

IMPLICATIONS OF FRAUD ON THE PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The study examined the implications of fraud on the performance of deposit money banks in Nigeria for the period of 2005 to 2020. The study utilized secondary data on profitability ratio of deposit money banks as proxy for the performance of deposit money banks being the dependent variable while % of Cheque Fraud, % of Fraudulent Invoices and Payments, % of Fraudulent Loans and % of Money Laundering were the independent variables sourced from Statistical Fact Database of Deposit Money Banks in Nigeria. The study used Ordinary Least Square (OLS) Multiple Regression as its method of data analysis. The study based on the regression results revealed that % of Cheque Fraud rate has negative implication on the performance of deposit money banks in Nigeria within the study period. The regression results also revealed that % of Fraudulent Invoices and Payments and fraudulent loans also had negative implication on the performance of deposit money banks in Nigeria within the study period. Finally, the study based on the regression results revealed that % of Money Laundering had negative implication on the performance of deposit money banks in Nigeria within the study period. Based on the findings, the study recommended that Deposit money banks in Nigeria should put in place fraud detection mechanisms in order to reduce the cheque fraud so as to enhance the profitability performance of deposit money banks in Nigeria. Deposit money banks should set up an efficient, reliable and working fraud detection department to oversee all the transactions that are considered prone to fraud to minimize fraudulent invoices and payments in order to enhance their performance. Finally, government should embark on tactical monetary policies to control the amount of money laundering so as to enhance the performance of deposit money banks in Nigeria.

Keywords: Fraud, Performance and Deposit Money Banks

INTRODUCTION

Fraud is a global phenomenon that has been in existence for long and it increases every day by day. Fraud is a deliberate act that causes a business or economy to suffer damages, often in the form of monetary losses. Fraud is rampant in both developed and developing countries and as well varies across places in its magnitude, its sources, the way it manifests itself and in its effects

on administrative performance and development.

Fraud according to Adeniji (2014) and ICAN (2016) is an intentional act by one or more individuals among management, employees or third parties which results in a misrepresentation of financial statement. Olufidipe (2019) viewed fraud as "Deceit or trickery deliberately practiced in order to gain some advantage dishonesty." Egwu

(2019) submitted that fraud is the crime of cheating somebody in order to get money or goods illegally. Alashi, (2018) opined that fraud means an act of dishonesty, deceit and imposture. Bank Fraud is the use of deliberate misrepresentation (which usually requires some technical expertise) in order to fraudulently obtain money or other assets from a bank (WiseGeek, 2013). The fear in the banking business is that if clients choose one bank over another based on the bank's security track record, or lack thereof, it will have an influence on gaining a new banking customer. (Aliyu, Tasmin & Takala, 2012). Because of the huge sums of money involved and the negative effects on the economy, the high occurrence of fraud within the banking industry has become an issue for which a solution must be found. (Fadipe-Joseph & Titiloye, 2012). Frauds in the Nigerian banking system are carried out through four channels: mobile banking, point of sale terminals, automated teller machines, and the internet. Financial performance can be measured using various proxies such as return on assets, return on equity, profit before or after tax, net income margin, and so on to determine how far and how effectively a bank has improved in terms of profitability as a result of its service delivery. etc. (Gitau & Samson, 2016).

Nigeria's financial reforms have resulted in various methods to promote financial intermediation and the mobilization of savings for investment, both of which are beneficial to the country's economic growth and development. (Egwu, 2012). These changes aim to take proactive steps to enhance the market mechanism, eliminate systemic and financial crises, ensure a more liberal financial system, and reduce fraud. Fraud in the banking industry is a global phenomenon, and it has grown at an astonishing rate in the Nigerian economy. The worry now is that the rising rate of fraud in financial institutions, if not addressed, would pose serious threats to the

stability and survivability of individual financial institutions, as well as the industry's overall performance, and that no sector of the economy is immune to fraudsters. (Nwankwo, 2005).

In recent years, the recurrence of bank fraud has posed a serious concern to the viability and existence of banks and the financial industry as a whole. (Ikpefan, 2016). Many of Nigeria's failing banks have suffered greatly as a result of fraud and fraudulent activity. (Ilaboya, 2017). Despite countless banking reforms, regulatory monitoring team by various banking regulatory agencies, and internal control mechanisms, fraud till continues to persist in banks. The Nigerian Deposit Insurance Corporation NDIC (2017 Deposit Money Banks (DMBs) were found to have a higher percentage of fraud and fraudulent activities than other banking institutions, according to research. The costs of dealing with the fraud threat consume a huge amount of bank resources and impose additional costs on the banks.

The caliber of individuals participating in bank fraud is even more concerning. Fraudsters reach out to the lowest levels of management, including cleaners and other temporary workers. According to different annual NDIC reports, management, who should be the organization's watchdog, makes up a large percentage of the overall number of people involved in fraudulent act. The collaboration of various employees in the perpetration of fraudulent operations is also a major concern. In order to carry out their fraudulent act, the majority of executive officials collaborate with non-executive staff. (Olufon, 2017). As a result, tracing fraud to its source and originators becomes more complex, with banks reporting an annual increase in the number of employees involved in fraud cases. Bank fraud has shattered the foundation and reputation of most Nigerian banks, leading to the closure of others. The study faces difficulties in determining how fraud affects

the performance of the Nigerian banking industry and the economy in general, taking into account the positive and negative effects based on the current state of the Nigerian banking industry. As a result, the purpose of this study was to look into the implications of fraud on Nigerian Deposit Money Banks.

