



EFFECT OF BANK FRAUD CONTROL MEASURES ON THE PROFITABILITY OF DEPOSIT MONEY BANKS IN NIGERIA

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Cite this article:

Ozurumba, C. V., Chibuzoh, A., Fabiya, O. T., Hassan, K. I. (2025), Effect of Bank Fraud Control Measures on the Profitability of Deposit Money Banks in Nigeria. African Journal of Accounting and Financial Research 8(3), 82-90. DOI: 10.52589/AJAFR-S5SIM6W8

Manuscript History

Received: 2 Jun 2025

Accepted: 9 Jul 2025

Published: 25 Jul 2025

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ABSTRACT: *The study examined the effect of bank frauds control measures on deposit money banks' profitability in Nigeria spanning a period of 24 years from 2000 to 2023. The data were sourced from secondary sources which included Nigeria Deposit Insurance Corporation (NDIC) publications and the Worldwide Governance Indicators data for Nigeria. Whereas deposit money banks profitability (proxy by banks return on assets – ROA) served as the dependent variable, total bank fraud (TBF), regulatory oversight (RO) and internal control (IC) served as the explanatory variables. The Augmented Dickey Fuller (ADF) test was used to ascertain the stationarity of this model, which proved to be of mixed order. The ARDL co-integration bounds test was further employed to ascertain the long run relationship test of the variables. The result showed that there was presence of co-integration, hence establishing a long run relationship between bank fraud control measures and deposit money banks' profitability. The results of Auto-regressive Distributed Lag (ARDL) estimate showed that the explanatory variables have a negative and insignificant relationship with deposit money banks' profitability. It is recommended that bank fraud detection measures, regulatory oversight and internal control mechanisms should be strengthened.*

KEYWORDS: Bank fraud, control measures, profitability, internal control, regulatory oversight.



INTRODUCTION

The Nigerian banking sector plays a key role in the growth of the country and therefore one of the most heavily regulated sectors in Nigeria (Banwo & Ighodalo, 2024). However, the Nigerian banking industry has been plagued by incidents of fraud, which have eroded public confidence and undermined the stability of the financial system (Otu, Adeyemi, & Ogunleye, 2014). It has also led to the depletion of shareholders' and ny N op customers' funds (Taiwo, Agwu, Babajide, Okafor, & Isibor, 2016). Fraud in the banking sector can take various forms, including forgery, suppression of entries, lending to ghost borrowers, unauthorized credits, computer fraud, and outright theft (Idolor, 2010). These fraudulent activities not only result in significant financial losses but also tarnish the reputation of the banking institutions involved and the industry as a whole (Otu et al., 2014). The issue of fraud in the Nigerian banking sector has been a subject of concern for regulatory authorities, policymakers, and the general public (Adeyemi, 2012). The Central Bank of Nigeria (CBN), the apex regulatory body for the banking industry, has implemented numerous measures to combat fraud, including the introduction of the Bank Verification Number (BVN) and the deployment of the Nigerian Electronic Fraud Risk Management Solution (NeFRMS) (CBN, 2021).

Despite these efforts, incidents of fraud in the Nigerian banking sector continue to occur, with varying degrees of sophistication and complexity (Otu et al., 2014). According to the Nigeria Deposit Insurance Corporation (NDIC), the amount of money involved in reported cases of fraud in the Nigerian banking industry rose from ₦18.46 billion in 2019 to ₦25.11 billion in 2020 (NDIC, 2021).

Statement of the problem

Fraud in the Nigerian banking sector has become a pervasive issue, posing significant threats to the stability and credibility of the financial system. Despite the efforts of individual banks, regulatory authorities and the implementation of various control measures, the incidences of frauds continue to persist, resulting in substantial financial losses and erosion of public confidence in the banking industry.

According to the Nigerian Deposit Insurance Corporation (NDIC), the amount involved in reported cases of fraud in the Nigerian banking industry increased from ₦18.46 billion in 2019 to ₦25.11 billion in 2020, representing a staggering 36% increase (NDIC, 2021). This alarming trend underscores the need to examine the efficacy bank fraud control measures on the profitability of DMBs.

Moreover, the prevalence of fraud in the Nigerian banking sector has far-reaching implications beyond the financial realm. It can contribute to the erosion of public trust in institutions, breed a culture of corruption, and hinder the effective allocation of resources within the economy (Adeyemi, 2012). While various control measures have been implemented by both the individual banks and regulatory authorities, such as the introduction of the Bank Verification Number (BVN) and the deployment of the Nigerian Electronic Fraud Risk Management Solution (NeFRMS) (CBN, 2021), the persistence of fraud suggests that there may be underlying factors or loopholes that need to be addressed.



