BVN Regulatory Framework and Banking System Stability in Nigeria

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Abstract

This study examined the effect of BVN Regulatory Framework on banking system Stability in Nigeria. The study adopted a survey research design and Primary data for this study were obtained through questionnaires, which were administered to 213 management staff of the ten (10) selected banks. The data was analyzed using descriptive statistics while spearman rank correlation was used to test the hypotheses. The result indicates that BVN Regulatory Framework have a significant effect on bank capital adequacy, bank liquidity and asset quality in Nigeria. The study concludes that BVN Regulatory Framework have a significant effect on banking system stability in Nigeria. It was recommended that Banks must ensure that Customers Bank Accounts are protected from unauthorized access while implementing BVN regulatory framework so as to avoid running into liquidity problem; In other to maintain a sound capital base, banks must ensure that staff comply strictly to BVN regulatory framework in it operation and Banks should continue to make effective use of BVN regulatory framework in the course of lending and administration so as to maintain high credit portfolio while avoiding cases of non-performing loan.

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Background of the Study

The ineffectual authentication techniques in Nigeria induce fraudsters and scammers to manipulate and claim identities that are different from who and what they are; as well as using various sophisticated techniques to perpetrate financial and identity fraud, which to a very large extent, hinders the performance of commercial banks in Nigerian banking sector (Idolor, 2010).In exercise of the power conferred on the Central Bank of Nigeria (CBN) in section 2(d) and 47(2) of CBN Act (2007) — to promote a sound financial system as well as facilitate the development of efficient and effective systems for the settlement of transactions in Nigerian banking sector. CBN launched a biometric technique known as bank verification number (BVN) in February, 2014. Bank Verification Number (BVN) is a new initiative introduced by the Central Bank of Nigeria (CBN) to check the prevailing money laundering and incidence of fraud in the financial institutions in Nigeria. Studies have showned that BVN has become imperative following the increasing incidence of compromise on conventional security systems. Previous research has reported that the current BVN is generated inside the banking hall making the whole process to be stressful and cumbersome.

Banking stability is crucial for the stability of any financial system in Nigeria. Financial system regulators understand that a loss of confidence in the banking system can have devastating consequences for the entire financial system. For this reason, banking stability has always been a top regulatory and supervisory policy objective for regulators. Mishkin (1997), defines financial stability as "the prevalence of a financial system, which is able to ensure in a lasting way, and without major disruptions, an efficient allocation of savings to investment opportunities." Therefore, any interference or interruption in the financial sector results to financial instability that may affect the economy of the nation. Adeyemi and Taiwo 2013 opine that financial stability should be a state of affair which is conducive to the public's welfare, otherwise promoting financial stability would not be a worthy objective of public policy. (Ozili, 2019) maintain that financial stability is related to the financial condition of financial companies but not of non-financial companies, or, in other words, that financial instability can arise only from financial problems of financial institutions.

Financial instability emerges as a result of turbulence in the financial sector CBN, (2015), in Financial Stability Report noted that the Nigerian economy has continued to witness a slowdown in growth as the persistent decline in the international price of oil led to the decline in government revenue. This affected the assets quality, liquidity and capital adequacy level of banks. Banks 'swing' their intermediary role around the rich companies and individuals paying little or no attention to poor sectors especially agricultural sector, when there is financial problem in those companies, banks should be affected. What is needed for the stability of financial sector and improved economy is coordinated monetary and fiscal policy which can be achieved through the efforts of government and the Apex bank in Nigeria.

Previous research has reported that the current BVN is generated inside the banking hall making the whole process to be stressful and cumbersome. Studies conducted on bank

verification number and bank stability (Nangih and Davies, 2017; Olijo, 2018; Ehi Eric, 2015; Odusina and Fowosire, 2014; Odusina and Fowosire, 2017; Wisdom (2015), Many have identified some determinants of banking stability such as financial development levels, bank efficiency and systemic interconnectedness, among others. But much of these studies have focused on developed economies). However, none of this studies in the literature reviewed examined the effect of effects bank verification number (BVN) regulatory framework on bank stability of the Nigerian while adopting capital adequacy, liquidity and asset quality as parameter to measure banking stability.

