Nigerian financial institutions. Strong systems for detecting and reporting fraud should be established by regulatory agencies; these should include precise rules and harsher sanctions. Investments in cutting-edge technology like artificial intelligence and data analytics are necessary for financial institutions to increase accuracy and real-time monitoring. Partnerships with academic institutions are crucial for improving ongoing training programs that emphasize the most recent forensic methods and ethical standards. To exchange emerging trends and best practices, banks should establish collaboration networks. To encourage the reporting of fraudulent activity, protection rules should foster a culture of whistleblowers. Finally, to detect weaknesses and proactively reduce fraud-related risks, it is essential to conduct regular risk assessments.

7. References

[1] Sunday, I. O., and Bamidele, E. H. (2014). Financial crime and its implications on banks performance in Nigeria: a general appraisal. Int. J. Sci. Basic Appl. Res., 13, 317-328.

[2] Okoye, E. I., and Gbegi, D. O. (2013). Forensic accounting: A tool for fraud detection and prevention in the public sector. (A Study of Selected Ministries in Kogi State). International Journal of Academic Research in Business and Social Sciences, 3(3), 1-19.

[3] Akenbor, C. O., and Oghoghomeh, T. (2013). Forensic auditing and financial crime in Nigerian banks A proactive approach. The Business and Management Review, 4(2), 48-61.

[4] Kanu, C., Nnam, M. U., Ugwu, J. N., Achilike, N., Adama, L., Uwajumogu, N., and Obidike, P. (2023). Frauds and forgeries in banking industry in Africa: a content analyses of Nigeria Deposit Insurance Corporation annual crime report. Security Journal, 36(4), 671-692.

[5] Mustafa Alastal, A. Y., Ahmed Ali, S., and Allaymoun, M. (2024). The Role of Internal Control in Enhancing the Forensic Accounting and Preventing the Fraud. In Business Development via AI and Digitalization: Volume 1 (pp. 957-965). Cham: Springer Nature Switzerland.

[6] Purba, R. B., Pitaloka, K., and Maisyarah, R. (2024). The Effect of Investigative Audit on Fraud Prevention Through Professional Competence and Prudence as an Intervening Variable. Jurnal Focus Manajemen UPMI, 1(01), 58-72.

[7] Offia, A. C., and Ajuonu, A. U. (2024). Effect of Forensic Accounting on Financial Fraud Control of Selected Firms in Nigeria. Journal of Economics, Business and Management, 9(10), 215-226.

[8] Akinyomi, O. J. (2012). Examination of fraud in the Nigerian banking sector and its prevention. Asian Journal of Management Research, 3(1), 182-194.

[9] Ama, G. A. N., Onwubiko, C. O., and Nwankwo, H. A. (2024). Cybersecurity Challenge in Nigeria Deposit Money Banks. Journal of Information Security, 15(4), 494-523.

[10] Reis, O., Oliha, J. S., Osasona, F., and Obi, O. C. (2024). Cybersecurity dynamics in Nigerian banking: trends and strategies review. Computer Science and IT Research Journal, 5(2), 336-364.

[11] Ogbaini, A. C., Akpor, A. A., Oboh, R., Oputa, J. E., and Marvis, V. B. (2024). The Role of Forensic Accounting in Fraud Detection and Prevention in Nigerian Public Sector: A Case Study of Lagos, Nigeria. Pedagogik: Jurnal Pendidikan, 19(1), 71-83.

[12] Solomon, A. N., Emmanuel, O. O., Ajibade, D. S., and Emmanuel, D. M. (2023). Assessing the effectiveness of internal control systems on fraud prevention and detection of selected public institutions of Ekiti State, Nigeria. Asian Journal of Economics, Finance and Management, 231-244.

[13] Ololade, B. M., Salawu, M. K., and Adekanmi, A. D. (2020). E-fraud in Nigerian banks: why and how?. Journal of Financial Risk Management, 9(3), 211-228.

[14] Oloruntoba, S. R., and Isaac, O. O. (2024). Forensic Accounting and Cybercrime Prevention in Listed Deposit Money Banks in Nigeria

[15] Nigeria Deposit Insurance Corporation (NDIC). (2017). Banking Industry Recorded Decline In Frauds, Forgeries – NDIC https://ndic.gov.ng/banking-industry-recorded-decline-infrauds-forgeries-ndic/ (Access Date: 12 September 2024).

[16] Adetiloye, K. A., Olokoyo, F. O., and Taiwo, J. N. (2016). Fraud prevention and internal control in the Nigerian banking system. International Journal of Economics and Financial Issues, 6(3), 1172-1179.

[17] Samuel, U. E., Udoh, B. E., and Prince, A. I. (2018). Financial fraud and the effect of insider abuse in Nigerian banking sector. J Fin Mark. 2018; 2 (2): 110-118. J Fin Mark 2018 Volume 2 Issue 2, 111.

