

# Identity Management Reform and Fraud Prevention in the Nigerian Banking Industry

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## ABSTRACT

This paper assesses the effect of identity management reform, namely the Bank verification number (BVN) policy on fraud prevention in the Nigerian banking industry. Using secondary data obtained from annual reports of Nigerian Deposit Insurance Corporation (NDIC) from 2011 to 2018, the study employed descriptive method to analyze trend in fraud variables before and after introduction of the policy and independent t-test to test the hypotheses in the study. Findings revealed that there was an initial decrease in number of staff involved and total amount involved in fraud in the two years following BVN introduction, but which showed increases thereafter. A similar trend was revealed in various fraud types with internet banking fraud showing significant increases in frequency of cases. The results from the t-tests revealed that the BVN policy had no significant impact on fraud prevention within the period under study. It was recommended that the banking public be educated on the different types of fraud and how to protect their personal details from getting into wrong hands. There is also the need to beef up security by improving on protocols required to carry out bank transactions particularly in the area of internet banking. It was also suggested that all bank account numbers be linked to the National Identity Number (NIN) immediately in line with proposals made by the Federal Government on identity management.

**Keywords--** Banking Industry, Identity Management, Bank Verification Number, Fraud Prevention

## I. INTRODUCTION

The banking sector is a very important and integral part of a country's financial system and is primarily responsible for mobilizing funds from surplus units and channeling same to the deficit units for the financing of productive investment. Banks as financial intermediaries are expected to serve as avenue for people to save that part of income that has not been expended on consumption. From the accumulated savings they are expected to extend credit to entrepreneurs and other businesses. In this way, banks support and promote efficient allocation of resources in an economy. It follows, therefore that financial stability and sustainable economic

growth can be achieved only in the presence of a robust and healthy banking sector.

In recent times there have been increasing reports of fraud in the banking industry which has been exacerbated by increase in the use of technology. In line with this, fraudsters have also upped their game to meet with the technological changes. Furthermore, the growth of online banking presents increased opportunities for perpetrators of cybercrimes as frauds can be carried out using wire transfers or account take-overs. NDIC (2018) attributes this rising fraud incidences to the increase in sophistication of fraud-related techniques such as hacking and cybercrime among others. Identity thieves have been known to carry out online banking through identity take-over of accounts, thus raising concerns over the safety and soundness of financial institutions.

Bank-related frauds have been accompanied by cybercrimes involving millions of dollars. Bank fraud erodes confidence and trust among investors and can also lead to crises in the banking sector. Similarly, financial crime and other fraud has the capacity to destabilize global economies through its ability to steal increasingly large sums of money and change the path of history as fraudsters manipulate events for their own means. Griffin (2018) reports the case of a middle manager and a subordinate in India's Punjab National Bank who had quietly executed a fraud over seven years stealing some 1.8 billion dollars. He notes that the biggest factor here is technology and the opportunities that it presents fraudsters to steal cash and other assets. He points out that technology has two sides though as it can be highly effective in preventing and detecting fraud, but that government, businesses and individuals must be able to keep up with fraudsters. Moreover, Igweike (2008) points out that bank frauds have the capacity of weakening intermediation functions (mobilization and allocation of funds) if trust, confidence, soundness and prudence are retracted with resultant effect on capital creation in the economy.

Fraud affects the operational efficiency of banking institutions, limits profitability, erodes the confidence placed in the banking system and diminishes the soundness of the financial system (Dagogo & Ngeremba, 2018). The vulnerability of the financial sector makes it

the most regulated sector of the economy. Despite the strict regulation of the financial sector, incidences of fraudulent practices appear to be on the increase and more sophisticated with the introduction of electronic banking (e-banking). This emergence of a revolutionized payment system in the country not only quickened the pace of financial transactions, it also opened up more windows for fraudsters who are bent on keeping pace with development initiatives to perpetrate their fraudulent activities on accounts of their victims. Very disturbing also, is the positive relationship between the adoption of e-banking and the incidence of fraud, as Nigeria Deposit Insurance Corporation (NDIC) reported that internet and technology-based sources of fraud accounted for 59.2% of fraud cases and 42.83% of the actual total loss suffered in the banking sector in 2018.