Statement of Problem

The problem of the Nigerian banking sector since inception has become the concern of everybody. The Nigerian economy needs a solid, sound and stable banking sector, as it is the health of every economy. Imala (2005), posits that the objectives of the banking system are to ensure stability and facilitate sustained rapid economic development. One could argue that financial instability is caused by the following factors; capital inadequacy, clearly banks has experienced among all, capital inadequacy which caused the 2005 recapitalization and ended up with merger and acquisition of many banks. This act reduced the number of banks and bank branches; caused retrenchment of workers which has its own social consequences. Aminu and Aderinokun (2004), maintained that increasing the capital base of banks in Nigeria would strengthen them and, in the process, deepen activities within the industry.

Another factor that can jeopardize the financial stability of banking system is poor asset quality. There is rising incidence of non performing credits in the system. Banks make annual provision for their non-performing loans and this further deteriorates assets value and a decline in the profit because of the provisions for depreciation. Diawan and Rodrik (1992), for instance, suggested that high non-performing loans increase the uncertainty regarding the capital position of the banks and therefore tend to limit their access to financing.

Finally, many banks have failed due to liquidity problem, fluctuations and pressure in the banking sector. Cases of serious distress and liquidation of banks still rocked the sector reducing the number of banks from 120 in 1992 to only 89 in 2004, yet, the industry was still gripped by the threat and fears of continued distress and instability since there still existed some unhealthy and unsound banks. It is against this background that this research seeks to investigate the effects bank verification number (BVN) regulatory framework on bank stability of the Nigerian while adopting capital adequacy, liquidity and asset quality as parameter to measure banking stability.

Research Question

In the course of this research, the following questions would be answered
1. What is the effect of bank verification number BVN regulatory framework on the Capital adequacy of the Nigerian banking system?
2. What is the effect of bank verification number BVN regulatory framework on the Liquidity of the Nigerian banking system?

3. What is the effect of bank verification number BVN regulatory framework on the Asset quality of the Nigerian banking system?

Research Objectives

The main objective of this research work is   to investigate the effect of bank verification number BVN regulatory framework on the Stability of the Nigerian banking system. To this end, the study attempts to;
1. The effect of bank verification number BVN regulatory framework on the Capital adequacy of the Nigerian banking system.
2. The effect of bank verification number BVN regulatory framework on the Liquidity of the Nigerian banking system.
3. The effect of bank verification number BVN regulatory framework on the Asset quality of the Nigerian banking system.

Research Hypothesis

Ho_1: Bank Verification Number regulatory framework has no significant effect on the Capital adequacy of the Nigerian banking system

Ho_2: Bank Verification Number regulatory framework has no significant effect on the Liquidity of the Nigerian banking system.

Ho_3: Bank Verification Number regulatory framework has no significant effect on the Asset quality of the Nigerian banking system.

Literature Review

The Concept of bank verification regulatory framework

The Bank Verification Number (BVN) is a biometric identification system that gives each bank customer a unique identity across the Nigerian banking industry, forms part of an identity management programme enforced by the CBN which was launched in February 2014, also partly ensuring the effectiveness of Know Your Customer (KYC) principles (CBN, 2014).BVN is the 11digit number you get from the bank after your picture, fingerprints, and signature have been captured electronically and successfully added to the database (Taiwo, 2015).

The purpose of adopting a biometric system into banking sector through BVN scheme is to use biometric information of bank clients as a means of identifying and verifying all individuals that have accounts in any of the Nigerian commercial banks, and subsequently authenticate customers' identity at various banking transactions, thereby ensuring stability in the banking system and on the long run boost economic growth. Though BVN is not 100% perfect, but it is currently more effective than using only password and PIN (Ehi, 2015). However, Nigeria banking industry does not fully migrate from traditional approach to pure biometric approach, but the combination of the two approaches known as two-factor authentication system. Biometric authentication offers a natural and most reliable solution to the problem of identity theft (Akinnwesi, et al, 2016).

The bank verification number has the following features. They are Biometrics and Eleven Digit Numbers. Biometrics is a field of science that uses computer technology to identify

people based on physical or behavioral characteristics, such as fingerprints or voice scans (Taiwo,2015). Biometrics are gaining widespread use in the business world as a means to make the workplace more secure and efficient (Taiwo, 2015). This number is used to indicate which template should be used for comparison in the bank. If the number is stolen or seen by anyone, it can't be useful for that person because it is best used with BVN platform which only a few and selected people in the banks have access to it. In verification (or authentication) mode the biometric system performs a one-to-one comparison of a captured biometric with a specific template stored in a biometric database to verify the individual is the person they claim to be (CBN, 2014).