Objectives of the study

The general objective of the study was to examine the effect of bank fraud control measures on the profitability of deposit money banks in Nigeria. The specific objectives include to:

1. Examine the effect of bank fraud on the profitability of deposit money banks.
2. Find out the effect of bank regulatory oversight on the profitability of deposit money banks in Nigeria.
3. Assess the effect of internal control mechanisms on deposit money banks' profitability in Nigeria.

Research questions

The following questions are posed in line with the objectives of the study:

1. What is the effect of bank frauds on deposit money banks' profitability in Nigeria?
2. To what extent does banks' regulatory oversight affect deposit money banks' profitability in Nigeria?
3. What effect does internal control mechanisms have on deposit money banks' profitability in Nigeria?

Hypotheses

1. H01: Bank fraud has no statistical significance on the profitability of deposit money banks in Nigeria.
2. H02: Banks' regulatory oversight has no significant relationship with the profitability of deposit money banks in Nigeria.
3. H03: Internal control mechanisms have no significant relationship with deposit money banks profitability in Nigeria.

THEORETICAL FRAMEWORK

Fraud Triangle Theory (Cressey, 1953)

The Fraud Triangle Theory, proposed by Donald Cressey (1953) suggests that three elements must be present for fraud to occur: pressure (or motivation), opportunity, and rationalization. This theory will help examine the underlying pressures driving individuals to commit fraud, such as financial difficulties or organizational incentives. It also considers the opportunities within banks that enable fraudulent activities, such as weak internal controls or lack of oversight. Additionally, it explores the potential rationalizations or justifications used by perpetrators to reconcile their unethical behaviour.



METHODOLOGY

Research design

This study adopted the ex-post factor research design as it deals with events that have taken place and secondary data were available for collection.

Sources of data collection

This research utilized existing datasets as its secondary source of information. Therefore, the archival records from the Nigerian Deposit Insurance Corporation (NDIC) publications spanning multiple years from 2000 to 2023 were used. Additionally, the governance metrics from the Worldwide Governance Indicators database (WGI, 2023), was employed; enabling a comprehensive examination of the variables under study throughout the specified 24-year period.

Model specification

The model for this research is built to establish the functional relationship between bank fraud control measures and deposit money banks profitability in Nigeria, 2000-2023. The model tested in this study is a multiple regression model stated below:

$$ROA = f(TBF, RO, IC) \quad (1)$$

By modifying the functional model in equation (1) into econometric model:

$$ROA = \beta_0 + \beta_1 TBF_t + \beta_2 RO_t + \beta_3 IC_t + \mu_t \quad (2)$$

Where:

ROA = Return on Assets (proxy for banks profitability)

TBF = Total Bank Fraud

RO = Regulatory Oversight

IC = Internal Control

$\beta_1, \beta_2, \text{ and } \beta_3$ are the parameter estimators

β_0 = Intercept of the Model

μ_t = Stochastic disturbance (error term)

Method of data analysis

The study adopted the econometric analysis approach since the study dealt with time series data. The data were subjected to pre-estimation tests in order to ascertain their stationarity and suitability for the study. This was followed by the test for long run relationship among the variables using the ARDL bounds test. The parameters of the model were estimated with Autoregressive Distributed Lag (ARDL) estimator.



RESULTS

Model estimation

Short run ARDL model estimation

The ARDL model estimates both the short and long run results in order to reconcile the long run periods with result from the lagged values of the short run estimates. The short run result is shown below:

Table 1: Showing Short-run ARDL result for the variables

Variable	Coefficient	Std. Error	t-Statistics	Prob.*
Bank return on assets(-1)	-0.191436	0.239120	-0.800586	0.4344
Total amount of fraud	-0.000173	0.000550	0.314395	0.7570
Regulatory oversight	-7.107614	8.137994	-0.873386	0.3946
Internal control	-0.015056	0.129171	-0.116558	0.9086
Constant	-6.040187	7.321532	-0.824989	0.4208

Source: *Extracted from E-Views 9.0 output*

The short run estimates above show that lagged value of banks return on assets (ROA) exerts negative effect of 0.191436 on itself. This implies that previous year's decrease in return on assets transcends itself to the lagged period as well. Bank total fraud, regulatory oversight and internal control all show negative effects of 0.000173, 7.107614 and 0.015056 units respectively on commercial banks' profitability in the current period.

The constant in the short run is negative (-6.040187), which means that there is a negative movement in bank' profitability occasioned by other variables that affect fraud in the banking sector in the short run which are not captured in the model.

Long run estimation of the ARDL model

The estimation of the long run model is necessary in order to reconcile the short-run behaviour of banking sector fraud control variables with its long-run behaviour, and to investigate the extent of relationship that exists between the two financial sector variables in the long run period. The ARDL model takes cognizance of both periods because of the focus on the lagged values of the regressors and regressand. This will be used to test the research hypotheses below:

Test of research hypotheses

H₀₁: Total Bank Fraud does not significantly affect commercial banks' profitability in Nigeria.