Objective of the Study

The main objective of this study is to examine the implications of fraud on the performance of deposit money banks in Nigeria. The specific objectives of this study are:

- i. To examine the implication of cheque fraud on the performance of deposit money banks in Nigeria
- ii. To determine the implication of fraudulent invoices and payments on the performance of deposit money banks in Nigeria
- iii. To investigate the implication of fraudulent loans on the performance of deposit money banks in Nigeria
- iv. To assess the implication of money laundering on the performance of deposit money banks in Nigeria

2.0 REVIEW OF LITERATURE

2.1 Empirical Review

Okoye, N. J., Onuoha, O. C. & Akuesodo, O. E. (2021) examined the effect of e-commerce and mobile banking fraud on the performance of deposit money banks in Nigeria. The data used in the study was obtained from CBN and Nigeria electronic forum statistics. A linear regression was adopted on both functional and statistical models. The study found that E-commerce fraud has a negative and insignificant effect on return on assets of deposits money banks in Nigeria. Mobile fraud has negative and insignificant effect on return on assets of deposit money banks in Nigeria. The study therefore recommended among others that the Government should evolve a good regulatory environment that will enable the

banks to be more accountable and fraudulent activities to be easily detected Folowosele, F. A. & Ikpefan, O. A. (2021) examined Electronic Fraud: An emerging cause of Bank Failure in Nigerian deposit money Banks. The study reviewed the degree to which fraud and other unethical practices especially in the digital space have affected the Nigerian banking industry both in the past and present, and how it will be a growing concern in the imminent future. The causal/descriptive research design was adopted for the study. The research used secondary data for the periods 2006 till 2018 which were collected from the Nigeria Deposit Insurance Corporation (NDIC) annual reports. Descriptive analysis and ordinary least square method of regression analysis were used for data analysis. Findings revealed that electronic fraud cases increased progressively over most of the years of study, which can be attributed to the increased bank products that are electronic based. The researchers, therefore, recommend amongst others that when new products are introduced, there should be proper test for efficiency. Limits should also be placed on transactions that can be done per time pending when the product is fully developed and incorporated

Fakunmoju, S., & Olukayode, F. (2021) examined Effect of Fraud Management Practices on Non-Financial Performance of Selected Deposit Money Banks in Lagos State, Nigeria. The increasing trend of declined in non-financial performance of banks in recent years pose serious threats to the stability and survival of financial and real sectors and banks in particular. Studies have shown that most deposit money banks in Nigeria have experienced declined in non-financial performances due to poor fraud management practices which have resulted in financial losses to banks and loss of public confidence in the banking sector. The study found out that fraud management practices have positive and significant

effect on bank efficiency and operational performance of the selected deposit money banks with ($P < 5\%$). The study concluded that fraud management practices have effect on bank operational performance and efficiency deposit money banks in Lagos State, Nigeria. The study recommended that management of banks should exert collective efforts in identifying the ideal mix of effective and efficient fraud management practices that matches their banking business scope so as to achieve targeted operational performance and bank efficiency.

Adaora, Jisike and Amalachukwu (2019) examined the effect of electronic banking related fraud on deposit money banks financial performance in Nigeria. The benefit of electronic banking in boosting the profitability of deposit money banks has been the focus of empirical studies in Nigeria, whereas the impact of fraud perpetrated on electronic banking platforms used by banks operating in the economy has been overlooked. We looked at the impact of electronic banking fraud on deposit money banks' return on assets, return on equity, interest income, and non-interest income through automated teller machines, mobile banking, point of sale terminals, and the web. The banking system's apex regulatory agency has compiled comprehensive data on fraud on various electronic banking channels: Central Bank of Nigeria began in 2013 thus limiting the study to a period of four years. The Ordinary Least Square (OLS) was applied in estimating the regression equation. With the use of granger causality analysis, the influence of fraud on several channels of electronic banking and financial performance was determined. The study found that while fraud on point of sale terminals has a significant negative impact on interest income, fraud on automated teller machines, mobile banking, and the web had no impact on a bank's return on

assets, return on equity, or non-interest income. We proposed that deposit money banks further authenticate transactions at point of sale terminals by sending a confirmation code to the account's mobile number to confirm that the transaction was made by the original cardholder.

Muritala, Ijaiya, and Adeniran (2017) used quarterly data from 2000 to 2013 to determine the impact of fraud on bank performance in the Nigerian banking system. According to the study, the number of employees participating in fraud has a significant positive influence on return on assets, however the quantity of fraud perpetrated and the number of employees involved in fraud both have a negative impact on bank performance. The expected coefficient of the (VECM) result revealed that changes in the return on asset have a short run dynamic effect, implying that the variables adjusted to rectify the imbalances in the fraudulent banking environment.

Taiwo, Agwu, Babajide, Okafor, and Isibor (2016) investigated the rise of bank fraud in Nigeria and its influence on the banking industry. The study examined annual time series data from the Central Bank of Nigeria statistical bulletin, several financial websites, journals, and newspapers for the period 2002 to 2014. The study used the multiple regression technique and the Augmented Dickey-Fuller (ADF) Unit Root test, with the hypothesis that fraud had no significant impact on bank profitability in Nigeria. The findings revealed a negative significant link between bank profitability as measured by return on asset and the total amount involved in banking industry frauds.

The insecure condition, bank fraud, and their impact on bank performance were examined by Kanu and Isu (2016). Multiple regression analysis was used to assess if there was any correlation between indicators of bank insecurity, fraud, and earnings before tax among Nigerian commercial banks. Data were obtained

