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AUTOMATED TELLER MACHINE FRAUD (ATMF) AND FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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K E Y W O R D S | **A B S T R A C T**

The study examined the effect of automated teller machine fraud on financial performance of deposit money banks in Nigeria from 2010 – 2020. Dependent variables are financial performance proxied with Return on Assets (ROA) and Return on Equity (ROE) while independent variable is automated teller machine fraud obtained from annual report of Nigeria Deposit Insurance Cooperation (NDIC) financial statement. The study used the ordinary least square of e-view 9 for the analysis. Two hypotheses were formulated for the study. The result of the findings shows that insignificant relationship exists between automated teller machine frauds (ATMF) and return on asset and return on equity of deposit money banks in Nigeria. The study therefore recommended that Banks management should create awareness and educate customers on how to identify ATM fraud practices in order to reduce Automated teller machine fraud activities.

Introduction
Background of the Study

In spite of the fact that banking industry is hub of financial activities in Nigeria economy, fraud has continued to rear its ugly head in the industry. It has eaten deep into every units and department in the banking sectors. The level of fraud in the present day Nigeria has assumed to be in an increase. Nigeria with all its human and natural resources, tethers on the brink of failure because of fraud.

Today, the very integrity and survivability of these laudable functions of Nigerian banks have been called into question in view of incessant frauds and accounting scandal. Oseni (2006) opined that the incessant frauds in the banking industry are getting to a level at which many stakeholders in the industry are losing their trust and confidence in the industry.

Corroborating the views of Oseni and Idolo (2010) stressed that the spate of fraud in Nigerian banking sector has lately become a source of embarrassment to the nations as apparent in the seeming attempts of the law enforcement agencies to successfully track down culprits. The increasing adoption of automated teller machine fraud (ATMF) as a major payment system has slow down the banking sources both in Nigeria and internationally. Automated teller machine fraud is described as a fraudulent activity where the criminal uses automated machine card of another person to withdraw money instantly from that account Pandey (2004).

According to Idowu (2009) fraud can be seen as the deliberate falsication, camouflage or exclusion of the truth for the purpose of dishonesty/stage management to the financial damage of an individual or an organization.

To Fadipe-Joseph and Titiloye (2012), fraud is any actions by which one person intends to gain a deceitful advantage over another. In other words fraud is an act of commission which is planned to cause unlawful gain to one person and criminal loss to the other.

Owolabi (2010) opined that bank fraud have far reaching consequences to the stakeholders and the nation's economy at large. There has been large scale fraud on Nigerian banks which at various times, among other factors have resulted in bank distress. A banking system that is in crisis cannot carry out its intermediate role effectively as there is halt to new lending. There may be low capital adequacy ratio of the bank or short fall of liquidity.

Owolabi traces most of the crises in the bank all over the world to fraud, which in some occasions, have resulted in bank failure. Automated teller machine fraud bring untold hardship to shareholders, employees, customers and family member. Odi (2013) acknowledges that fraud in banks shakes the foundation and credibility of most banks in Nigeria, resulting to some of the banks being distressed. It is in recognition of these seeming serious assertion on impact of ATM fraud and financial performance of deposit money banks in Nigeria that this study is designed to focus.

Statement of the Problem

The banking business has become more complete with the development in the field of information and communication technology (ICT), which has changed the nature of bank fraud and fraudulent practices. Berny (2008) observes that customers rely heavily on the web for their banking business which leads to an increase in the number of online transactions.

Gates and Jacob (2009) and Malphrus (2009) assert that the internet provides fraudsters with more opportunities to attack customers who are not physically present on the web to authenticate transactions. Within a (6) six years period, the FBI received 207,051 suspicious Activity Reports (SARs) for criminal activities related to cheque fraud, cheque letting, counterfeit cheques and counterfeit negotiable instrument Dos (2002). These fraudulent activities accounted for 47 percent of the 436655 SARs filed by U.S. financial institutions and equated approximately $7 billion on expected losses U.S. Department of justice Dos (2002).

