



The Impact of Fraud on Financial Performance of Deposit Money Banks: Evidence from Nigeria

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Abstract

This study demonstrated new evidence sustaining the idea that the issue of fraud has a long history and that fraud in deposit money banks affect performance when fraud are proxied with data extracted from inappropriate auditing process, peer group pressure, computer fraud and management looting using the Generalized Least Square Method (GLS) and the z-statistics as method of data analysis. The data used in the study were adjusted with the Jarque-Bera test of normality to remove any form of spurious result as variable normality is a standardized requirement for any linear model while the cronbach alfa value was used to test the validity, consistency and reliability of the data. The main aim of the study is to investigate if variables like computer fraud, managers looting; inappropriate auditing, peer group pressure affect bank performance. To achieve this objective, research questions and hypotheses were formulated and variables were proxied for fraud and deposit banks performance as distilled from related literatures. The GLS result was used to test the formulated hypotheses with a standard z-value of 1.96. The GLS regression results revealed that there are negative relationships between bank frauds and performance while the z-test shows that bank frauds affect deposit money bank performance in Nigeria. The study therefore recommends that an efficient and modern financial technological structure such as Computer Aided Auditing Tools & Techniques (CAATs) would combat fraud in deposit money banks in Nigeria.

Keywords: Frauds; Deposit money bank; Performance; Z-statistic; GLS regression.

1. Introduction

The issue of fraud in deposit money banks in West Africa has a long history and the case of Nigeria and other West Africa countries is not an exception. However, there are a lot of variables that has accounted for frauds in deposit money banks by different scholars and professionals. This study focuses on variables that are regarded as conventional methods of perpetrating frauds in deposit money banks that are over looked by previous academic scholars.

Fraud which is noted to be a calculated process that appears to be real in order extracts money by an unforeseen individual or firms. Most fraud are committed based on the structuring of the environment, in order words, the environment influences the gravity and nature of the fraud. This environment is made up of so many variables that are likely to influence the perpetration of frauds and which may have not been accounted for by other scholars hence there still numerous loopholes for fraud in the system. The methods of dealing with frauds by financial regulators in Nigeria and other West Africa countries in this decade have been encouraging but sometimes failed to address little fraud cases that may damage her images and financial technological structure to the general world. These small cases may be irregular audit of financial statements by deposit money banks or using the same auditors for a longer period than stipulated by law; not checkmating the appearance of employees alongside their colleagues on the platform on the scale of the same salary; etc. The occurrence of major fraud or little fraud passes through a financial system and this has actually led to a series of debates by scholars and professionals on the question how, when and where those frauds occurred. These questions flooded the internet during the period of worldwide shutdown of economies and financial activities arising from COVID-19 in the year 2020 as a result of the activities of the Nigerian Instagram celebrity (Hushpuppi) that was arrested due to high cases of fraud he executed around the world. The action of this Nigerian Instagram celebrity (Hushpuppi) may have been necessitated by peer group pressure or by the observance of management looting in order organizations without appropriate sanctions or inadequate financial technology used by financial houses organizations.

It is on the basis of this that this study is been carried out with the focus on deposit money banks and financial performance by examining variables like inappropriate audit, peer group pressure, computer fraud and management looting. The significance of the financial sector in any country stems from its role of financial mobilization from surplus to deficit unit, provision of a competent payment system and facilitation of the implementation of monetary policies. In financial intermediation, deposit money banks mobilize savings from the surplus units to the deficit unit,

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particularly private business enterprises, for the purposes of expanding their productive capacity. The financial sector with reference to the banking sector is one of the most critical sectors in the economy with wide effect on the level and direction of economic growth and transformation hence this sector has been a target of fraud.