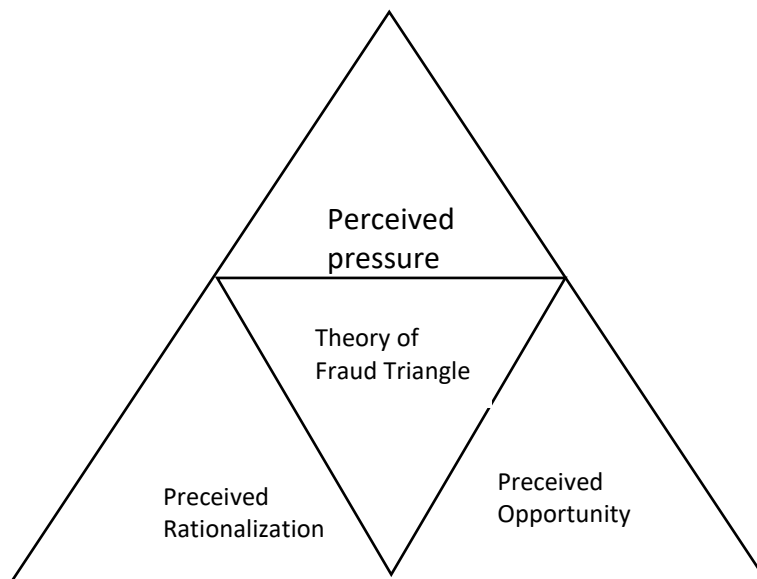
through secondary sources on the indicators of bank insecurity and fraud and the earnings before tax of Commercial banks in Nigeria for the period 1991 -2013 from Nigeria Deposit and Insurance Corporation's annual report. The results of the study demonstrated an inverse relationship between Expected Losses on insecurity and Fraud (ELF), Number of Fraud Cases (NFC) and Number of Staff involved in Fraud Cases and earnings before tax of commercial banks in Nigeria. The results of the Granger causality test show a unidirectional causality from bank insecurity and fraud to commercial bank performance.

2.2 Theoretical Framework

There are many theories that relate to fraud. Fraud has been a subject with several

theoretical underpinning. Other studies have conceptualized fraud under the theoretical framework of differential theory of Edwin Sutherland, Fraud Triangle theory of Donald Cressey, Fraud Diamond theory of Wolfe and Hermerson, and a host of others.

However, this study is anchored on the fraud triangle theory in explaining the elements of fraud in the banking industry. The theory happens to be the most widely used theory. It was based on a model developed by Donald Cressey, a sociologist and criminologist who studied the behaviour of white-collar crime in the 1950's in respect of those he termed trust violators. He observed that fraud is likely to occur given a combination of three factors; namely: Pressure (motivation), Opportunity and Rationalization.



The Fraud Triangle (Donald Cressey 1973)

According to Dorminey, Fleming, Kranacher and Riley (2012), Cressey identified three elements that made up the fraud triangle. He opined that for an ordinary individual to commit fraud three elements must be present. First is pressure; pressure is the motivation of the person to commit fraud, usually a financial burden.

Adeyomo (2012) opine that other business and organizational pressures may create a motive for fraud. He noted that the desire to pull in more investment, secure tax advantage, and meet the teaming requirement of banking regulators may pressure management to commit fraud. Most researchers have used a number of

staff involved in fraud as a proxy for rationalization.

Next is opportunity; which is the method by which the crime could be committed. Opportunity is a vital element in the fraud triangle because a potential fraudster may have the desire to commit fraud but without the perceived opportunity fraud may not occur. Opportunities can span from weak internal control, weak audit committee, management override, collusion, lack of supervision, and individual skill set such as employee knowledge of accounting and how to conceal misstatement (Dorminey et al, 2012). In explaining the opportunity, the number of reported cases has been adopted as a proxy by authorities in the field (Muritala, Ijaiya & Adeniran, 2017; Taiwo, Babajide, Okafor & Isibor, 2016).

Lastly, rationalization; this is how the person justifies in their own mind, the action of committing the crime. Rationalization helps to justify a crime in a way that makes it acceptable in the mind of the fraudster. it may arise from an employee's feeling of dissatisfaction at work, low compensation or lack of recognition. Some fraudsters may even rationalize that the bank has enough money and will not be affected by a simple fraud (Adeyomo, 2012).

3.0 METHODOLOGY

An ex-post facto research design is adopted and being a time series study covering a period from 2004 to 2019, The study utilized secondary data on profitability ratio of deposit money banks as proxy for the performance of deposit money banks being the dependent variable while % of Cheque Fraud, % of Fraudulent Invoices and Payments, % of Fraudulent Loans and % of Money Laundering were the independent variables sourced from Statistical Fact Database of Deposit Money Banks in Nigeria. The study used Ordinary Least Square (OLS) Multiple Regression as its method of data analysis. The study based on

the regression results revealed that % of Cheque Fraud rate has negative implication on the performance of deposit money banks in Nigeria within the study period. The regression results also revealed that % of Fraudulent Invoices and Payments and fraudulent loans also had negative implication on the performance of deposit money banks in Nigeria within the study period. the study based on the regression results revealed that % of Money Laundering had negative implication on the performance of deposit money banks in Nigeria within the study period.

Model Specification

In building the model for this study, the Ordinary Least Square Method of Multiple Regression Analysis of the form $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n$ shall be used to analyze the data. Where $\beta_0 - \beta_n$ are parameters to be estimated from the data and $X_1 - X_n$ are the independent variable and Y is the dependent variable for the study. On this Basis, the model for the study can thus be specified as follow; the functional form of the model is presented in Equation [1]

$$[1] \quad Y = f(X_1, X_2, X_3, X_4)$$

The model in logarithmic mathematical form is specified below in Equation [2]

$$[2] \quad Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

The above model can also be stated in the logarithmic stochastic form as represented in Equation [3]

$$[3] \quad Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where the profitability ratio of deposit money banks (Y) is the proxy for the performance of deposit money banks which is the dependent variable while % of Cheque Fraud (X_1), % of Fraudulent Invoices and Payments (X_2), % of Fraudulent Loans (X_3) and % of Money Laundering (X_4) as the independent

variables and μ is the error or stochastic term that captures other variables of fraud that have implications on the performance of deposit money banks in Nigeria which are not included in the model.

Evaluation Criterion

This is the criterion used in evaluating whether the estimated parameters are theoretically meaningful statistically satisfactory or significant. In evaluating the model, the statistical criterion is employed.