In Nigeria, in spite of the banking regulations and the central bank of Nigeria (CBN), the supervisory role of the Nigeria Deposit Insurance Corporation (NDIC) and the chartered institute of bankers of Nigeria (CBN), the economic and financial crime commission (EFCC) control. There is still a growing concern about fraud and other unethical practice in the banking industry,

The Central Bank of Nigeria attributes the backward development of the nation's economy, to weaknesses in the internal control system and operational procedures of banks CBN (2020). This has been given a practice of how fraud and other financial mismatch have eaten deep into the financial strength of Nigeria banks. Therefore, the damage which the menace of fraud do to financial sector in particular and the banking industry at large is immeasurable and grave. Hence the hazard of banking fraud to banking industry, the need for proper banking operation efficiency and an attempt to put an end to this economy degradation is the motivation for this study.

The proxy for fraud is automated machine fraud (ATMF) which is the independent variable whereas proxies for banks performance as dependent variables are return on assets ROA and return on equity (ROE).

Objectives of the Study

The main objective of the study is to ascertain the effect of Automated Teller Machine Fraud (ATMF) on the financial performance of Deposit Money banks in Nigeria. However, the specific objectives are to:

i) evaluate the effect of Automated Teller Machine Fraud (ATMF) on the Return on asset (ROA) of Deposit Money banks in Nigeria, and

ii) ascertain the effect of Automated Teller Machine Fraud (ATMF) on the Return on equity (ROE) of Deposit Money banks in Nigeria.

Research Questions

From the above stated research objectives the following research questions are formulated and stated below:

1) What is the extent of effect of automated teller machine fraud (ATMF) on return on asset (ROA) of deposit money banks in Nigeria?

2) What is the effect of automated teller machine fraud (ATMF) on Return of equity (ROE) of Deposit Money Banks in Nigeria?

Research Hypotheses

From the above stated research questions the following research hypotheses are formulated and stated below:

1) Automated teller machine fraud (ATMF) has not affected return on assets (ROA) of Deposit Money Banks in Nigeria.

2) There is no significant effect of automated teller machine (ATMF) on Return on Equity (ROE) of Deposit Money Banks in Nigeria.

Scope of the Study

This study centers on the effect of automated teller machine fraud (ATMF) on financial performance of deposit money banks in Nigeria. Bank fraud cases and performance indicators as reported by Nigeria Deposit Insurance corporation (NDIC) in their annual reports on proxies of fraud automated teller machine fraud and the proxies of bank performance namely return on asset (ROA) and return on equity (ROE) of deposit money banks in Nigeria were obtained. Data covers the period 2010-2020 i.e. 10 years.

Significance of the Study

The study has the following significances to the following as below:

Government

1. It will draw the government attention to finance and provide consistent banking policy for sustainable development of our country.
2. It will help the government agencies in the control and prevention of crime e.g. economic and financial crime commission.

The Public

- It will help the managers with an effective ways of preventing and minimizing frauds and forgeries in banking operations.
- The research will restore the level of confidence which the public has in those banks

The Analysts

- It will serve for analysis of effect on the banking hence the transfer of payment of money.

Researcher

- It will serve as a reference material for further study.

Definition of Terms

Fraud: Wrongful or criminal deception intended to result in financial or personal gain Owolabi (2010).

NDIC: Nigeria Deposit Insurance Corporation is an Independent agency of the Federal Government of Nigeria.

Banking Industry: Banking sector are the principal depositories of the public money saving the nerve center of the payment system, the vessel endowed with the ability of money creation and allocation of resources and a medium through which monetary and credit policies are implemented.

Forgeries: The act of falsely making altering or imitating (a document or signature) with intent to defraud, Owolabi (2010).

Review of Related Literature

Operational Framework

Effect of Automated Teller Machine Fraud (ATMF) on financial performance of deposit money banks in Nigeria.