The Nigerian Deposit Insurance Corporation (NDIC) annual report showed that the number of reported cases of attempted frauds and forgeries in the nation's banking industry witnessed a substantial increase to 26,182 cases in 2017, which was an increase of 56.30% over the 16,751 cases reported in 2016. The frauds and forgeries cases reported in 2017 also showed a 146.50% and 113.20% increase over reported cases in 2014 and 2015 respectively (NDIC, 2017). In 2018, a total of 37,817 fraud cases were reported representing an increase of 44.42%. Similarly, the amount involved increased by over 224% to ₦38.93 billion in 2018 from ₦12.01 billion in 2017. The rising fraud incidences were attributed to increase in sophistication of fraud related techniques such as hacking, cybercrime as well as increase in information technology-related products and usage. From these figures, the incidence of fraud in the banking sector appears not to be dwindling.

In recognition of this rising menace and increasing incidence of compromise on conventional security systems in the banking sector, such as Personal Identification Number (PIN) and the use of passwords, which were used to check financial fraud, the Federal government, through the Central Bank of Nigeria (CBN), saw the need for identity management reform to curb the incidence of fraud, particularly those involving identity theft in the financial sector. To improve on the security of depositors' funds and putting checks on identity theft therefore, the CBN came up with the Bank verification number (BVN) policy.

The Central Bank of Nigeria (CBN) in collaboration with the Bankers' Committee launched the BVN Project on February 14, 2014, as a unique identifier for all bank customers. The key objective of the BVN initiative is to authenticate a customer of financial institutions using a unique identifier across the industry. The BVN enables one person to have a single identity within the financial system irrespective of the number of

accounts within multiple banks. The purpose of the project is to use biometric information as a means of first identifying and verifying all individuals that have account(s) in any Nigerian bank and consequently, as a means of authenticating customers' identity at point of transactions.

The BVN involves identifying an individual based on physiological or behavioural attributes such as fingerprints, signatures, facial features and others. The BVN provides account holders with a unique number that enables the account holder to have a single identity in the same banking system. The benefits expected from the BVN policy include reduced exposure to fraud, checking identity theft, enhancement of the effectiveness of Know Your Customer (KYC), and promotion of a safe and sound financial system, among others, in Nigeria (CBN, 2017a). The BVN will help the banking system identify customers who have been black-listed by one bank, who also move to other banks perpetrating such fraudulent activity. Also, because it captures physical features, it is very helpful for people who cannot read and write, thereby making sure that everyone is included in the financial system (Nelson, 2015).

A total of 23,030,269 bank customers had been registered in the BVN central database as at 31<sup>st</sup> December, 2015. Also, 28,303,332 accounts had been linked to the BVN out of 55,316,040 customer accounts (CBN, 2015). Implementation of the framework for BVN operation and Watch-list continued and by 31<sup>st</sup> December 2018, a total of 36,170,176 customers had been registered under the scheme, with 49,318,972 accounts out of 71,214,706 active accounts linked with BVN (CBN, 2018).

Security of depositors' funds is of utmost importance in banking as it would ensure confidence in the system. Confidence in the banking sector means that the populace will continue to patronize the banks and so make their function as financial intermediaries seamless. Consequently, the need for a developing country like Nigeria to increase in its capacity not only to mobilize funds efficiently, but also channel same effectively to achieve higher levels of industrialization and development cannot be overemphasized. Since bank frauds have the capacity not only to erode confidence and trust, but also weaken intermediation functions in the banking sector, it goes without saying that everything possible should be done to ensure that the banking sector functions efficiently and effectively.