Statistical Criteria (First Order Test)

These criteria are used to determine the statistical significance of the estimated parameters of the model. The statistical criteria are referred to as the first order test; the most widely used statistical criteria are the coefficient of determination (R^2), the student t-test, Standard Error Test and the Analysis of Variance Test (F-test)

(a) Student t-Test

Student t-test is used to verify the truth or falsity of a null hypothesis, the decision rule under this approach is based on the computed value of t-statistics from the data. Using a significant level of 0.05, the analysis and interpretation of t-calculated and t-tabulated will be based on the decision rule described below; When t-calculated $>$ t-tabulated, Reject H_0 and Reject H_1 and conclude that the estimated parameter is not statistically significant.

(b) Standard Error Test

If the standard error is less than half of the absolute value of the parameter estimate (i.e. $S\beta_i < \beta_i/2$), we will reject the H_0 and accept H_1 and conclude that the estimated parameter is statistically significant. If on

the other hand, if $S\beta_i > \beta_i/2$, we will accept the H_0 and Reject the H_1 and conclude that the estimated parameter is not statistically significant.

(c) Analysis of Variance (F-Test)

The F- statistics is used to test for the overall statistical significance of the entire model. It checks the joint variance of the explanatory variables. The level of significance to be used is 5%. The decision rule can be stated as follows: If $F^* > F_{\alpha}(k-1, n-k,)$ df, reject H_0 and accept H_1 and conclude that the overall model is statistically significant, but if $F^* < F_{\alpha}(k-1, n-k,)$ df, accept H_0 and reject H_1 and conclude that the overall model is not statistically significant. Where; F^* is called F-calculated and $F_{\alpha}(k-1, n-k,)$ df shows F-tabulated.

(d) Coefficient of Determination (R^2)

Coefficient of Determination (R^2): This measures the proportion of the total variation in the dependent variable that can be explained by the independent variables. The R^2 measures the explanatory power of the model. It shows the extent to which the independent variable influences the dependent variable. It is a measure of the goodness of fit of the model; the closer the R^2 is to zero the worse the fit and the closer the R^2 is to one, the better the fit

Presentation of Data

Table 1: Presentation of Data on Profitability Ratio of Deposit Money Banks (Y) % of Cheque Fraud (X_1), % of Fraudulent Invoices and Payments (X_2), % of Fraudulent Loans (X_3) and % of Money Laundering (X_4).

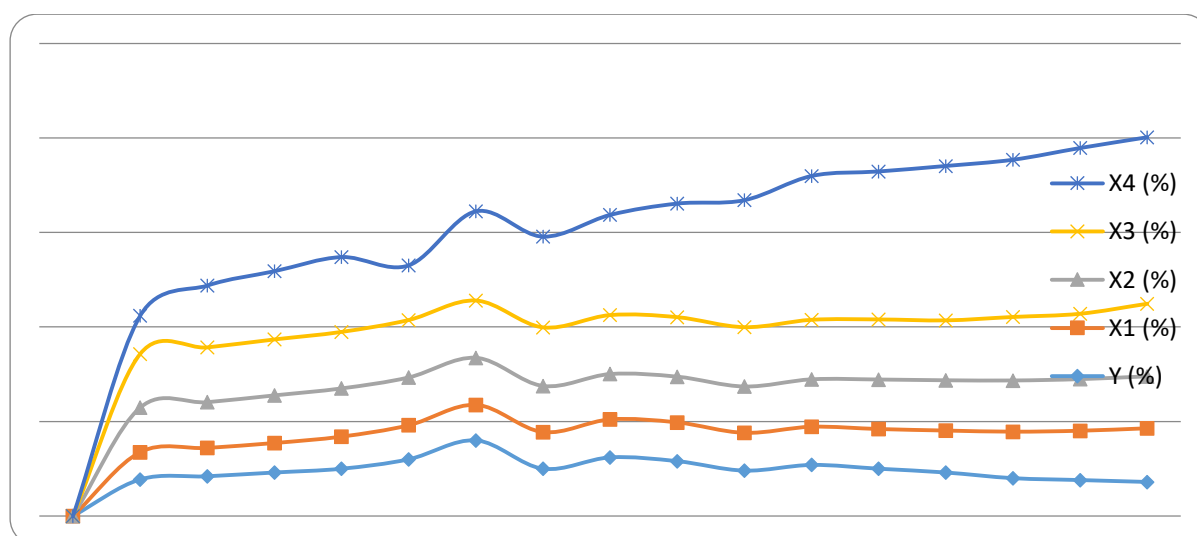
Year	Y (%)	X ₁ (%)	X ₂ (%)	X ₃ (%)	X ₄ (%)
2005	19.34	14.4	23.6	28.4	20.2
2006	21.00	15.0	24.2	29.0	32.7
2007	23.00	15.6	25.2	29.6	36.1
2008	25.00	17.0	25.5	29.9	39.6
2009	30.00	18.0	25.3	30.4	28.9
2010	40.00	18.8	24.9	30.3	47.2
2011	25.00	19.4	24.4	31.0	48.0
2012	31.00	20.1	24.0	31.2	53.0
2013	29.00	20.5	24.2	31.5	60.1
2014	24.00	20.0	24.5	31.4	67.2
2015	22.00	20.2	25.1	31.5	76.1
2016	18.00	21.0	26.2	31.8	78.3
2017	16.31	22.2	26.6	31.7	81.7
2018	14.34	24.6	27.1	33.6	83.2
2019	13.67	26.1	27.3	34.6	87.7
2020	11.89	28.4	27.5	38.4	88.1

Source: Deposit Money Banks Statistical Facts Database, 2021

Table 1 shows presentation of data on profitability ratio of deposit money banks (Y) as the proxy for the performance of deposit money banks which is the dependent variable while % of Cheque Fraud (X₁), % of Fraudulent Invoices and Payments (X₂), % of Fraudulent Loans (X₃) and % of Money Laundering (X₄) were used

to measure bank fraud in deposit money banks in Nigeria.