Concept of Banking Stability
Although bank stability is extensively used, but literature suggests that bank stability is difficult to define and measure based on the various submissions by academics and scholars. Bank stability as a concept is hazy with no acknowledged definition. However, to avoid misconceptions, financial stability and banking stability are used interchangeably in literature. Several attempts have been made to define bank stability. Morgan and Pontines (2014), are of the view that a financial system is stable when it is capable of facilitating positive economic performance by dissipating financial imbalances that arise inherently or as a result of unanticipated and adverse events. Additionally, Jokipii and Monnin (2013), refer to banking sector stability as the probability of the banking sector becoming solvent within the next quarter. They considered a banking sector to be solvent when the market values of the assets owned by all the banks in the country are sufficient to cover the total debt at a particular point in time.

This study therefore dwells on banking stability with a view of making revelations that will affect financial stability. Therefore, the various submissions below present a consistency in supporting the importance of the assessment of some selected CAMELS indicators in banks. They show that the selected indicators bring to light the financial soundness and stability of banking institutions.

Capital Adequacy Proxy – Equity/Total Assets Ratio (ETA)
Capital Adequacy determines how well banks are able to cope with shocks to their bottom-line. Capital adequacy is measured in relation to the relative risk weights apportioned to the diverse category of assets held both on and off balance sheet items (Sahut and Mili, 2011). It is assumed that better-capitalized banks are less exposed to distress. A low Equity to Total Assets Ratio means high leverage, which implies that a bank is less likely to be able to withstand shocks Sufian et al., 2016).In the same vein, the adoption rate of biometric techniques in banking transaction can significantly influence bank capital. The combination of bank cards and biometric techniques in banking ensures flexibility, compactness, and accuracy as well as reduce impersonations which in recent times has been the remote cause of bank failure.

**Asset Quality Proxy – Impaired Loans/Gross Loans Ratio (IL/GL)**
Asset quality indicators reveal symptoms of difficulties with the loan portfolio of banks. Problems with the asset quality of banks are typically assumed to lower profitability.

More so, the solvency of banks is typically at risk when their assets become impaired. Therefore, it is essential that the BVN regulatory framework of banks are monitored in order to spot upsurge in specific risk areas such as an increase in the volume of non-performing loans (Sahut and Mili, 2011). A bank whose borrowers default on their repayments resulting non adherence to authentication system may likely encounter cash flow problems that eventually impact on its liquidity. BVN regulatory framework helps banks and other financial institutions to adhere to the CBN policy on "Know Your Customer" and as well protect customers' identities and other personal information from being compromised by cyber criminals and imposters in attempt to obtain sensitive customers' information to perpetrate financial crimes. Thus, the Impaired Loans (NPL) to Gross Loans ratio is utilized as an indicator of asset quality because it captures the quality of disbursed loans and the effect of credit risk on bank performance. The higher the ratio of impaired loans to gross loans, the lower the quality of the bank's loan portfolio, other things being equal. Thus, an increase in the ratio should lead to an increase in the probability of bank distress (Chiaramonte et al., 2015; Other users of impaired loans to gross loans to ascertain the determinants of efficiency, performance and stability include Kirkpatrick et al. (2008), Sufian. (2011),