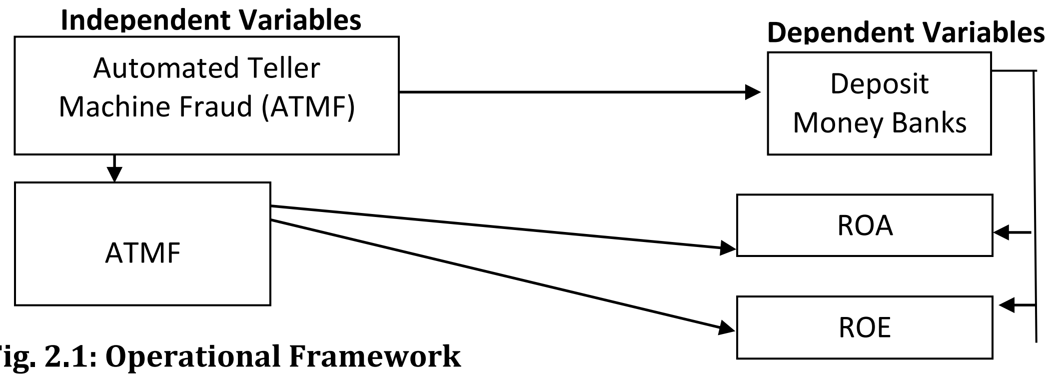

Fig. 2.1: Operational Framework

Conceptual Review

Concepts of Fraud

Fraud however has been defined by many scholars. Fraud can be define as any illegal act that is characterized by any deceit, concealment or violation of trust Agwu, (2013). According to Barnabas (2011) fraud is an act or course of deception, deliberately practiced to gain unlawfully or unfair advantages to the detriment of another. Any act of unfair dealing whether against the bank by his customers or against the customers by the bank (including its official) is regarded as fraud. Another scholar Idowu (2009) also sees fraud as a deliberate falsification, camouflage or exclusion of the truth for the purpose of dishonesty, stage management to the financial damage of an individual or an organization.

Fraud in its effect reduces organizational assets and increases its liabilities, with regards to banking industry, it may engender crises of confidence among the banking public, impede the going concern status of the bank and ultimately lead to banking failure Adeyemo (2012). The bank fraud does not only effect customer's confidence but also increases organization liabilities and by implication reduces its assets which will also reduce the earning per share of organization. According to Kimani (2011) a way of making money is to stop losing it. The level of fraud in the present day Nigeria has assumed an epidemic dimension. It has eaten deep into every aspect of our life to the extent that a three years old child talks about 419, the name given to the newly discovered advance fee fraud that is hunting our nation. In July 2004, Central Bank of Nigeria (CBN) unveiled new banking guidelines designed to consolidate and restructure the industry through mergers and acquisition. Banks and other financial institution Act (BOFIA) 1991, section 15, it was also designed to prevent fraud and to make Nigeria banks more competitive and able to play in the global market. Fraud can also be defined as an internal distortion, misstatement, omission, or non-disclosure to obtain financial and other benefit.

The Concept of Automated Teller Machine

Automated Teller Machine also known as automated banking machine (ABM) or cash machine and by several other names is a computerize telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for the cashier, human clerk or bank teller. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stayed or a plastic smart card with a chip that contains a unique card number and some security information such as on expiration date or CVV, Idolor (2010). Authentication is provided by the customer entering a Personal Identification Number (PIN). Using an ATM, customers can access their bank accounts in order to make cash withdrawal, credit cash, cash advances and check their account balance as well as purchase prepaid cell phone cards Idolo (2010).

Causes of Bank Fraud

According to Abiola Adedokun and Oyemole (2013) bank fraud can be categorized in two main groups, namely, internal and external fraud.

1. **Internal Frauds:** Are fraud committed by employees and managers of an organization, either acting alone or in groups or through collusion with outside parties. Management fraud can be quite difficult to detect because managers have access to most information and system and have the power to disguise their actions because they know that their decisions may not necessarily be questioned by others. They can also intimate junior employees to commit fraud on their behalf.

2. **External Fraud:** Is fraud committed by third parties of organizations such as suppliers, competitors, partners and customers. Other offenders include potential customers, governments and criminal organizations. The perpetrators can work independently or can collude with staff to defraud the bank. Idowu (2009). The various types of external fraud witnessed by the bank are money laundering. Identify theft and use of lost or stolen documents, use of counter be it cards, theft and confidential information etc. These types of fraud can be relatively costly if not detected quickly. The probability that bank could unknowingly be transacting with criminal gang is very challenging. If for instance such a transaction was to come in the lime light, the bank could face a great damage to its reputation and customer confidence.