Fig 1: Trend Analysis on Profitability Ratio of Deposit Money Banks (Y) % of Cheque Fraud (X₁), % of Fraudulent Invoices and Payments (X₂), % of Fraudulent Loans (X₃) and % of Money Laundering (X₄).



Source: Researcher's Computation using Excel, 2020

Fig 1 shows a trend analysis on Profitability Ratio of Deposit Money Banks (Y), % of Cheque Fraud (X_1), % of Fraudulent Invoices and Payments (X_2), % of Fraudulent Loans (X_3) and % of Money Laundering (X_4). Based on the trend of

analysis, the profitability ratio of deposit money banks has been decreasing due to increase in bank frauds such as Cheque Fraud, Fraudulent Invoices and Payments, Fraudulent Loans and Money Laundering

Table 2: Regression Results

Dependent Variable: Y

Variables	Coefficients	Standard Error	t-Statistic	Probability
X_1	-1.271505	0.603074	2.108373	0.0444
X_2	-0.075765	0.155281	0.487923	0.6295
X_3	-8.864650	0.554601	15.98385	0.0000
X_4	-4.585857	0.475757	9.639101	0.0001
$R^2 = 0.971676$ F-Statistic: 308.7503 D.W= 1.964436				

Source: Researcher's Computation using Eviews version 10, 2021.

Table 2 showed the regression coefficient of % of Cheque Fraud (X_1) is -1.271505. It shows that a unit increase in % of Cheque Fraud (X_1) will bring about 1.271505 unit decrease in the profitability ratio of deposit money banks (Y) in Nigeria. It is negative showing an inverse relationship between % of Cheque Fraud (X_1) and the profitability ratio of deposit money banks (Y) in Nigeria. Hence, increase in % of Cheque Fraud (X_1) led to decrease in the performance in deposit money banks in Nigeria within the study period.

The regression coefficient of % of Fraudulent Invoices and Payments (X_2) is -0.075765. It shows that a unit increase in % of Fraudulent Invoices and Payments (X_2) will bring about 0.075765 unit decrease in the profitability ratio of deposit money banks (Y) in Nigeria. It is negative showing an inverse relationship between % of Fraudulent Invoices and Payments (X_2) and the profitability ratio of deposit money banks (Y) in Nigeria. Hence, increase in % of Fraudulent Invoices and Payments (X_2) led to decrease in the performance of

deposit money banks in Nigeria within the study period.

The regression coefficient of % of Fraudulent Loans (X_3) is -8.864650. It shows that a unit increase in % of Fraudulent Loans (X_3) will bring about 8.864650 unit decrease in the profitability ratio of deposit money banks (Y) in Nigeria. It is negative showing an inverse relationship between % of Fraudulent Loans (X_3) and the profitability ratio of deposit money banks (Y) in Nigeria. Hence, increase in % of Fraudulent Loans (X_3) led to decrease in the performance of deposit money banks in Nigeria within the study period.

The regression coefficient of % of Money Laundering (X_4) is -4.585857. It shows that a unit increase in % of Money Laundering (X_4) will bring about 4.585857 unit decrease in the profitability ratio of deposit money banks (Y) in Nigeria. It is negative showing an inverse relationship between % of Money Laundering (X_4) and the profitability ratio of deposit money banks (Y) in Nigeria. Hence, increase in % of Money Laundering (X_4) led to decrease in

the performance of deposit money banks in Nigeria within the study period.

Testing of Hypotheses

Standard Error Test

Table 3: Summary of the Standard Error Test

Variable	Parameter	Standard Error	$\frac{1}{2}(\text{coefficient})$	Decision	Conclusion
X1	β_1	0.603074	0.635753	Reject H_0	significant
X2	β_2	0.155281	0.037883	Accept H_0	insignificant
X3	β_3	0.554601	4.432325	Reject H_0	significant
X4	β_4	0.475757	2.292929	Reject H_0	significant

Source: Researcher's Computation using E-views 9.5 version 2021. The standard error test result on table 2 showed that the coefficients of the independent variables; % of Cheque Fraud (X_1), % of Fraudulent Loans (X_3) and % of Money Laundering (X_4) were statistically significant because the standard errors of their parameter estimates were less than half of their coefficients. Hence, % of Cheque Fraud (X_1), % of Fraudulent Loans (X_3) and % of Money Laundering (X_4) had significant effects on the performance of deposit money banks in Nigeria within the study period. The H_0 for the three variables were therefore rejected while the H_1 were accepted. For the % of Fraudulent Invoices and Payments (X_2), the standard error was greater than half of its coefficient. The H_0 is therefore accepted while the H_1 is rejected. It also implies that the estimated parameter is not statistically significant. Hence, % of Fraudulent Invoices and Payments (X_2) had no significant effect on the performance of deposit money banks in Nigeria within the study period.

Students't-Statistic Test

The student t-distribution test is used to determine the significance of the individual parameter estimate. To achieve this, we have to compare the t-value in the regression result with the t-tabulated at n-k degree of freedom (d.f) at 5% level of

significance. Theoretically, the degree of freedom (d.f) is denoted by n-k. n = 13, k=4, so that d.f= 13-4= 9; the t-tab obtained at 5% significance level under a two-tailed test is ± 1.833 .

The calculated t-statistic for β_1 is 2.108373. Since t-tab < t-cal, that is, 1.833 < 2.108373 (absolute values), we reject the null hypothesis and accept the alternative hypothesis and concluded that % of Cheque Fraud rate has significant effect on the performance of deposit money banks in Nigeria.

The calculated t-statistic for β_2 is 0.487923. Since t-tab < t-cal, that is, 1.833 > 0.487923 (absolute values), we accept the null hypothesis and reject the alternative hypothesis that % of Fraudulent Invoices and Payments has no significant effect on the performance of deposit money banks in Nigeria.

The calculated t-statistic for β_3 is 15.98385. Since t-tab < t-cal, that is, 1.833 < 15.98385 (absolute values), we reject the null hypothesis and accept the alternative hypothesis that % of Fraudulent Loans has significant effect on the performance of deposit money banks in Nigeria.