[18] Nwaobia, A. N., Omotayo, I. I., and Ajibade, A. (2021). Internal audit and fraud detection in selected banks listed in Nigeria. IOSR Journal of economics and Finance, 12(4), 51-65.

[19] Uzoagba, C. I. (2023). Forensic Accounting in Nigerian Economic Growth.

[20] Bello, O. A., and Olufemi, K. (2024). Artificial intelligence in fraud prevention: Exploring techniques and applications challenges and opportunities. Computer Science and IT Research Journal, 5(6), 1505-1520.

[21] Akinyomi, O. J. (2012). Examination of fraud in the Nigerian banking sector and its prevention. Asian Journal of Management Research, 3(1), 182-194.

[22] Owolabi, S. A. (2010). Fraud and fraudulent practices in Nigeria banking industry. African Research Review, 4(3).

[23] Uniamikogbo, E., Adeusi, A. S., and Amu, U. C. (2019). Forensic audit and fraud detection and prevention in the Nigerian banking sector. Accounting and Taxation Review, 3(3), 121-139.

[24] Chukwuma, O. V., Okolie, P. I., and Eneh, N. A. (2022). Impact of cyber security and forensic accounting techniques on fraud detection in Nigeria.

[25] Omolara, A. E., Jantan, A., Abiodun, O. I., Singh, M. M., Anbar, M., and Kemi, D. V. (2018). State-of-the-art big data application techniques to financial crime: a survey. International Journal of Computer Science and Network Security, 18(7), 6-16.

[26] Omolara, A. E., Jantan, A., Abiodun, O. I., Singh, M. M., Anbar, M., and Kemi, D. V. (2018). State-of-the-art in big data application techniques to financial crime: a survey. International Journal of Computer Science and Network Security, 18(7), 6-16.

[27] Adeyemo, K., and Obafemi, F. J. (2024). A Survey on the Role of Technological Innovation in Nigerian Deposit Money Bank Fraud Prevention. South Asian Journal of Social Studies and Economics, 21(3), 133-150.

[28] Bello, O. A., and Olufemi, K. (2024). Artificial intelligence in fraud prevention: Exploring techniques and applications challenges and opportunities. Computer Science and IT Research Journal, 5(6), 1505-1520.

[29] Olelewe, C. A., and Onwumere, J. U. (2024). The Impact of Internet Banking on Bank Fraud in Nigeria. Asian Journal of Economics, Business and Accounting, 24(5), 510-524.

[30] Akinleye, G. T., Olatunji, O. F., Bolaji, Y. A., and Dauda, A. A. (2023). Combating Financial Crimes through Forensic Audit: Evidence from Nigeria. Brit J Manag Mark Stud, 6(4), 54-62.

[31] Bello, A. M., Mohammed, A., and Javan, H. (2022). Effects of forensic audit on fraud detection in the Nigerian banking sector. African Journal of Management and Business Research, 4(1), 10-18.

[32] Chukwuma, O. V., Okolie, P. I., and Eneh, N. A. (2022). Impact of cyber security and forensic accounting techniques on fraud detection in Nigeria. International Journal of Multidisciplinary Research and Growth Evaluation, 3, 585-595.

[33] Akujuobi, N. E., Anyanwu, G. I., and Eke, C. K. (2021). Regulatory framework and bank operations in Nigeria: A VECM approach. International Journal of Development and Management Review, 16(1), 148-160.

[34] Hancock, D. R., Algozzine, B., and Lim, J. H. (2021). Doing case study research: A practical guide for beginning researchers.

[35] Verma, R., Verma, S., and Abhishek, K. (2024). Research methodology. Booksclinic Publishing.

[36] Pederson, L. L., Vingilis, E., Wickens, C. M., Koval, J., and Mann, R. E. (2020). Use of secondary data analyses in research: Pros and Cons. Journal of Addiction Medicine and Therapeutic Science, 6(1), 058-060.

[37] . Modugu, K. P., and Anyaduba, J. O. (2013). Forensic accounting and financial fraud in Nigeria: An empirical approach. International Journal of Business and Social Science, 4(7), 281-289.

[38] Olelewe, C. A., and Onwumere, J. U. (2024). The Impact of Internet Banking on Bank Fraud in Nigeria. Asian Journal of Economics, Business and Accounting, 24(5), 510-524.

[39] Imohiosen, D. E. L. E. (2024). Fraud and Corruption In Nigeria: A Historical Investigation And An Overview Of The Theory Of Punishment. Nigerian Journal of Management Sciences Vol, 25, 1b.

8. Acknowledgements

We are also grateful to the Infonomics Society for funding this publication. Their support has been instrumental in advancing research and dissemination of knowledge enhancement worldwide.