Identified Fraud, Types Prevalent in the Nigerian banking Industry

The regulatory authorities Central Bank of Nigeria (CBN) and the Nigeria Deposit Insurance Corporation (NDIC) has identified the under listed 32 fraud types as the prevalent modes through which deposits are frittered away in Nigerian banks.

(1) ATM fraud
(2) Internet fraud
(3) Staff cash defalcation
(4) Unauthorized credit fraud
(5) Tellering fraud

(6) Falsification of accounts
(7) Forgery cheques with forged signatures.
(8) Printing of bank documents illegally.
(9) Clearing fraud
(10) Computer fraud
(11) Telex or SWIFT fraud,
(12) Foreign exchange fraud,
(13) Cross firing of cheques and kite flying
(14) Theft of cash
(15) Suppression of cash/cheque entries
(16) Opening and operating of fraudulent loan accounts,
(17) Over invoicing
(18) Armed Robbery attacks
(19) Fictitious bank branches

Methods through which Frauds are perpetrated in the Nigerian Deposit Money Banking Industry

Motor Finance Fraud: Types of motor finance fraud include application fraud (where a customer gives incomplete or inaccurate information to the lender/conversion fraud (the fraudulent, sale of a vehicle which does not belong to the seller or on which money is still owed) and first party fraud (where a customer makes their loan requirements using for example a false credit card Leor (2019).

Online Banking Fraud: According to UK financial fraud action (2009) online banking fraud losses increases from $53 million in 2008 to 60 million on increase of 14 percent 2009. This increase is largely due to criminal using sophisticated methods to target online banking customers through malware, which targets vulnerabilities on customer PCS rather than the banks own system which are more difficult to attack. There were also more than 51,000 phishing incident recorded during 2009 a 16 percent increase on the amount seem in 2008. More than half of all internet users bank online with more than 24 million adults accessing at least one bank account Oludayo (2020).

Online Ticket Fraud: Ticket fraud occurs when victims purchase tickets for a music, sports or theatre event which do not materialize. The tickets are purchase from fake ticketing websites and through online auction and shopping sites.

Organized Crime Fraud: Fraud is a significant element of the overall organized crime, threat either perpetuated by organized crime groups (OCGS) as a primary activity or as an enabled funding device for other serious crimes.

Payroll and Recruitment Fraud: Payroll and recruitment fraud can occur when unauthorized charges are made to payroll system such as charges to salary payment or allowances. Recruitment fraud occurs when false information is provided in order to gain employment for example by lying about employment history and qualification or providing false identification documents, such as false documentation demonstrating to right to work in the country Natural HR (2021).

Ways to Prevent Bank Fraud

Another way of reducing or eradicating fraud in banking industry is through the shareholders by complying with the following recommendations according to Abiola (2013):

1. **Hire Sincere People:** The need to hire honest people cannot be over emphasized. Though it is the ambition of every organization, but it is easier said than done. The cost of hiring a dishonest employee is incalculable, dishonest employee will undermine any attempt to create a positive work environment and constantly strive to defeat any internal control put in place. Pre-employment background checks that over criminal history, educational history, verification, previous employment verification and history for possible law suits etc. will be helpful in hiring honest people.

2. **Exemplary Leadership:** Top management of the bank must set the standard for other employees by their conduct. Every staff, no matter how highly placed should be governed by the rules of the organization and not above it.

3. **Instauration of an Encouraging Atmosphere:** An encouraging work environment boosts employees to follow established policies and procedures and operate in the best of the organization. It opens line of communication between employees and management of the bank and guaranteed positive employees recognition and sound reward system. This kind of environment is likely to reduce the internal frauds in the bank.

4. **Perform Expected and Unexpected Audits:** Every bank should have regular assessments procedures which will be complemented with uncustomary, random, unannounced financial audits and frauds assessments. This can help to send message to all employees that fraud prevention and control are of high priority to the bank.