Muritala *et al.* (2020) looked at fraud and bank performance in Nigeria using data from 2000 to 2016 on a granger causality test and other econometrics test. Their findings show that fraud activities in the banking sector affect performance through profit reduction. The work of Olaoye and Dada (2014) investigates the causal relationship between bank fraudulent activities and banks performance in Nigeria, and they concluded that the need for adequate remuneration of bank staff is essential while the work of Adeyemo (2012) shows that the battle for uncovering, reclusion, and retribution of fraudulent acts must be dealt with from two extensive situations. Olufidipe (1994) stated that fraud is a deceit or trick deliberately practiced in order to gain some advantages dishonestly. Boniface (1991) further stressed that fraud is any premeditated act of criminal deceit, trickery or falsification by a person or group of persons with the intention of altering facts in order to obtain undue personal monetary advantage while Idowu (2009) stated that fraud is a deliberate falsification, camouflage, or exclusion of the truth for the purpose of dishonesty/stage managed action to the financial damage of an individual or an organization. The work of Kirkpatrick (2015) concluded that dishonest practice, deception, false disclosure, concealment of assets and other activities of this nature are fraud. Base on this conclusion of Kirkpatrick (2015) and other scholars on this field, the researchers further extends the elements of frauds as inappropriate auditing, peer group pressure, computer fraud and management looting to investigate financial performance in deposit money banks in Nigeria. Ailemen (2018) administered questionnaires to some stakeholders' banks to gather information on the impact of the confidence placed on board and management. The conclusion was a quantum of fraud on board and management leads to downward slide in share price and dividend. Ihejihi (2009), used quantitative analysis of listed banks in the UK to expressed concern about the lack of cooperation among banks in the fight to stem the incidence of ATM related frauds now plaguing the industry. Ihejihi (2009), concluded that silent from banks in disclosing methods used by fraudsters continually affect the sector. The conclusion of Ihejihi (2009) was further supported by Adeloje (2017). Adeloje (2017), stated that power outage in developing countries like Nigeria is a major challenge facing the ATM users within developing countries like Nigeria and the on ATM Frauds in the year 2017 identified some types of ATM Frauds such as Shoulder Surfing, Lebanese Loop, Stolen Cards, Card Jamming, Fake Cards and Duplicate ATMs.

In as much as there are different ways of fraud identified by the researchers of this study, the list of the elements of fraud is not exhausted. According to Eseoghene (2010), there are various types of frauds perpetrated in banks such as deceitful collection of banks such as computers, stationary or equipment. Defalcation is a type of fraud, which involves the embezzlement of money held in trust by bankers on behalf of their customers. Defalcation of customers deposits either by conversion or fraudulent alteration of deposit vouchers by either the bank teller or customer is the common form of bank fraud. Where the bank teller and customer collude to defalcate, such fraud is usually neatly perpetrated and takes longer time to uncover.

2. Materials and Methods

To account for deposit banks fraud and financial performance in Nigeria, we used a convenience sampling method. Data were collected through the mixed method. Primary data were collected through the use of questionnaire administration while secondary data were collected from the financial statements of the selected deposit money banks. The population of the study was twenty listed deposit money banks with financial statement of five years (2016-2020). The Generalized Least Square (GLS) regression was used as method of data analysis while the alpha and Jarque-Bera test were used to test the suitability of the data for the study. However, due to the robustness of the GLS methodology, Williams and Mojekwe (2019) used the GLS to find the impact between credit risk management and financial performance in deposit money banks in Nigeria.

Table-1. Cronbach's alpha Test

Case Processing Summary			
		N	%
Cases	Valid	100	100.0
	Excluded ^a	0	.0
	Total	100	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.810	.810	5

Source: computation with SPSS

The valid observations are 100. These observations were derived from 20 deposits money banks and five years financial statements. The questionnaire administered was also 100 to ensure that both the primary and secondary data are the same. Since the alpha value is 81%, it means that the data collected are valid and reliable for the study.

2.1. Jarque-Bera(JB) Test for Normality

We used Jarque–Bera test as measure of goodness of fit to test the normality of the data. To do this we carried out a descriptive statistics to ascertain the skewness and kurtosis and then use the formula to find the Jarque-bera value which was then used to match a chi-square significant value of 5% and 5% degree of freedom. We chose 5d.f. because we have 5 variables in our models.

The Jarque-Bera test statistic is defined as:

$$\frac{N}{6} \left(S^2 + \frac{(K-3)^2}{4} \right)$$

with S , K , and N denoting the sample skewness, the sample kurtosis, and the sample size, respectively.