The introduction of the BVN policy as an identity management reform is a relatively recent initiative and so this study sets out to examine whether the reform has any effect on fraud prevention since its introduction in 2014. The specific objectives are to determine the impact of the BVN on the type of fraud and forgeries in the deposit money banks, on the number of reported fraud cases, on

the number of staff involved in fraud and on the total amount involved in fraud cases. The findings would be beneficial for the Nigerian banking sector development by proffering recommendations to aid policy making.

## II. REVIEW OF RELATED LITERATURE

### 2.1 Theoretical Literature

Fraud has been defined by several authors in different ways. According to Adewumi (1986) fraud is a conscious premeditated action of a person or group of persons with the intention of altering the truth and or fact for selfish personal monetary gain. He expatiates that it involves the use of deceit and trick and sometimes highly intelligent cunning and know-how and that the action usually takes the form of forgery, falsification of documents and authorizing signatures and an outright theft. According to Nwankwo (1991) as cited in Owolabi (2010), fraud occurs when a person in a position of trust and responsibility, in defiance of norms, breaks the rule to advance his personal interests at the expense of the public interest, which he has been entrusted to guard and promote. Awe (2005) sees fraud as the intentional alteration of records accompanied by the defalcation of asset in order to deceive certain groups of people for the benefit of the perpetrator. Fraud has also been defined as any illegal act characterized by deceit, concealment or violation of trust, which may not depend on the application of threat of violence or physical force, and is an antithesis of trust, good faith, fidelity and fiduciary (Palmy& Di Lorenzo, cited in Dagogo & Ngerebo-a, 2018). From these various definitions, it can be seen that fraud is a deliberate act with the intent to deceive and ultimately obtaining benefit to the detriment of some other person.

Banking fraud takes many forms and so is not easily classified, although Nwanze (2006), opines that bank fraud can be classed as executive and other frauds. This classification is not clear-cut as Olojo (as cited in Owolabi, 2010) described bank fraud as consisting of syndicated fraud, corporate fraud, executive fraud, internal fraud, external fraud, internal/external fraud, computer fraud, electricity failure aided fraud, good boy and good girl syndrome aided fraud, rotten leadership aided fraud, slow judicial aided fraud and survival politics induced fraud. Owolabi (2010) in his submission on major frauds and forgeries in the banking industry identifies them to include: presentation of forged cheques and dividend warrants; granting of unauthorized loans; posting of fictitious credits; suppression of cheques and defalcating; fraudulent transfers and withdrawals; loss of money to armed robbers and outright theft of money. From the foregoing, bank fraud ultimately leads to loss of money which belongs to either the bank or customers.

Dagogo and Ngerebo-a (2018) identified three known theories of fraud as follows: Theory of Differential opportunity, Concealment theory and theory of Deviations. Differential opportunity theory states that people have the opportunity to commit fraud against their employees, suppliers, customers, third parties and government departments. Access to accounts, assets, premises and computer systems, skill required to identify and utilize opportunity and available time to plan and execute the fraud enable such opportunity. Concealment theory explains the introduction of confusion during and after the act in order to conceal the act. This involves the manipulation of accounting record or misrepresentation of a physical, personal or commercial reality intended to hide, disguise, or alter an account or inventory before, during and after a fraudulent act. In theory of deviation, perpetrators conceal their dishonesty as plausible breaches of rules or procedures. It is a deviation from a normal procedure and perpetrators are usually limited to the available opportunities and also concentrate on ways to conceal their guilt. Deviations from accepted procedures are generally the first symptoms of fraud.

### 2.2 Empirical Literature

A number of empirical studies have shown the negative effects of fraud on the Nigerian economy. Okoye and Gbegi (2013) using secondary data and regression analysis showed that fraud and related financial crimes have significant negative effect on the Nigerian economy. Udeh and Ugwu (2018) examined fraud in the Nigerian banking sector. They employed data relating to fraud, bank profits, bank assets and bank deposits for the period 2006 to 2015. Using descriptive analysis and ordinary least squares (OLS) method of regression analysis, they found that fraud has negative but insignificant relationship with bank profit.