Theoretical Review

There are many theories that relate to fraud. These include, Association theory, the theory of fraud scale the theory of fraud diamond, social learning theory, the theory of hyper motivation, theory of workplace deviance, theory of concealment, Anomic theory on fraud to mention just a few.

We will discuss the four of theories most relevant to our research work and latter anchored this research on the theory of workplace deviance.

Self-Concealment Theory

The self-concealment theory by Kelly and Achter (2002) proposed that self-concealment can be opined as an instance of boundary regulation which helps to maintain ones privacy. They established the self-concealment principle which states, that self-concealment, psychological construct operating as a predispositions to actively conceal from others personal information which one perceives as distressing or negative. The domains of self-concealment include secrecy/privacy, feeling of embarrassment, fearfulness, trauma and depression. Self-concealment is the tendency to withhold personal sensitive information that is perceived as negative upsetting or embarrassing, as explained by Larson and Christian (1990a). Specifically self-concealment can obstruct psychological expression of individual's autonomy, competence and relationships. The inverse relationship between self-concealment well-being is a state that may demand persistent effort, which can ultimately elicit maladjusted physiological and psychological symptoms Kelly (2002). This implies that individuals must have been acting appropriately or shamefully in a compromising perception of themselves Larson & Christian (1990b).

Fraud Triangle Theory

Cressey (1971) postulated the theory of fraud triangle. He observed that fraud is likely to occur given a combination of three factors namely; pressure (motivation), opportunity and rationalization. Pressure here refers to needs or desires that have to be satisfied. It could be divided into financial pressure, vices, work-related pressure and others pressures (Adeniji, 2012). Opportunity to commit fraud, conceal the fraud or avoid being punished forms the second element of the fraud triangle. The third element is rationalization which entails giving unnecessary explanation(s) to justify ones involvement in fraud. There exists pressure motivation or compulsion on the fraudster who identifies opportunity which he utilizes and tries to justify his actions by unnecessary rationalization.

Fraud Diamond Theory

Kanu and Okorafor (2013) stated that Wolfe and Hermanson in (2004) postulated the fraud diamond theory. Fraud diamond added a fourth dimension to fraud triangle where it states that an individual's capability, personality trait and abilities can play a major role in determination of fraud occurrence. Despite the existence of opportunity, with pressure and rationalization as attracting forces to it, individual's trait and ability to recognize the opportunity and perpetrate the fraud were other essential factors for fraud to occur.

Workplace Deviance Theory

Comer (1985) put forward this theory in addition to others namely: differential opportunity, theory of concealment, and theory of minimum and general collusion. He believes that fraud is a deviant behaviour. Deviance theory postulates that employees steal primarily as a result of the conditions of the workplace. It adds that a lower rate of employee theft is a by-product of management responsiveness to the employee's affairs. Fraud is akin to paying back evil for evil as employees pay back assumed injustice with fraudulent activities. Workplace conditions bring to focus the issue of corporate governance. Banks being institutions where the object of trade is money requires good management, internal control, updated equipment, adequate remuneration and high security, good management is essential, good and bad conducts within a corporate organization is infectious. This implies that bad attitude (like fraud) as well as good conducts by supervisors and top management in corporate organizations could be easily emulated.

The nature of banking business where the object of trade is money itself makes it special as much effort is made on fraud prevention. This is because fraud in banks affects the transactions directly, has psychological effects on the depositors as regards safety of their deposits. The ripple effect of reporting fraud in banks is the cause of under reporting of frauds in the industry. Good corporate governance becomes the key to lack the elements in fraud diamond such that they might be like a thought inside the box (Okoye, 2016).

In view of the afore-mentioned, we anchored my research work on this theory as good control of the work environment as contained in the theory would reduce the incidences of fraud where otherwise, fraud would escalate.

Empirical Review

There have been an extensive studies conducted in many countries on fraud and its consequences on bank performance and the growth of the Nigerian banks.

Akintola (2005) conduct a research on job involvement/experience factors and fraudulent behaviours among serving and convicted bank staffs. The study found that the level of job involvement has function of three factors: motivation, identification and a feeling of pride that people achieve in their jobs.