The calculated t-statistic for β_4 is 9.639101. Since t-tab < t-cal, that is, 1.833 < 9.639101 (absolute values), we reject the null hypothesis and accept the alternative hypothesis that % of Money Laundering has

significant effect on the performance of deposit money banks in Nigeria

Probability Test

Decision Rule

If p-value >0.05, accept the H₀ and reject the H₁ and conclude that the estimated

parameter is not statistically significant. On the contrary, if the p-value <0.05, reject the H₀ and accept the H₁ and conclude that the estimated parameter is statistically significant. This is analyzed below.

Table 4: Summary of the Probability Test

Variables	Parameters	P-values	Level of significance	Decision	Conclusion
X1	β ₁	0.0444	0.05	Reject H ₀	Significant
X2	β ₂	0.6295	0.05	Accept H ₀	Insignificant
X3	β ₃	0.0000	0.05	Reject H ₀	Significant
X4	B ₄	0.0001	0.05	Reject H ₀	Significant

Source: Researcher’s Computation using E-Views 9.5 version 2021

Table 4 showed that the probability values of % of Cheque Fraud (X₁), % of Fraudulent Loans (X₃) and % of Money Laundering (X₄) were 0.0444, 0.0000 and 0.0001. This implied that their probability values were less than 0.05. Hence, we rejected the null hypothesis and accepted the alternative hypothesis and concluded that the variables were statistically significant. For the % of Fraudulent Invoices and Payments (X₂) the probability value (0.6295) was greater than (0.05). The H₀ was therefore accepted while the H₁ was rejected. It also implied that the variable was not statistically significant.

Coefficient of Determination (R²)

This shows the proportion of the total variation in the dependent variable which was caused by the independent variable, in the estimated regression equation. The R² of 0.971676 showed that about 97% of the total variation in the profitability ratio of deposit money banks as proxy for the performance of deposit money banks was explained by the independent variables i.e. % of Cheque Fraud, % of Fraudulent Loans and % of Money Laundering while the remaining 3% was not explained by these variables but by other factors which were not included in the model. These are captured within the stochastic or error term

(μ). Hence, since the R² was close to one, we concluded that the model was a good fit.

iv. F-Statistic (Analysis of Variance Test)

H₀: β₀=β₁=β₂=β₃=β₄=0 (the overall model is not statistically significant)

H₁: β₀≠β₁≠β₂≠β₃≠β₄≠0 (the overall model is statistically significant)

Level of significance=5%

Degrees of freedom = (V₁, V₂)

Where V₁=K-1 and V₂=n-k

V₁= 4-1=3, V₂=13-4=9

F_{0.05} (3, 9) = 2.33

Decision Rule/Conclusion: From table 2, since the F-value or F-calculated of (308.7503) > the F-tabulated of (2.33) above, we reject the null hypothesis and accept the alternative hypothesis. Since the alternative hypothesis was accepted and the null hypothesis was rejected, we can deduce from our findings that the parameter estimates of the model or the overall model was statistically significant at 5% level of significance.

v. Durbin Watson Test for Autocorrelation

Decision Rule/ Conclusion

If Durbin Watson (DW) statistic is less than 2, we will conclude that there is positive

autocorrelation, if Durbin Watson (DW) Statistic is greater than 2, we will conclude that there is a negative autocorrelation and lastly, if Durbin Watson (DW) is equal to 2, we will conclude that there is no autocorrelation. From table 2, the Durbin Watson (DW) statistic = 1.964436, i.e. approximately 2. We can therefore conclude that there is no autocorrelation in the model.

4.0 Discussion of Findings

Empirically, the study based on the regression results revealed that % of Cheque Fraud had significant negative effect on the profitability ratio of deposit money banks in Nigeria. This implied that an increase in % of Cheque Fraud brought about decrease in the performance of deposit money banks in Nigeria within the study period. This study agrees with the finding of Dare (2017) who submitted a negative relationship between % of Cheque Fraud and deposit money banks performance in Nigeria.

The study also based on the regression results revealed that % of Fraudulent Invoices and Payments has negative effect on the profitability ratio of deposit money banks in Nigeria, but such effect wasn't significant within the study period in Nigeria. However, this finding implied that an increase in % of Fraudulent Invoices and Payments brought about decrease in the performance of deposit money banks in Nigeria within the study period.

Furthermore, the study based on the regression results revealed that % of Fraudulent Loans had significant negative effect on the profitability ratio of deposit money banks in Nigeria. This implied that an increase in % of Fraudulent Loans brought about decrease in the performance of deposit money banks in Nigeria within the study period. This finding contradicts that of Otalú (2014) who submitted a negative relationship between % of

Fraudulent Loans and the performance of deposit money banks in Nigeria.

Finally, the study based on the regression results revealed that % of Money Laundering had significant negative effect on the profitability ratio of deposit money banks in Nigeria. This implied that an increase in % of Money Laundering brought about decrease in the performance of deposit money banks in Nigeria within the study period.

Conclusion and Recommendations

The study explored implications of fraud on the performance of deposit money banks in Nigeria. This has become necessary in the face of increase in the level of fraudulent activities going on in the banking system. As a result of this, it is expedient to know what must be done to reduce this menace drastically. Based on the findings, it has been discovered that the increased in % of Cheque Fraud, % of fraudulent invoices and payments, % of Fraudulent Loans and % of Money Laundering led to decrease in the performance of deposit money banks in Nigeria within the study period. The study based on the regression results revealed that % of Cheque Fraud rate has negative implication on the performance of deposit money banks in Nigeria within the study period. The results also revealed that % of Fraudulent Invoices and Payments and fraudulent loans also had negative implication on the performance of deposit money banks in Nigeria within the study period. Finally, the study based on the regression results revealed that % of Money Laundering had negative implication on the performance of deposit money banks in Nigeria within the study period. It is clear that this has affected the performance of the banking sector over the period, thus for a stronger and more resilient banking and financial system, banks need to improve their current state of development.