Liquidity – Liquid Assets/Deposit & Short Term Funding Ratio (LADSTF)
The importance of liquidity cannot be downplayed in banking as the inability to meet liquidity and funding obligations may lead to failure if external support is not obtained. This covariate measures the ability of banks to continuously use their deposits and short term liquidity position to meet its customer needs and short-term liabilities. The role BVN regulatory framework play in ensuring that banks meet up with their short term financial obligation can never be over emphasized as It is a deposit run-off ratio and it shows the percentage of customer deposits and short-term funding that could be realized when funds are suddenly withdrawn without authentication. When bank fail to adopt strict compliance of BVN regulatory framework in their day to day transaction it leads to illiquidity. However, for banks to remain liquid and sound, BVN regulatory framework must be put in place since higher the value of this ratio, the more liquid a bank is said to be and the less vulnerable to a classic run. Users of the liquid assets to deposit & short term funding ratio include; Salim et al. (2016), Chiaramonte et al. (2015)
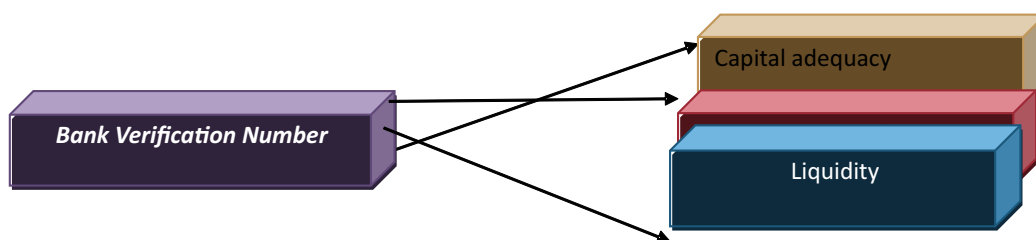
Figure 1: The Conceptual Model of effect of bank verification number BVN regulatory framework on the Stability of the   Nigerian banking system

The proposed model seeks to determine whether bank verification number BVN regulatory framework have a significant effect on capital adequacy, asset quality and liquidity (Stability of the Nigerian banking system).

Theoretical Review

The theoretical review helps in understanding of the current body of knowledge on the research topic. This section introduces three prominent theories: Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Fraud Preventative Theory.

Theory of Reasoned Action (TRA)

Theory of Reasoned Action (TRA) developed by Martin Fishbein and Icek Ajzen in 1975 suggests that an individual's actual behavior is contingent on his/her behavioral intention. It further suggests that a person is influenced by two factors: attitude towards the behavior and subjective norm (Fshbein and Ajzen, 1980). The attitude of a person is the positive or negative feelings about performing a target behavior. On the other hands, subjective norm is an individual's perception on what other people think about a target behavior. Therefore, even if some banks failed to adopt biometric authentication technique in the short run, the probability that they will implement it in the long run is high; especially when they discover its effectiveness in identity and information security, such that identity theft will be reduced and depositors' funds will be properly secured, thus ensuring stability in the banking industry

Theory of Planned Behavior (TPB)

Theory of Planned Behavior (TPB) propounded by IcekAjzen in 1985 holds that behavior is not absolutely voluntary and controlled, but can be deliberate and planned. This theory added a third factor—perceived behavioral control—to the two factors in the theory of reasoned action (Ajzen 1985, 1991). As reviewed by various scholars (Davis 1986, Davis, Bagozzi and Warshaw, 1989), technology acceptance model (TAM) was built upon TRA and TPB. Technology acceptance model holds that the acceptability of any information system is influenced by two main factors: perceived usefulness and perceived ease of use. Perceived usefulness is the degree to which an individual believes that their job performance will be enhanced by using a particular system while perceived ease of use is the degree to which an individual believes that using a particular system will be facile (Davis et al. 1989). Hauser and Shugan (1980), argued that perceived ease of use influences perceived usefulness which in turn leads to bank stability, since the easier the usage of a system, the higher the accomplishment; and the more clumsy a system, the less work the individual will be able to finish. Therefore, adopting TPB such as BVN to ensure ease of use, increases bank asset quality, capital. base and liquidity on the long run.

Fraud Preventative Theory

Intentions are the best predictor of any planned behavior and understanding the antecedents of intentions provides practical insights into the behavior (Ajzen and Fishbein 1980). Therefore, Fraud preventative theory was proposed to curb the behavioral intention of any individual to fraud. According to Goosen, Pampallies, Van

der Merwe and Mdluli (1999), a bank owes a duty to its customers to keep accurate records of all the transactions effected against the account in question. Thus, a bank statement serves a vital role in meeting the bank's accountability to its clients and is a fundamental aspect of modern banking. Goosen et al, (1999) state that the role of a bank account statement, which is of the utmost importance to a bank, is that it serves as an audit trail showing in detail the various transactions effected against the account. Willemse (2004), is of the view that financial investigation is the identification and documentation of the movement of money during and after a crime. It establishes the link between where the money comes from, who gets it, when it was received, and where it was stored or deposited. This can provide proof of unlawful activity such as money laundering, racketeering, corruption, thus ensuring stability in the banking industry.

Empirical Review

Empirical review helps in understanding what other related studies have found and suggested.