Nwude (2006) carried out a bank frauds using methodology of an interaction with bank staff of various cadres with structured questionnaire to identify the fraud forms and characteristics in the banking industry. The study reveals that some staff involve in fraud due to greediness and arrogance.

Ikpefan (2006) in his study growth of bank frauds and the impact on the Nigeria banking industry opined in recent past there has been upward movement of bank frauds in Nigeria. For instance the figure rose to N8,309.83 billion in 2004 as against N3399.39 billion in 2003. This no doubt has covered the confidence of the public and bank customers and hence the need for this research.

The banking system is the medium through which funds flow into and out of the country. Some factors were identified as causes of fraud and illegitimate acquisition of wealth. This study empirically tested if there is no significant relationship between deposits on the one hand and the following explanatory variables – fraud, actual/expected loss and MLA between 1989-2004. The Ordinary Least Square method (OLS) was employed in the study. Furthermore, correlation coefficient, t-test, f-test and standard error were used in testing the relationship between the variables formulated in the hypotheses. From the four tests carried on the fitted regression model three of them show that the regression is very useful in explaining variability in deposits.

Adewumi (2007) in his explanation of bank fraud identify socio-economic lapses in society such as misplacement of societal values, the unquestioning attitude of society towards the sources of wealth, the rising societal expectations from bank staff and the subsequent desire of the staff to life up to such explanation as contributory factors of fraud.

In a different study, Otusanya (2008) carried out a study on the role of bank CEO in the perpetration of corporate executive frauds in the Nigerian Banking Sector. The study reveals that recent banking crises in Nigeria have exposed the activities of bank executive in corruption and fraudulent practices using institutional anomie theory called American dream theory whereby the pursuit of monetary success has come to dominate society.

Idowu (2009) did a research on the means of minimizing the incidence of fraud in Nigerian banking industry. Findings of the study revealed that, so many factors contributed to the incidence of frauds in banks amongst which are poor management of policies and procedures, inadequate working conditions, bank staff staying longer on a particular job and staff feeling frustrated as a result of poor remunerations.

Research Gap

Adeniyi (2016) reviewed effect of forensic auditing and financial fraud in the Nigeria deposit bank, Opara & Okoro (2016) examined the impact of fraud on the risk assets of commercial banks, Taiwo, Agwu, Babajide, Okafor & Isibor (2016) examined the growth of bank frauds and its impact on the Nigeria banking industry, Muritala, Ijauya, & Adeniran (2016) examined the impact of fraud on bank performance in the Nigerian banking industry while Kanu & Idume (2016) undertook a study to evaluate the insecurity situation of bank fraud and its impact on bank performance among others. While some adopted description research design, others utilized ex-post facto research design and applied OLS for data analysis.

The above shows divergence in approach and methodology. Sequel to this, the researcher evaluates Automated teller machine fraud (ATMF) and financial performance of deposit money banks in Nigeria using on ex-post facto research design with specific interest on Automate teller machine fraud (ATMF) on bank return on assets, and return on equity. None of the researchers reviewed used these variables.

Methodology

Research Design

This study adopted ex post facto research design. It is appropriate for the studies because the variables were collected as secondary data. The data collected is devoid of external manipulation since the events have already reported and published. Therefore the adoption of this research design to investigate the relationship between fraud and financial performance of deposit money banks in Nigeria as the methodological approach is appropriate.

Source of Data Collection

Secondary data was used which was gotten from Nigeria Deposit Insurance Corporation (NDIC) online annual report on frauds and forgeries in deposit money banks in Nigeria.

Method of Data Collection

The independent variables include automated teller machine fraud (ATMF) of banks reported by NDIC proxies for fraud while the proxies for financial performance as dependent variables return on assets and return on equity were computed from the published Nigeria Deposit Insurance Corporation (NDIC) annual online report on frauds and forgeries in Nigerian banks.

Method of Data Analysis

The study employed simple linear regression analysis. Regression analysis is a statistical tool used in determining the strength and weakness of independent and dependent variables.

Model Specification

The following regression models were developed in this study. The models are specified below.