Dagogo and Ngerebo-a (2018) investigated bank fraud and financial intermediation. They formulated three multiple regression models to estimate the values of the dependent variables and the coefficients of the independent variables. Using three different measures of financial intermediation as dependent variables, and unauthorized loans, theft and robbery and fraudulent withdrawals as proxies for bank fraud, they found that bank fraud had no significant effect on financial intermediation. They however warned that the incidence of fraud cannot be overlooked and that it is a signal for intermediaries and regulators to be alive to their responsibilities.

Adetiloye, Olokoyo and Taiwo (2016) examined fraud prevention and internal control in the Nigerian Banking system using primary and secondary data. Using regression analysis, they showed that internal control on its own is effective against fraud, but not all bank workers are committed to it.

Anyim (2018) investigated fraud control measures in the Nigerian banking sector. He adopted the survey research design using selected commercial banks in South-east of Nigeria. Employing primary and secondary data sources, he found that various fraud control measures were used to reduce fraud in Nigerian commercial banks. He reported that the introduction of BVN has helped to control fraud in Nigerian banks, but that many fraudulent bank workers were deliberately frustrating successful implementation of the BVN introduction by the CBN.

Akinadewo and Akinkoye (2019) analyzed trend of frauds in the Nigerian Deposit Money Banks from 2005 to 2018 and the perceptions of the stakeholders on the devised mechanisms to manage the effects of frauds in DMBs. They used primary data from a structured questionnaire administered on 50 senior bank staff from 10 banks and secondary data obtained from NDIC annual reports. Their analysis revealed that fraud cases and the value of frauds in the Nigerian banking industry have been on the increase particularly at the emergence of e-banking even as the respondents agreed to the effectiveness of the devices and strategies employed to reduce and minimize fraud occurrence. They however stressed the need for more enlightenment of bank customers on safe handling of security details, timely and effective prosecution of fraudsters, compliance with and the enforcement of relevant Fraud Prevention Acts and the strengthening of the internal control units of banks among other things.

Akyuz, Wuyep and Opusunju (2019) examined the impact of Bank Verification Number on corrupt practices in the United Bank for Africa branches in Abuja, Nigeria. They adopted a survey research design by employing primary data collected with the aid of a questionnaire administered to bank staff. They found that implementation of BVN has helped in monitoring banking transfers and transactions and preventing money laundering.

From the literature surveyed, very little had been done on the impact of BVN policy on fraud prevention in Nigeria. The few studies carried out on BVN used mainly primary data targeted at bank staff who expressed their subjective opinion on their perceptions about the impact of the policy in banking operations. The present study was therefore designed to contribute to literature in this area by

going a step further by employing secondary data to examine the impact of the BVN on fraud prevention.

### III. METHODOLOGY

To study aims at providing empirical evidence on the impact of the Bank Verification Number (BVN) on fraud prevention in the Nigerian banking sector. Secondary data used for the analysis were obtained from NDIC Annual reports. The secondary data included types of fraud and forgeries, number of reported fraud cases, number of staff involved in fraud and total amount involved in fraud in Deposit Money Banks (DMBs) in Nigeria for the period 2011- 2018. The study examined the trend in the variables using the descriptive method of analysis and also employed the Independent t-test to determine if there are statistically significant differences between the means of the variables before (2012-2014) and after (2015-2017) the introduction of the BVN policy in the banking sector.