Wisdom (2015), examined the impact of BVN on corrupt business practices in Zenith Bank Nigeria Plc. He used a survey research design and the entire staff of Zenith Bank Nigeria Plc. The sample size was determined based on the number of staff who received a copy of the questionnaire. He tested for the reliability of the instrument and used variables such as money laundering and diversion of fund as measures of corrupt business practices. The study also employed the used of regression to analyse the data and the finding indicates that implementation of BVN has a significant impact on the prevention of corrupt business practices in Zenith Bank of Nigeria Plc.   The above study failed to indicate the population of the study and the figure for sample size. The study used the word impact but failed to conduct the analysis called before and after (pre and post). The regression used was unique since the study uses an impact to understudy the variables.

Odusina and Fowosire (2017), used five top-rated posts consolidated banks to examined biometric verification numbers and fraud prevention in Nigerian Deposit Money Banks. Structured questionnaire was prepared to get the opinions of both workers and bank customers, their responses were critically analyzed and the study concluded that the introduction Biometric Verification Number is an effective tool that will reduce the incidence of fraud to the barest minimum in Nigeria, and thus the financial institution and their business partners must continue to seek and develop new solutions to the issue of customer authentication and transaction validation.

The above study used Biometric Verification Number and Fraud prevention in Nigerian Deposit Money Banks and noted that fraud was cited as Nigeria's biggest problem both in the public and private sectors and similar studies can also examine this to re-affirm this statement. The study failed to indicate the population of the study and the sample size of the study. The study failed to use appropriate statistical tools adopted in this study.

Odusina and Fowosire (2014), examined Information Communication Technology, Bank Verification Number and Fraud Prevention in the Banking industry in Nigeria, their responses were critically analyzed. Structured questionnaire was prepared to get the opinions of both workers and bank customers using all the banking industry in Nigeria and the study concluded that the introduction of Bank Verification Number with the aid of Information Communication Technology (ICT), is an effective tool that will reduce the incidence of fraud to the barest minimum in Nigeria, the use of ICT should also be encouraged but with strict security and thus the financial institutions and their business partner must continue to seek and develop new solutions to the issue of customer authentication and transaction validation

The above study used three variables such as Information Communication Technology, Bank Verification Number and Fraud Prevention in the Banking industry in Nigeria but similar studies can only use two variables such as Bank Verification Number and Fraud Prevention. The study failed to indicate the population of the study and the sample size of the study. The study failed to indicate the statistical tool used in the study. In addition, Ehi (2015), critically analyses the centralized biometric identification system tagged Bank Verification Number (BVN). The BVN project was introduced by the Central Bank of Nigeria due to increasing incidents of compromise on conventional security systems (password and PIN) and high demand for greater security for access to sensitive or personal information in the Banking System. This paper seeks to determine whether or not the project can achieve its core objectives? The analysis would be done under the following headings: Identity Theft, Beneficial Owners, Financial Inclusion and Blacklisted Customers.

The above study failed to adopt good research methodology such as indicating the research design, population of the study, a sample size of the study and method of sample size determination, sources of data, method of data collection and method of data analysis as well as model specification. The finding of the study is not unique since it does not use a statistical tool such as regression and correlation as well as chi-square.

Recently, Oluwalami (2018), examined e-banking fraud prevention and detection in the Nigerian banking sector; particularly the current nature, impacts, contributing factors, and prevention and detection mechanisms of e-banking fraud in Nigerian banking institutions. This study adopts mixed research methods with the aid of descriptive and inferential analysis, which comprised exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) for the quantitative data analysis, whilst thematic analysis was used for the qualitative data analysis. The findings show that the factors contributing to the increase in e-banking fraud in Nigeria include ineffective banking operations, internal control issues, lack of customer awareness and bank staff training and education, inadequate infrastructure, presence of sophisticated technological tools in the hands of fraudsters, negligence of banks' customers concerning their e-banking account devices, lack of compliance with the banking rules and regulations, and ineffective legal procedure and law enforcement.

The above study failed to indicate the population of the study and sample size of the study as well as the method of sample size determination. The study also failed to indicate the statistical tool adopted. The study could have to use regression to estimate the cause and effect relationship between the dependent and independent variables.