Table-2. Results of Jarque-Bera Test of Normality

Variables	Jarque-bera (JB)	Chi-square 5df@5sf
ROE	4.6	11.071
IA	2.6	11.071
PGP	3.1	11.071
CF	7.6	11.071
ML	4.8	11.071

Source: computed.

We use the $JB < \text{Chi-square}$ to conclude that variables in the model follow a normal distribution.

2.2. Model Specification and the Generalized Least Square

In order to account for banks fraud and its effect on bank performance in Nigeria, the model for the study is hereby specified as follow.

2.3. Primary Data Analysis

$$ROE = f(IA, PGP) \dots \dots \dots \text{Eq1}$$

2.4. Secondary Data Analysis

$$ROE = f(CF, ML) \dots \dots \dots \text{Eq2}$$

Rewriting the Model in Linear form

$$ROE_t = \lambda_0 + \lambda_1 IA_t + \lambda_2 PGP_t + \mu_t \dots \dots \dots \text{Eq1}$$

$$ROE_t = \lambda_0 + \lambda_1 CF_t + \lambda_2 ML_t + \mu_t \dots \dots \dots \text{Eq2}$$

Where:

ROE = Return on Equity= profit/equity

CF = Computer Fraud = credit risk=loan loss/total loan.

ML = Managers Looting = no bank staff involved in fraud.

IA = Inappropriate Auditing

PGP = Peer Group Pressure

λ_0 = Slope of the regression

$\lambda_{1,2,3}$ = Coefficient of the variables

μ = Error term (Which captures other variables not stated in the model)

2.5. Model Specification One

$$ROE_t = \lambda_0 + \lambda_1 IA_t + \lambda_2 PGP_t + \mu_t \quad (1)$$

Table-3. Summary of GLS Result Model 1

Dependent Variable: ROE				
Method: Generalized Linear Model (Quadratic Hill Climbing)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.740811	0.517911	1.430384	0.1564
IA	-0.061868	0.098658	-0.627102	0.5323
PGP	-0.108373	0.073939	-1.465706	0.1466

Source: computed and extracted from the GLS result

The negative relationship may attest to the higher number of male participants than female participants as in terms of personnel in management level. There is a negative relationship between inappropriate audit (IA) and ROE of -0.061868. This indicates that any one percent increase in IA will lead to a one percent fall in ROE. The work of [Adewole \(2016\)](#) shows that there is a negative relationship between inappropriate audit and bank performance, that inappropriate auditing often overstate performance. Therefore, the negative relationship of IA in this study corroborate with other studies, indicating that inappropriate audit process have negative relationship with deposit

money banks performance (ROE). The peer group pressure (PGP) also shows a negative relationship of -0.108373 with ROE.

2.6. Test of Hypotheses

H₀: Inappropriate audit does not affect bank performance in Nigeria.

Table-4. Model 1 Hypothesis 1

Variable	Coefficient	Std. Error	z-Statistic	Prob.
IA	-0.061868	0.098658	-0.627102	0.5323

Source: extracted from GLS

The z-value is regarded as the calculated z-value which is 0.627102 and it is tested against 1.96 (alpha value) standard z-score. Since the IA z-value of 0.627102 is less than the 1.96 (alpha value) $0.627102 < 1.96$, we reject the null hypothesis and conclude that fraud as a proxy with inappropriate audit affects bank performance in Nigeria.

H₀: Peer group pressure through social factors does not affect bank performance in Nigeria.

Table-5. Model 1 Hypothesis 2

Variable	Coefficient	Std. Error	z-Statistic	Prob.
PGP	-0.108373	0.073939	-1.465706	0.1466

Source: Regression Table

The z-value is regarded as the calculated z-value which is -1.465706 and it is tested against 1.96 (alpha value) standard z-score. Since the PGP z-value of -1.465706 is less than the 1.96 (alpha value) $-1.465706 < 1.96$, we reject the null hypothesis and conclude that fraud as a proxy with PGP affects deposit money bank performance in Nigeria.