The null hypothesis for the independent t-test is that the population means from two unrelated groups are equal:

$$H_0: \mu_1 = \mu_2$$

The test was carried out using the statistical software SPSS. The following hypotheses were tested at the 5% level of significance;

**Hypothesis 1:** BVN has no significant impact on the type of fraud in Deposit Money Banks in Nigeria.

**Hypothesis 2:** BVN has no significant impact on the number of reported fraud cases in Deposit Money Banks in Nigeria.

**Hypothesis 3:** BVN has no significant impact on the number of staff involved in fraud in Deposit Money Banks in Nigeria.

**Hypothesis 4:** BVN has no significant effect on the total amount involved in fraud in Deposit Money Banks in Nigeria.

### IV. RESULTS AND DISCUSSIONS

The findings on the frequency of fraud types are presented in Table 1.

**Table 1:** Frequency of Fraud types in Nigeria Deposit Money banks

Year	ATM/card fraud	Fraudulent transfer/ withdrawal of deposit	Suppression of customers' deposit	Web-based (Internet banking fraud)	Fraudulent conversion of cheques	Presentation of stolen cheques
2012	1,539	342	224	314	219	196
2013	1,739	394	324	316	219	196
2014	7181	1099	483	1277	138	59
2015	8039	1396	602	1471	71	132
2016	11,244	836	357	3689	48	17
2017	16,396	963	279	7869	101	18
2018	10,063	6,980	3,918	12,343	501	112

Source: NDIC Annual Reports

From Table 1, it can be seen that apart from fraudulent conversion of cheques which showed decreases immediately after BVN introduction in 2015 and 2016, and presentation of stolen cheques which also decreased in 2016 and 2017 all other fraud types witnessed increases in 2015. In 2016, there was a drop in cases of fraudulent transfers and suppression of customers' deposits. However in 2017, apart from suppression of customers' deposit which showed a decrease in frequency, all other fraud types witnessed increases. However by 2018, apart from ATM/card related fraud, all other fraud types recorded increase in frequency of cases. Notable from the table is

incidence of web-based (internet banking) which was on an upward trend both before and after the introduction of the BVN. From these findings, BVN appears to have had an initial positive effect in reducing incidences of some fraud cases, notably those which involve physical presence but does not appear to have the same effect in internet banking. This is an indication that the BVN has not been able to deter internet fraudsters.

Table 2 shows the actual amount involved in the various fraud types before and after the introduction of the BVN policy.

**Table 2:** Actual Amount involved in various Fraud types in Nigerian Deposit Money banks (₦'Billions)

Year	ATM/card fraud	Fraudulent transfer/ withdrawal of deposit	Suppression of customers' deposit	Web-based (Internet banking fraud)	Fraudulent conversion of cheques	Presentation of stolen cheques
2012	0.082	1.162	0.282	0.712	0.388	0.011
2013	0.585	1.162	0.482	1.683	0.388	0.120
2014	1.242	0.583	0.312	3.196	0.088	0.054
2015	0.504	0.502	0.218	0.857	0.049	0.054
2016	0.476	0.626	0.224	0.582	0.002	0.014
2017	0.798	0.318	0.116	0.709	0.021	0.011
2018	2.64	1.930	0.960	3.850	1.080	0.324

Source: NDIC Annual Reports

From Table 2, apart from presentation of stolen cheques which remained unchanged, all other fraud types witnessed decreases in actual amount involved in fraud immediately after introduction of BVN in 2015. By 2016, apart from fraudulent transfer/withdrawals and suppression of customers' deposit which witnessed slight increases, there were further decreases in actual amount involved in the other fraud types. In 2017, ATM/card related fraud, internet and fraudulent conversion of stolen cheques witnessed increases in actual amount involved, while other fraud types continued to decline. However by 2018, all fraud types recorded significant increases in

actual amount involved in fraud. This is similar to the findings in frequency if incidence of various fraud types. Although there was an initial reduction in actual amount involved in most of the fraud types, subsequent increases across board in 2018 indicates that fraudsters have upped their game. Web-based (internet banking) fraud showed a similar trend as seen in Table 1 recording an increase of over 440% in actual amount involved.