Again, Olijo (2018), investigated Nigerian newspaper coverage of the Bank Verification Number (BNV) exercise with emphasis on story interpretation/ education, volume, and prominence. The study applied content analysis while two newspapers- The daily Sun and The Leadership were selected for the study which duration was February 1st, 2015 to October 31st, 2015. A self-developed questionnaire was used to collect data for the study. The result showed that 66.7% of the stories on BVN were found to be educative/ interpretative while only 33.3% were found not to be interpretative/ educative, findings also showed that 60.3% of the stories were on half-page, 25% were quarter-page while 14% was a full page. The researcher also found that most (47%) of the stories on BVN were on the inside page, followed by back page (17%), front page (17%) and the center page (15%).

The above study used bank verification number and similar studies can also use the same variable. The problem of the study was that it failed to indicate the population of the study and how the population or sample size was reached. The study failed to indicate good statistical tools such as regression and correlation but use a simple percentage that cannot give detail significant effect of one variable on the other variable.

Finally, Nangih and Davies (2017), examined how the use of biometrics and BVN technology can be used to check the menace of ghost worker syndrome and payroll fraud in the local government system in Rivers State. Primary data were collected via questionnaires. Chi-Squares and Kruskal Wallis statistical tools were employed to test hypotheses. Descriptive statistics were also used to show the diagrammatically the reactions of the respondents. It was concluded that the use of biometrics and BVN can help greatly in the eradication of payroll fraud and ghost workers in the local government payroll system. The above study was conducted in River State and a similar study can be conducted in Abuja using deposit money banks in Abuja. The study failed to indicate the population of the study and the sample size of the study as well as sample size determination. The study used Chi-Squares and Kruskal Wallis which is inappropriate since then it cannot explain the cause and effect relationship between the dependent and independent variables

Research Gap
The research gap provides a clear distinction between the reviewed literature and the gap this study intends to fill it. In view of the above empirical review, it is clear that lot of research has been conducted to examine BVN regulatory framework in Nigeria (Nangih and Davies, 2017; Olijo, 2018; Ehi (2015); Odusina and Fowosire, 2014; Odusina and Fowosire, 2017; Wisdom (2015), however nothing have been done on the effect of bank verification number BVN regulatory framework on the Stability of the Nigerian banking

system adopting Capital adequacy, asset quality and bank liquidity as proxy forestimating banking system stability with a methodology different from existing literature.

Summary of Literature Review

Summary of review summarizes this chapter explaining the anchor theory. The literature was broadly grouped into three namely, the conceptual, theoretical and the empirical. The first involve an attempt to discuss the nature of BVN regulatory framework and the concept and determinant of bank stability. The second segment involves the identification of theories. This study enumerated various theories ranging from Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Fraud Preventative Theory as anchor theories. This is because it gives a clear basis and fundamental relation of BNV regulatory framework and banking system stability. Also, justified this study in the sense that, even if some banks failed to adopt biometric authentication technique in the short run, the probability that they will implement it in the long run is high; especially when they discover its effectiveness in identity and information security, such that identity theft will be reduced and depositors' funds will be properly secured. The empirical involves studies and findings of various scholars.

Methodology

A cross-sectional correlation research design was used for this study. The population of the study constitutes of all bank managers at the 24 deposit money banks in Nigeria in 2021. A non-probability judgment sampling method in form of convenient sampling techniques is used in the study. The sampling frame comprised deposit money banks in Jos North, Plateau State. From this sampling frame, a non-probability judgment sample of (10) ten selected banks; First Bank, Guarantee Trust Bank, Access Bank, Zenith Bank, FCMB, ECO Bank, Fidelity Bank, Unity Bank, Union Bank and United Bank of Africa located in Plateau State, was selected. The sample size of 213 bank managers was selected for this study. The researcher derived the sample size statistically by using NEA, (1960). The sample size of 213 bank managers was split evenly between the ten (10) selected deposit money banks, thereby allowing a sample size of 8 managers per bank. The rationale for issue of 213 questionnaires is because questionnaires will be filled by the target population (bank managers) who are presumed to be very few in each bank. The study adopted the use of primary data from the ten (10) selected deposit money banks in plateau state. A structured self-administered questionnaire was utilised to gather the required data for this study. The managers were requested to complete a questionnaire consisting of five (5) sections. The first section (Section A) was designed to gather demographical data. The second section (Section B) was designed to gather data on Bank Verification Number. The third section (Section C) gathered data on management efficiency. The fourth section (D) was designed to gather data on asset quality. The last section (E) gathered data on liquidity. All scaled responses were measured on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The study adopts the use of spearman rank correlation coefficient to analyze the relationship between the dependent and independent variables. The spearman correlation coefficient is most