ROA = F (ATMF) ……………………….. (1)

ROE = F(ATMF) ……………………….. (2)

Where;

ROA = Return on Assets

ROE = Return on Equity

ATMF = Automated teller machine fraud

Translating the above to regression equations; we have; models were expressed in their regression explicit form as follows:

ROA = $\beta_0 + \beta_1 ATMF + e$ ……………………….. (1)

ROE = $\beta_0 + \beta_1 ATMF + e$ ……………………….. (2)

The variable models were logged to ensure equal basis. . The logged models are stated as follows:

LogROA = $\beta_0 + \beta_1 ATMF + e$ ……………………….(1)

LogROE = $\beta_0 + \beta_1 ATMF + e$……………………….(2)

Decision Rule.

Data was tested at 5% level of significance; therefore, decision on the test of hypothesis was based on the following criteria; Accept H_0 and Reject H_1 if: P-val < 0.05 level of significance

Accept H_1 if: P-val >0.05 level of significance.

A-priori Expectation:
From the conceptual perspective, it is expected that fraud will negatively affect the financial performance of the study.

Data Presentation, Analysis and Interpretation of Results

Data Presentation

Data for the study which has been analyzed is presented below.

YEAR	ATMF N Million	ROA %	ROE %
2010	3,452	3.91	162.98
2011	2534	0.04	0.28
2012	2765	2.62	22.2
2013	1739	2.15	19.14
2014	13454	2.29	20.34
2015	8039	2.34	19.78
2016	11244	1.48	12.56
2017	16397	0.43	0.48
2018	10063	1.24	9.73
2019	26263	1.65	0.07
2020	327226	2.25	6.05

Source: NDIC annual report (2010-2020)

Logged Data

LATMF	LROA	LROE
3.53807	0.8350561	0.72916479
3.40381	0.94001816	1.0722499
3.4417	1.01283722	0.67669361
3.2403	1.15259408	0.97266559
4.12885	0.65896484	1.45682135
3.9052	0.96567197	0.0211893
4.05092	0.78675142	0.94398888
4.21476	0.89042102	0.17318627
4.00273	0.77158748	0.30103
4.41934	0.93043959	0.18184359
5.51485	0.94694327	0.32221929
5.99339	0.88366144	0.30103

Data Analysis

Below are results of the statistical tools used for the analysis of the study;

Table 4.2 Descriptive

	LROA	LROE	LATMF
Mean	0.103713	0.753397	3.987321
Median	0.332438	1.098990	4.002727
Maximum	0.592177	2.212134	5.514848
Minimum	-1.397940	-1.154902	3.240300
Std. Dev.	0.555092	0.101710	0.632521
Skewness	-2.009994	-0.685045	1.156529
Kurtosis	6.043792	2.449696	4.150186
Jarque-Bera	11.65312	0.999158	3.058533
Probability	0.002948	0.606786	0.216695
Sum	1.140846	8.287362	43.86053
Sum Sq. Dev.	3.081276	10.03422	4.000833
Observations	11	11	11

Sources: Researcher's computation, 2022 e-view, 9

The descriptive table describes properties of the selected variables. The average mean of LROA 0.103713 and standard deviation 0.555092 and LROE mean of 0.753397 and standard deviation 0.101710. Automated teller machine fraud registered a mean of 3.987321 and standard deviation of 0.632521 which illustrates that one fraudulent activity has 39% effect on financial performance.

Test of hypothesis

Ordinary least square was used to estimate and analysis the model A for the test of hypothesis.

Estimation and analysis of the model A

Table 4.3 Ordinary least square

Dependent Variable: LATMF
Method: Least Squares
Date: 01/31/23 Time: 21:17
Sample: 2010 2020
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.217366	0.244078	17.27879	0.0000
LROA	0.675558	0.450834	1.498461	0.1724
LROE	-0.398341	0.249828	-1.594465	0.1495

R-squared	0.567526	Mean dependent var	3.987321
Adjusted R-squared	0.504408	S.D. dependent var	0.632521
S.E. of regression	0.605238	Akaike info criterion	2.060611
Sum squared resid	2.930505	Schwarz criterion	2.169128
Log likelihood	-8.333362	Hannan-Quinn criter.	1.992207
F-statistic	1.460946	Durbin-Watson stat	1.544254
Prob(F-statistic)	0.287852		

Sources: Researcher's computation 2022, e-view, 9

From the tables above the result shows that the R-square is 56% which shows the coefficient value (ROA) 0.675558 with P-value of 0.1724 and coefficient value of ROE -0.398341 and P-value of 0.1495 the variables used for analysis is good for the study. The decision rule for Durbin-Watson statistics is that any result of 2 (or approximately 2), is free from serial or autocorrelations; therefore, the study concludes that the data series used in the analysis of the study are free from serial autocorrelation and the result is accurate for decision making.