Table 3 shows the number of reported fraud cases, number of staff involved and total amount involved in fraud in Nigerian banks from 2011 to 2018.

**Table 3: Number of Cases, Staff involvement and Total Amount involved in Fraud in Nigerian Banks**

Year	No. of reported fraud cases in DMBs	No. of staff involved in fraud	Total amount involved in fraud (₦ Millions)
2011	2,352	498	28,400
2012	3,380	531	18,045
2013	3,786	682	21,795
2014	10,612	465	25,608
2015	12,279	425	18,021
2016	16,751	231	8,633
2017	26,182	320	12,012
2018	37,817	899	38,926

Source: NDIC Annual Reports

From Table 3, there was an upward trend in the number of reported fraud cases before and after the introduction of the BVN policy. There was an initial decrease in staff involvement and total amount involved in fraud in the two years (2015 and 2016) following the introduction of the policy. This was then followed by significant increases in 2017 and 2018. The BVN policy

does not appear to have deterred fraudsters from operating in the banking industry.

The results from the Independent t-test analysis are presented in Table 4 and Table 5. Table 4 shows the summary of independent t-test result for actual amount involved in the various fraud types.

**Table 4: Summary of Independent t-test Result for Actual Amount involved in various Fraud Types**

Fraud Type		Levene's Test for Equality of Variances		t-Test for Equality of Means		
		F	Sig.	T	Df	Sig. (2-tailed)
ATM Fraud	Equal variances assumed	2.191	.213	.124	4	.907
	Equal variances not assumed			.124	2.373	.911
Fraudulent Transfer of Deposit	Equal variances assumed	3.552	.133	2.289	4	.084
	Equal variances not assumed			2.289	2.822	.112
Suppression of Customers' Deposit	Equal variances assumed	1.986	.232	2.416	4	.073
	Equal variances not assumed			2.416	3.151	.090
Internet Banking Fraud	Equal variances assumed	4.861	.092	1.578	4	.190
	Equal variances not assumed			1.578	2.048	.252
Fraudulent Conversion of Cheques	Equal variances assumed	11.748	.027	2.616	4	.059
	Equal variances not assumed			2.616	2.075	.116
Presentation of Stolen Cheques	Equal variances assumed	1.545	.282	1.021	4	.365
	Equal variances not assumed			1.021	2.738	.389

Source: SPSS 23 OUTPUT

The results in Table 4 are used to test hypothesis 1 as follows:

**Hypothesis 1:** BVN has no significant impact on the type of fraud in Deposit Money Banks in Nigeria.

Based on the independent t-test result in Table 1 for fraud type, there is no statistically significant difference at 5% level of significance ( $p < 0.05$ ) between the means in the amount involved before introduction of BVN and

after the introduction of BVN. We fail to reject hypothesis 1 since the p-value for the various fraud types are higher than .05. We conclude that the introduction of BVN has not significantly reduced any of the fraud types or forgeries in DMBs in Nigeria.

Table 5 shows the summary of the independent t-test results for number of reported cases, number of staff involved and total amount involved in fraud in DMBs in Nigeria used to test Hypotheses 2, 3 and 4.

**Table 5:** Summary of Independent t-test Result for Number of Reported Cases, Number of Staff involved and Total Amount involved in Fraud in Deposit Money Banks

		Levene's Test for Equality of Variances		t-Test for Equality of Means		
		F	Sig.	T	Df	Sig. (2-tailed)
Number of Reported Fraud Cases in Deposit Money Banks	Equal variances assumed	1.070	.359	-2.643	4	.057
	Equal variances not assumed			-2.643	3.184	.073
Number of Bank Staff involved in Fraud	Equal variances assumed	.137	.730	2.745	4	.052
	Equal variances not assumed			2.745	3.928	.053
Total Amount involved in Fraud	Equal variances assumed	1.245	.646	2.545	4	.064
	Equal variances not assumed			2.545	3.807	.067