relevant since the data will be collected at the ordinal levels All these were carried out with the aid of Statistical Package for Social Sciences version 25 (SPSS v. 25.0) and results interpreted. This is because the coefficients best explain the instantaneous effect that a change in a particular covariate has on the predicted probability. More so, the interpretation of the coefficient provides additional information on the degree of impact the independent variable has on each explanatory variables.

Data Presentation and Analysis
Presentation of Data
Data obtained in each section will be presented using a frequency distribution table, percentage and spearman rank correlation. This will be the adoptable tools to be used for our analysis.

Table 1: Number of questionnaires administered

Details	Total no. of questionnaires	No. of questionnaires returned	Percentage of questionnaires returned	No. of unreturned questionnaires	Percentage of unreturned questionnaires
Total	213	213	100%		

Source: Field survey (2021).

The table 1 shows that out of the total number of 213 questionnaires that were administered and all 213 were filled and returned representing 100% of this total.

Data Analysis
Table 2: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Capital_Adequacy	.289	213	.000	.757	213	.000
Liquidity	.312	213	.000	. .771	213	.000
Asset_Quality	.321	194	.000	.769	194	.000
BVN_Regulatory Framework	.273	213	.000	.778	213	.000

a. Lilliefors Significance Correction

Applying statistical test (Kolmogorov-Smirnov[a] and Shapiro-Wilk) on each variable and test for hypothesis, table 8 revealed that capital adequacy, liquidity, asset quality and BVN Regulatory Framework are not normally distributed at significance level of .000. Therefore, this study applied non-parametric test to analyze hypothesis.

Test for hypothesis one: BVN Regulatory Framework has no significant effect on capital adequacy of the Nigerian banking system**.**

Table 3: Correlations

			BVN Regulatory Framework	Capital Adequacy
Spearman's rho	BVN Regulatory Framework	Correlation Coefficient	1.000	.930**
		Sig. (2-tailed)	.	.000
		N	213	213
	Capital Adequacy	Correlation Coefficient	.930**	1.000
		Sig. (2-tailed)	.000	.
		N	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

The table 9 above shows the correlation coefficients between BVN Regulatory Framework and Capital Adequacy are 1.000 and .930. The correlation between BVN Regulatory Framework and Capital Adequacy is 0.000. This indicate that BVN Regulatory Framework and Capital Adequacy of the Nigerian banking system have a positive relationship. The relationship is significant at 5% level of significance since p-value $0.000<0.05$.

Test for Hypothesis two: BVN Regulatory Framework has no significant effect on liquidity of the Nigerian banking system

Table 4: Correlations

			BVN Regulatory Framework	Liquidity
Spearman's rho	BVN Regulatory Framework	Correlation Coefficient	1.000	.909**
		Sig. (2-tailed)	.	.000
		N	213	213
	Liquidity	Correlation Coefficient	.909**	1.000
		Sig. (2-tailed)	.000	.
		N	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

The table 10 above shows the correlation coefficients between BVN Regulatory Framework and liquidity are 1.000 and .909. The correlation between BVN Regulatory Framework and liquidity is 0.000. This indicates that BVN Regulatory Framework and liquidity of the Nigerian banking system have a positive relationship. The relationship is significant at 5% level of significance since p-value $0.000<0.05$.

Test for hypothesis three: BVN Regulatory Framework has no significant effect on asset quality of the Nigerian banking system

Table 5: Correlations

			BVN Regulatory Framework	Asset Quality
Spearman's rho	BVN Regulatory Framework	Correlation Coefficient	1.000	.712**
		Sig. (2-tailed)	.	.000
		N	213	194
	Asset Quality	Correlation Coefficient	.712**	1.000
		Sig. (2-tailed)	.000	.
		N	194	194

**. Correlation is significant at the 0.01 level (2-tailed).

The table 11 above shows the correlation coefficients between BVN Regulatory Framework and asset quality are 1.000 and .712. The correlation between BVN Regulatory Framework and asset quality is 0.000. This indicate that BVN Regulatory Framework and asset quality of the Nigerian banking system have a positive relationship. The relationship is significant at 5% level of significance since p-value $0.000 < 0.05$.