The result of ARDL long run estimator as shown in Table 2 reveal that total bank fraud has a negative (-0.000145) long run effect of total bank fraud on the sector's profitability. This implies that an increase in bank fraud is capable of causing lower capital accessibility for investors. However, the decreasing effect of fraud on banks' profitability is not significant at the 5% level as the p-value (0.7567) indicates.

**Table 2: Long run Coefficient for Total Bank Fraud**

Variable	Coefficients	Std. Error	t-Statistic	Prob.
Total Bank Fraud	-0.000145	0.000461	0.314859	0.7567

Source: *Extracted from E-Views 9.0 output*

H₀₂: Regulatory Oversight does not significantly affect commercial banks' profitability in Nigeria

Table 3 presents ARDL long run estimator result. The result shows that regulatory oversight has a negative long run effect on banks' profitability (-5.965585) units. However, the p-value of regulatory quality (0.3863) shows that the decreasing effect on banks' profitability is not significant at the 5% level.

Table 3: Long Run Coefficient for Regulatory Oversight

Variable	Coefficients	Std. Error	t-Statistic	Prob.
Regulatory oversight	-5.965585	6.708907	-0.889204	0.3863

Source: *Extracted from E-Views 9.0 output*

H₀₃: Internal Control does not significantly affect banks' profitability in Nigeria.

The ARDL long run estimator result as presented in Table 4 shows that internal control exerts a negative long run effect on the bank. Banks' profitability decreased by -0.012637 with a unit change in the internal control measures. The p-value of regulatory oversight (0.9085) shows that the decreasing effect on banks' profitability is not significant at the 5% level.

Table 4: long run Coefficient for internal control

Variable	Coefficients	Std. Error	t-Statistic	Prob.
Internal Control	-0.012637	0.108334	-0.116646	0.9085

Source: *Extracted from E-Views 9.0 output*

DISCUSSION OF FINDINGS

The Augmented Dickey Fuller (ADF) test was used to ascertain the stationarity of the model. The result revealed that the variables were of a mixed order. Consequently, the ARDL co-integration bounds test was employed to ascertain the long run relationship of the variables. The result showed that there was presence of co-integration, hence establishing a long run relationship between banking sector fraud variables and the profitability of commercial banks in Nigeria.

The Autoregressive Distributed Lag (ARDL) estimator was also carried out to ascertain the long run implication of the exogenous variables (TBF, IC, and RO) on the profitability of deposit money banks in Nigeria. The result revealed that Total Bank Fraud has a negative coefficient. This implies that there is a negative relationship between regulatory oversight and commercial banks' profitability. The result further shows that a unit change in total bank fraud causes a units decrease in banks' profitability in Nigeria. The test of significance indicates that total bank fraud has an insignificant relationship with banks' profitability in Nigeria. The



negative relationship is in tandem with Olabamiji & Suleiman (2021) finding. However, Olabamiji et al (2021)'s study contrarily revealed significant correlation between bank fraud and profitability of DMBs.

Also regulatory oversight had a negative coefficient. This explains that there is a negative relationship between regulatory oversight and commercial banks' profitability. It also implies that a unit increase in regulatory oversight causes a 5.965585 unit decrease in banks' profitability. This is in contrast with Chernykh (2017) who discovered that regulatory oversight has a positive and significant relationship with reduction in bank fraud.

Internal control similarly, had a negative coefficient, implying a negative relationship between control of fraud and commercial banks' profitability. This means that a unit change in internal control index results to units decrease in banks' profitability in Nigeria. This is at variance with Azeez et al (2023) who found that internal control environment exerts a positive and significant effect on fraud detection and control in Deposit Money Banks (DMBs) in Nigeria.

Conclusion

Based on the findings, it is concluded that bank fraud has a negative and insignificant relationship with deposit money banks' profitability in Nigeria. In the same vein, both regulatory oversight and internal control also had negative and insignificant relationships with deposit money banks' profitability in Nigeria.

RECOMMENDATIONS

It is therefore recommended that:

1. fraud detection mechanisms should be enhanced by bank officials to minimize potential losses, and while investing significantly in employee education on fraud prevention.
2. the quality and effectiveness of regulatory institutions should also be enhanced by the federal government to ensure transparency, accountability, and adherence to national and international standards.
3. there is need to streamline regulatory processes and enhance collaboration among regulatory agencies to create more effective sector-wide measures
4. banks should regularly conduct targeted internal auditing with a view to identifying inefficiencies with little or no disruptions in banking operations.



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