Source: SPSS 23 OUTPUT

**Hypothesis 2:** BVN has no significant impact on the number of reported fraud cases in Deposit Money Banks in Nigeria.

For hypothesis 2 at 5% significance level, the independent t-test result for equality of means (equal variances assumed) shows that the means in the number of reported fraud cases in DMBs before and after the introduction of BVN are not statistically significant ( $t(4) = -2.643, p = 0.057$ ). Thus, we fail to reject the hypothesis that BVN has no significant impact on the number of reported fraud cases in Deposit Money Banks in Nigeria. We can then conclude that the BVN policy has not significantly reduced the number of fraud cases in the Nigerian banking industry.

**Hypothesis 3:** BVN has no significant impact on the number of staff involved in fraud in Deposit Money Banks in Nigeria.

In the third hypothesis, the t-test for equality of means (equal variances assumed) shows that  $t(4) = 2.745, p = .052$ . We fail to reject the hypothesis that BVN has no significant impact on the number of staff involved in fraud in Deposit Money Banks since p-value is more than 0.05. We then conclude that the introduction of BVN policy has not significantly reduced the number of bank staff involved in fraud in the Nigerian banking industry.

**Hypothesis 4:** BVN has no significant effect on the total amount involved in fraud in Deposit Money Banks in Nigeria.

For hypothesis 4, the result of the t-test for equality of means (equal variances assumed) shows that  $t(4) = 2.545, p = .064$ . We fail to reject the hypothesis (since p-value is more than .05) that BVN has no significant effect on the total amount involved in fraud in Deposit Money Banks in Nigeria. We conclude therefore that BVN has not significantly reduced the total amount involved in fraud in the Nigerian banking industry.

All four hypotheses tested at 5% level of significance showed that the introduction of the BVN policy has not significantly reduced the incidence of fraud in the Nigerian banking industry. Rather variables in the study mostly showed an upward trend in the incidence of fraud over time. The findings agree with those of Akinadewo and Akinkoye (2019) who reported increase in both number of reported fraud cases and also the value of frauds in the Nigerian banking industry especially with the emergence of e-banking. This also is in agreement with NDIC (2018) which attributed the rising fraud incidences to the increase in sophistication of fraud-related techniques such as hacking, cybercrime as well as increase in information technology-related products and usage, fraudulent withdrawals and unauthorized credit.

The results however disagree with that of Anyim (2018) who reported that the introduction of BVN has helped control fraud in Nigeria.

## V. CONCLUSION / RECOMMENDATIONS

In this study, an attempt was made to examine the impact of identity management reform, specifically, the Bank Verification Number (BVN) policy introduced by the CBN on fraud prevention in the Nigerian banking sector. The findings of this research work have provided empirical evidence that although the introduction of the BVN policy as an identity management initiative has the potential to impact fraud incidence in the Nigerian banking sector, it did not result in fraud prevention within the period under study. We can safely conclude that the BVN policy has not impacted positively on fraud prevention in the Nigerian banking industry.

Based on the findings of the study, the following recommendations have been made towards ensuring that the BVN policy can enhance identity management and thus play a role in the prevention of fraud in the Nigerian banking sector.

1. There is need to improve on the security protocols required, particularly during web-based on-line banking to reduce internet fraud. The CBN in collaboration with other stakeholders can do this by further coming up with initiatives that will strengthen the existing protocols. The additional linking of all bank account numbers to the National Identity Number (NIN) proposed by the Federal Government to enhance identity management in the country should be fast-tracked.

2. Policies which will encourage banks to enhance proper use of biometrics embedded in the BVN should be put in place by the CBN.

3. To reduce staff involvement in fraud, Banks should be compelled to have more permanent staff rather than temporary staff in their employ. CBN as regulator should ensure better corporate governance in the banking sector by being more vigilant in their supervisory and monitoring roles.

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