Discussion of Findings

Again, the introduction of BVN Regulatory Framework in Nigeria can be seen as a step in the right direction. It is expected that its impact on will be felt in modernization of Nigeria payment system, reduction in the cost of banking services as well as reduction in high security and safety risks. This should also include curbing banking related corruptions and fostering transparency. It is also assumed that the introduction of BVN Regulatory Framework in Nigeria will help in banking system Stability. This study assessed the effect of BVN Regulatory Framework on banking system Stability in Nigeria. The estimated spearman rank correlation used to analyze the effect of BVN Regulatory Framework on banking system Stability in Nigeria. This study found on an individual basis, that effect of BVN Regulatory Framework on bank capital adequacy was statistically significant and positive given the probability value of 0.000. Hence leading to rejection of the null hypothesis (H_0) which assumes that BVN Regulatory Framework has no significance effect on bank capital adequacy and accepting the alternative hypothesis (H_1) which assumes that BVN Regulatory Framework has significance effect on bank capital adequacy.

Similarly, this research also found on an individual basis that BVN Regulatory Framework had a positive and significant effect on bank liquidity given the probability value of 0.000. Hence leading to rejection of the null hypothesis (H_0) which assumes that BVN Regulatory Framework has no significance effect on Bank liquidity given the

probability and accepting the alternative hypothesis (H_1) which assumes that BVN Regulatory Framework has significance effect on Bank liquidity. Finally, the study found that the effect of BVN Regulatory Framework on Bank asset quality was positive and statistically significant given the probability value of 0.000. Hence rejecting the null hypothesis (H_0) which assumes that BVN Regulatory Framework has significant effect on Bank asset quality and accepting the alternative hypothesis (H_1) which assumes that BVN Regulatory Framework has significance effect on Bank asset quality.

Summary, Conclusion and Recommendations
Summary of Findings
The chapter deals with the presentation and analysis of the data collected. To test the hypotheses of this study, spearman ranking correlation model was used. This is deemed as suitable due to the nature of the variables which are continuous rather than dichotomous categorical variables. Finally, the findings and policy implication of the result are discussed. The tables that follows contains the data extracted from the response of participants which was used in running spearman ranking correlation and obtaining the results of the study. This study found that effect of BVN Regulatory Framework on bank capital adequacy, bank liquidity and asset quality was statistically significant and positive.

Conclusion
This study established the effect of BVN Regulatory Framework on banking system Stability in Nigeria. Conclusively, BVN Regulatory Framework, needless to say, has a several benefits, which outweighs the challenges experienced by customers of banks so far because the CBN and the banks decided to embark on this project as a proactive strategy to enhance the integrity of banking service delivery by building are liable customer identification system which would help in complementing the other banking system stability projects being embarked upon by the central bank of Nigeria. The study therefore, concludes based on the findings of this study that banks should not underestimate the significant and positive effect BVN Regulatory Framework has on bank system stability in Nigeria. Understanding the effect on indicators of banking system stability is likely to make a valuable contribution in their financial performance, strategic plans and business models.

Recommendations
Based on the experience, analysis and interpretation of the data collected from the survey as presented in the proceeding chapter, the following recommendations were made;
1. In other to maintain a sound capital base, banks must ensure that staff comply strictly to BVN regulatory framework in it operation.
2. Banks must ensure that Customers Bank Accounts are protected from unauthorized access while implementing BVN regulatory framework so as to avoid running into liquidity problem.
3. Banks should continue to make effective use of BVN regulatory framework in the course of lending and administration so as to maintain high credit portfolio while avoiding cases of non-performing loan.

4. As a matter of urgency CBN should be greatly involved in the promotion of technologies to keep improving BVN capacities.

Suggestion for Further Research

This study thus suggested that further study be conducted in similar areas to be able to identify what other major variables associated with Bank stability in Nigeria. In addition, the investigation, utilized responses of 10 DMBs in which we accept are the systematical important banks(SIB). The study adopted three prominent theories: Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB) and Fraud Preventative Theory. Further study should be conducted reviewing more theories of BVN regulatory frame work as it relates to bank stability in Nigeria.

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