Test of Hypothesis for Model A

Ho$_1$: There is no significant relationship between automate teller machine fraud (ATMF) and the return on asset (ROA) of deposit money banks in Nigeria.

The result shows that automated teller machine fraud has positive coefficient value of 0.675558 and P value of 0.1725 and insignificant relationship on return on assets of deposit money banks in Nigeria. This indicates that the null hypothesis which states that there is no significant relationship between automated teller machine fraud and the return on assets of deposit money banks is accepted and rejected alternative that states that there is a relationship between automated teller machine fraud and the return on assets of deposit money banks.

Ho$_2$: There is no significant relationship between automate teller machine fraud (ATMF) and the return on equity (ROE) of deposit money banks in Nigeria.

The result shows that automated teller machine has negative coefficient value of -0.39834 with P-value of 0.1495 and insignificant relationship on return on equity of deposit money banks in Nigeria. This indicates that the null hypothesis which states that there is no significant relationship between automated teller machine fraud and the return on equity of deposit money banks is accepted and rejected alternative that states that there is a relationship between automated teller machine fraud and the return on equity of deposit money banks.

Discussion of Findings

The findings of the study of model A reveals that automated teller machine fraud has positive coefficient value of 0.675558 P-value 0.1724 and insignificant relationship between return on assets of deposit money banks in Nigeria. While ROE has negative coefficient value of -0.398341 and insignificant P-value of 0.1495. This finding contradicts with Adediran and Olugbenga (2010) and Adepoju and Ahassan (2010) that found there is positive relationship between automated teller fraud machine and return on assets and return on equity of the deposit money banks in Nigeria.

Summary of Findings, Conclusion and Recommendations

Summary of Findings.

The study investigated on the effect of automated teller machine fraud and financial performance of deposit money banks in Nigeria 2010 – 2020. The study moved to determine whether the advent of automated teller machine has affected the financial performance of deposit money banks in Nigeria. The study used descriptive and ordinary least square test (e-view 9) to analyse the study. The findings from the analysis conducted in this study are summarized as follows:

1. Automated teller machine fraud has positive and insignificant relationship with return on assets of deposit money banks in Nigeria.
2. Automated teller machine fraud has negative and insignificant relationship with return on equity of deposit money banks in Nigeria.

Conclusion.

The study on automated teller machine fraud and financial performance of deposit money banks in Nigeria. The findings revealed results positive relationship between automated teller machine fraud and financial performance of deposit money banks in Nigeria. Also the study shows negative effect on banks performance as shown in the negative coefficient values of the financial performance variable return on equity indicating that the more fraud is perpetrated in deposit money banks most the banks experiences high risk of insolvency in the deposit money banks in Nigeria.

Recommendations.

Based on the findings and conclusion, the study hereby recommends as follows:

1. The regulatory and supervisory bodies of Nigeria banks such as Nigerian deposit insurance corporation (NDIC), central banks of Nigeria (CBN) and Economic and financial crime commission (EFCC) need to improve their supervision using tools at their disposal to appropriately check and curtain the incidence of fraud and fraudulent activities in the banking industry in Nigeria.
2. Banks management should create awareness and educate customer on how to identify ATM fraud practices in order to reduce Automated teller machine fraud activities.

3. A good internal organizational control should be put in place by the banks to ensure that proper delegation exists and clearly specify duties to avoid jobs lapping. In addition, staff members should not have limited access to sensitive materials like cheques and stamps. Banks should make available, individual password that will enable staff to individually sign to their computer page and carry out their designated assignment.

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