2.7. Model Specification Two

$$ROE_t = \lambda_0 + \lambda_1 CF_t + \lambda_2 ML_t + \mu_t \quad (2)$$

Table-7. Summary of GLS Result Model 2

Dependent Variable: ROE				
Method: Generalized Linear Model (Quadratic Hill Climbing)				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-6.285210	0.634851	-9.900288	0.0000
CF	-0.282597	0.032648	-8.655963	0.0000
ML	-0.254998	0.025363	-10.05386	0.0000

Source: computed and extracted from the GLS result

Table 7 shows the relationship between return on assets and bank frauds in Nigeria. Bank fraud was proxied with computer fraud and managers looting. From the fixed effect panel regression results, the probability value shows if the variables are statistically significant or not. It is noted in statistics that a probability value of 0.0000 are statistically significant. Therefore, frauds and its effects in banks are statistically significant. This means that one percent increase in computer fraud will have -0.282597 effects on bank performance ROE). One unit increase in managers looting will have -0.254998 effects on ROE.

2.8. Test of Hypotheses

H₀: Computer fraud does not affect bank performance in Nigeria.

Table-8. Model 2 Hypothesis 1

Variable	Coefficient	Std. Error	z-Statistic	Prob.
CF	-0.282597	0.032648	-8.655963	0.0000

Source: computed and extracted from the GLS result

The z-value is regarded as the calculated z-value which is -8.655963 and it is tested against 1.96 (alpha value) standard z-score. Since the CF z-value of -8.655963 is less than the 1.96 (alpha value), that is, $-8.655963 < 1.96$, we reject the null hypothesis and conclude that fraud as a proxied with CF affects deposit money bank performance in Nigeria.

H₀: Managers looting of fund does not affect bank performance in Nigeria.

Table-9. Model 2 Hypothesis 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.285210	0.634851	-9.900288	0.0000
ML	-0.254998	0.025363	-10.05386	0.0000

Source: computed and extracted from the GLS result

The z-value is regarded as the calculated z-value which is -10.05386 and it is tested against 1.96 (alpha value) standard z-score. Since the ML z-value of -10.05386 is less than the 1.96 (alpha value) i.e. $-10.05386 < 1.96$, we

reject the null hypothesis and conclude that fraud as a proxy with ML affects deposit money bank performance in Nigeria.

3. Results and Discussion

The GLS method of analysis used in this study show the impact of the variables proxied for fraud and financial performance. From the result of the study, we can deduce that there is a negative relationship between computer fraud (CF) and bank performance (ROE) and the test of hypothesis confirmed that CF affects ROE. In the banking sector, the basic work tool is the computer, therefore this study findings corroborate the findings of Muritala *et al.* (2020) that, fraud activities in the banking sector affect performance through profit reduction. Also there is negative relationship between managers looting (ML) and bank performance (ROE) and the test of hypothesis confirmed that ML affects ROE. There is negative relationship between inappropriate auditing (IA) and bank performance (ROE) and the z-statistical test of hypothesis confirmed that IA affects ROE. The peer grouped pressure (PGP) variable and bank performance (ROE) have negative relationship and the z-statistical test of hypothesis confirmed that PGP affects ROE. Meanwhile the Jarque-bera and alpha value attest to the fact that the data follow a normal distribution and is valid and consistent while the probability values for bank fraud and its effect on bank performance in Nigeria shows 0.0000 indicating that the variables are statistically significant.

4. Conclusion

The relevance of bank fraud and its effect on bank performance in Nigeria banking sector is taking a new dimension. Nigeria and other West Africa countries are still developing nations and the deposit money banks operating are just a little above the infant stage whose financial technological structure is not sufficient to combat deposit money bank frauds when compared with advance nations. However, as the deposit money banks in Nigeria and other West Africa countries aspire to be globally competitive and profit oriented the need to overhaul and eliminates all elements that may propel the occurrence of fraud. Therefore, from the discussion and findings of the study, the researchers concluded that variables proxied for fraud affect deposit money bank performance in Nigeria. From the analysis carried out in the study, there have been negative impacts of bank frauds and its effect on deposit money banks performance in Nigeria. The study therefore recommends that an efficient and modern financial technological structure, such as Computer aided Auditing Tools and Techniques (CAATTs) would combat fraud in deposit money banks in Nigeria.

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