In review of the above findings, the following recommendations are suggested

to bank management for execution to improve the deposit money banks operation and financial stability in general:

- i. Nigerian deposit money banks should employ fraud detection methods in order to reduce cheque fraud to improve their profitability.
- ii. To improve their performance, deposit money banks should establish an effective, dependable, and operational loan fraud detection department to manage all loan transactions and reduce loan fraud.
- iii. Deposit money banks should establish an effective, dependable, and operational loan fraud detection department to manage all loan transactions in order to prevent loan fraud and improve performance.
- iv. In order to improve the performance of Nigeria's deposit money banks, the government should implement tactical monetary measures to reduce money laundering.

REFERENCES

- Abdulrasheed, H., Babaita, E. & Yinusa, R. (2012) determined the problem of fraud and its implications for bank performance in Nigeria. *Asian Journal of Management Research*, 3(1), 182-194.
- Adaora, V., Jisike, D. & Amalachukwu, I. (2019) examined the effect of electronic banking related fraud on deposit money banks financial performance in Nigeria. *Journal of Technology, Entrepreneurship & Rural Development*, 4(1), 125-137.
- Adeniji, R.I. (2014). Fraud as a negative catalyst in Nigeria banking industry. *Journal of Emerging Trends in Economics & Management Science*, 2(5), 357-363.
- Adetiloye, K.A., Olokoyo, F.O., & Taiwo, N.J. (2016). Fraud Prevention and Internal Control in the Nigerian Banking System, *International Journal of Economics and Financial Issues*, 6(3), 1172-1179.
- Adeyemi, A. G. & Oluwafemi, A. S. (2021). Effect of forensic accounting on fraud detection and prevention in Nigerian deposit money banks* dele-oladejo oyekunbi olubukola, PhD. *Hallmark university*, 168.
- Adeyemo, S.D. (2012). Fraudulent activities and forensic accounting services of banks in Port Harcourt, Nigeria. *Asian Journal of Business Management*, 4(2), 132-140.
- Aguilar, I. (2011). An assessment of fraud and its management in Nigeria commercial banks. *European Journal of Social Science*, 10(4), 628-640.
- Akindele, P.E (2011) Bank reforms and deposit banks performance: Evidence from Nigeria. *European Journal of Business and Management*, 8(7), 136-152.
- Akinyomi, F. (2012). The impact of fraud on performance of deposit money banks in Nigeria. *International Journal of Innovative Finance and Economics Research*, 6(1), 40-49.
- Alashi, U. (2018). Board independence and financial statement fraud: A moderating effect of female gender diversity. *Accounting and Taxation Review*, 1(1), 196-221.
- Albrecht, C. (2009). Security challenge, bank fraud and commercial bank performance in Nigeria: An evaluation. *Journal of Business Management*, 5(2), 1-21
- Albrecht, D., Williams, F. & Wernz, S. (1995). Financial soundness measurement and trend analysis of commercial banks in Bangladesh: An Observation of selected banks. *European Journal of Business and Management*, 4(10), 159-184.
- Albrecht, F., Albrecht, C., Albrecht, W. & Zimelman, I. (2009). The Nature, Extent and Economic Impact of

- Fraud on Bank Deposits in Nigeria. *Interdisciplinary Journal of Contemporary Research in Business*, 4(9), 253-265
- Aliyu, D., Tasmin, E. & Takala, I. (2012). Financial performance assessment of banks: A case of Pakistani public sector. *International Journal of Business and Social Sciences*, 3(14), 276-283.
- Berney, D. (2018). Fraud Prevention and Internal Control in the Nigerian Banking System. *International Journal of Economics and Financial Issues*, 6(3), 1172-1179
- Black, C. (2014). Fraud and bank performance nexus: Evidence from Nigeria using vector error correlation model. *Journal of Business Finance*, 3(1), 21-29.
- Chelangat, G. (2014). Effects of the various types of fraud on the financial performance of deposit taking SACCOs in Kenya. *International Journal of Empirical Finance*, 5(1), 55-68.
- Chondough, S. M. (2021). The Implication of The Cbn Cashless Economy Policy Channels On The Performance Of Nigerian Banks. *SEA-Practical Application of Science*, 9(25), 75-85.
- Domfeh, F. & Bawole, C. (2011). Implication of fraud on commercial banks performance in Nigeria. *International Journal of Business and Management*, 8(15), 144-150
- Duffield, F. & Grabosky, H. (2011). Empirical assessment of frauds on the financial performance of banking sector in Nigeria. *International Journal of Research Studies in Management*, 7(1), 75-84.
- Dyck, V., Morse, E. & Zingales, U. (2010). Causes and effect of Banking distress in Nigeria Industry. *International Academic Journal of Accounting and Financial Management*, 4(1), 100-105
- Egwu, F. (2012). Growth of bank frauds and the impact on the Nigerian banking industry. *Journal of Business Management and Economics*, 4(1), 1-10
- Egwu, F. (2019). Bank failure and persistent distress in Nigeria: A discriminant analysis. *Nigerian Journal of Economic and Financial Research*, 2(1), 45-78.
- El-Haddan, F. & Almahmeed, Y. (1999). Fraudulent activities and forensic accounting services of banks in Port Harcourt, Nigeria. *Asian Journal of Business Management*, 4(2), 89-110.
- Enourah, F. & Ebimobowei, U. (2012). Fraud and its implications for bank performance in Nigeria. *International Journal of Asian Social Science*, 2(4), 35-45.
- Fadipe, J. & Titiloye, I. (2012). Challenges of automated teller machine (ATM) usage and fraud occurrence in Nigeria-A case study of selected banks in Minna Metropolis. *Journal of Internet Banking and Commerce (JIBC)*, 15(2), 2-10.
- Fakunmoju, S., & Olukayode, F. (2021). Effect of Fraud Management Practices on Non-Financial Performance of Selected Deposit Money Banks in Lagos State, Nigeria. *The Journal of Accounting and Management*, 11(1).
- Folowosele, F. A. & Ikpefan, O. A. (2021). Electronic Fraud: An emerging cause of Bank Failure in Nigerian deposit money Banks.
- Gates, D., Jacob, C. & Malphrus, J. (2019). Precipitating factors in fraud and criminal motivation. *International Journal of Bank Marketing*, 10(3), 232-250.
- Gitau, F. & Samson, Y. (2016). The role of non-bank financial institutions on

- financial intermediation process in Nigeria (1992-2014). *British Journal of Economics, Management & Trade*, 14(4), 1-15.
- Gitau, S. & Samson, L. (2016) assessed the effect of financial fraud on the financial performance of Commercial Banks in Kenya, a case of Nakuru Town. *Journal of Forensic Accounting*, 4(2), 76-110.
- Graham, F. Li & Qiu U. (2012). Growth of bank frauds and the impact on the Nigerian banking industry. *Journal of Business Management and Economics*, 4(12), 1-10.
- Headworth, S. (2021). Fraud Control as Performance. In *Policing Welfare* (pp. 146-183). University of Chicago Press.
- Idowu, I. (2009). Effect of financial fraud on the performance of commercial banks: a case study of tier 1 banks in Nakuru town, Kenya. *International Journal of Economics, Commerce and Management*, 4(12), 142-157.
- Ikhu, O. & Enimola, U. (2014) examined the implications of financial crime on bank performance in Nigeria. Financial crime and its implications on banks performance in Nigeria: a general appraisal. *International Journal of Sciences: Basic and Applied Research*, 13(2), 317-328.
- Ikpefan, G. (2016). An empirical analysis of social impact of fraud on the Nigerian banking industry. *Research Journal of Finance and Accounting*, 7(4), 12-17.
- Ilaboya, E.O (2017). Application of continued fractions in controlling bank fraud. *International Journal of Business and Social Science*, 3(9), 1-12.
- Inaya, D. & Isito, F. (2016). Social impact of fraud on the Nigerian banking industry. *International Journal of Business and Social Science*, 3(9), 34-56.
- Kalapo, E. & Olaniyan, I. (2018). Frauds in Nigerian banks: Nature, deep-seated causes, aftermaths and probable remedies. *Mediterranean Journal of Social Sciences*, 30(2), 279-289.
- Kanu, R. & Isu, D. (2016). Examination of fraud in the Nigerian banking sector and its prevention. *Asian Journal of Management Research*, 3(1), 184-192.
- Khrawish, P. (2011). Fraud and corporate executives: Agency, stewardship and broken trust. *Journal of Forensic Accounting*, 5(1), 109-130.
- Kirkpatrick, F. (2015). Workplace theft: An analysis of student-employee offenders and job attributes. *American Journal of Criminal Justice*, 27(1), 111-127.
- Kohlber, G. (2008). Towards curbing commercial bank fraud: An analysis of internal control. A postgraduate dissertation submitted to the Department of Financial Studies, University of Nigeria, Nsukka.
- Lotfi, A., Salehi, M., & Dashtbayaz, M. L. (2021). The effect of intellectual capital on fraud in financial statements. *The TQM Journal*.
- Lister, I. (2007). Frauds in the Nigerian banking sector: A factor-analytic investigation. *International Journal of Empirical Finance*, 5(1) 55-68.
- Luft, Y. & Omarkhil, I. (2018). The impact of fraud on the risk assets of Nigerian commercial banks. *Journal of Finance and Economic Research*, 3(1), 81-96.
- Mackevicius, U. & Giriunas, O. (2013). Fraud and fraudulent practices in Nigeria banking industry. *An International Multi-Disciplinary Journal, Ethiopia*, 4 (3b), 240-256.
- Mawutor, F. (2014) assessed the impact of electronic banking on the profitability of a Bank in Ghana. *Asian Journal of Management Research*, 3(1), 182-194.

- McGee, B. (2012). Determinants of fraud control measures in commercial banks: A survey of selected commercial banks in Nakuru town, Kenya. *International Journal of Science and Research*. 3(10), 2178-2183.
- Muritala, S., Ijaiya, A. & Adeniran, O. (2017). Impact of fraud on bank performance in Nigerian banking industry. *Journal of Social Sciences*, 27(1): 53-58.
- Nwankwo, C. (2013) evaluated the impact of fraud on the performance of commercial banks in Nigeria. *Asian Journal of Management Research*, 3(1), 182-194.
- Olongo, I. (2013) ascertained the effects of financial fraud and liquidity on the financial performance of the commercial banks in Kenya. *International Journal of Science and Research*. 3(10), 2178-2183.
- Odukoya, O. O. & Samsudin, R. S. (2021). Knowledge capability and fraud risk assessment in Nigeria deposit money banks: The mediating effect of problem representation. *Cogent Business & Management*, 8(1), 1899450.
- Okoye, N. J., Onuoha, O. C. & Akuesodo, O. E. (2021) E-Commerce and Mobile Banking Fraud: Examining the Nexus on the Performance of Deposit Money Banks in Nigeria.
- Pillarella, R. (2021). A holistic generative adversarial network-based methodology for synthetic banking dataset generation.
- Taiwo, J.N., Agwu, M. E., Babajide, A.A., Okafor, T.C., & Isibor, A.A. (2016). Growth of bank frauds and the impact on the Nigerian banking industry. *Journal of Business Management and Economics*, 7(4): 53-58.
- Tega, W. H. & David, A. O. The Impact of Fraud on Financial Performance of Deposit Money Banks: Evidence from Nigeria.
- Wolfe, D. & Hermanson, D. R. (2004). The fraud diamond: Considering four elements of fraud. *The CPA Journal*, 74 (12), 38-42.