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REGULATORY COMPLIANCE MEASURES AND FINANCIAL STABILITY OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

This study investigates the relationship between regulatory compliance measures and financial stability of DMBs in Nigeria during the period 2011 to 2021. The dimensions of regulatory compliance measures as the independent variable aremonetary policy regulation and credit allocation regulation, while financial stability as the dependent variable was measured with capital adequacy. Ex-post facto design was applied in the study to gather existing data on the variables. The Central Bank Statistical Bulletin formed the source of secondary data. E-view 10 software version was used for statistical analyses wherein descriptive, univariate, bivariate and multivariate results were produced. The results disclosed the following: positive and significant relationship between monetary policy regulation and capital adequacy, and positive and significant relationship between credit allocation regulation, and capital adequacy. From the findings, the research concluded as follows: that monetary policy regulation exhibited the potential to change capital adequacy amongst others. Thus, the study recommended that shareholders of quoted DMBs in Nigeria should understand the complex nature of banks' capital adequacy in relation to financial regulations.

Keywords:

Monetary policy regulation. Credit allocation regulation. Capital adequacy.

Introduction

Deposit Money banks' have traditionally played an important role in financing various sectors of the economy especially in developing nations such as Nigeria. The Nigerian Banking Act of 1969 provides a clear definition of deposit money banks. Section 61 defines deposit money banks as any financial institution that carry out the business of receiving deposit on the current account, savings account or other similar accounts, paying or collecting cheques drawn by or paid in by customers, provision of finance or such other business as the governor may, by order published in the gazette, designate as banking business. (CBN, 2007). In general term, a deposit money bank is the institution where people or businesses keep their money. It offers other such services like lending, exchanging or transferring money. Banking, on the other hand, entails the business of holding deposits and lending money in order to earn a profit. Also, deposit money bank (DMB) is a privately owned bank that provides a wide range of financial services both to the general public and to firm. DMBs function in various dimensions in an economy which include: acceptance of deposit from customers for safekeeping, lending to customers, provision of loans and overdraft, discounting bill of exchange (Musa &Oologumek, 2020). However, a bank's major operation is the acceptance of deposits and granting of loans to different kinds of customers.

Financial system regulators understand that a loss of confidence in the banking system can have devastating consequences on the entire financial system. For this reason, financial stability has always been a top regulatory and supervisory policy objective for regulators. Nigeria, whose banking sector is ranked 'third' in Africa after South Africa and Egypt has experienced many episodes of financial and economic recession which has brought the fragility of Nigerian banking and finance to the front burner of discourse by academics and policy makers (Ozili, 2019). Stability of the financial system in an economy is an important economic catalyst due to its function in facilitating exchange of value (Swamy, 2014). The financial sector, facilitate the flow of funds from surplus households to deficit households in a more efficient manner, thereby promoting economic growth and development (Ratnovski, 2013). Consequently, Deposit money banks need to proactively study the operating environment and develop relevant strategies that would reduce the severity of their exposure to situations that are likely to affect their financial stability. Financial stability describes the condition where the financial intermediation process functions smoothly thereby building confidence among users (Merga, 2013). It refers to the smooth operation of the system of financial intermediation processes between households, firms and the government through a range of financial institutions supported by a myriad of financial infrastructure (Khan, 2011). Financial stability may be hampered by both internal processes and strong shocks leading to the emergence of weak spots. Such shocks may arise from the external environment, domestic macroeconomic developments, main debtors and creditors of financial institutions, economic policies or changes in the institutional environment (Azam &Siddiqoui, 2012). Any interaction between weak spots and shocks can result in the collapse of major financial institutions and disruption of the functions of the financial system as regards financial intermediation processes. In the extreme case, it may even lead to a financial crisis with adverse implications for the economy (Ozili, 2019). The Financial stability of deposit money banks can be affected by internal and external factors. These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks (Olaoye, & Olarewaju, 2015).

Huang and Ratnovski (2011) believed that an adequate regulatory mechanism beyond the traditional reserve requirements and capital adequacy ratio should be enforced to address and mitigate the systemic component of funding liquidity risk among deposit money banks. The reserve ratios made by each bank may not be adequate for the liquidity exposure they face as they are subjectively determined. Allam (2013) contends further that some deposit money banks set their liquidity levels through mimicking behaviour in liquidity choices which may also arise from learning motives. Financial stability of deposit money banks has been viewed by Brunnermeier, *et al.*, (2009) as the absence of banking crises when all banks are individually stable. In terms of interdependence, Segoviano and Goodhart (2009) described financial stability as the stability of banks linked to each other either directly through the interbank deposits market and participation in syndicated loans, or through lending to common sectors and proprietary trades. In the opinion of Ozii and Thankom (2018), financial stability is viewed as the absence of abnormal disruption in credit supply, payment systems and banking services.

However, these studies document conflicting and in-conclusive findings regarding the impact of regulatory compliance measures on the financial stability of banks in Nigeria. Chiaramonte and Casu (2017) and Ahmed, *et al.*, (2015) argue that the implementation of regulatory requirements with stricter capital requirements hampers financial stability as banks invest less to meet minimum capital requirements. This means that when a bank puts more capital aside and does not invest it in the hope of meeting and exceeding the minimum capital target and capital buffer requirements, the subsequent impact will be felt on the bank's earnings. This results in a lower return on capital and limits the availability of funds that can be loaned to businesses. Bilal and Salim (2016) reported that the initial adoption of regulatory measures by banks in advanced economies during the five-year implementation period adversely affected bank performance, which in turn affected the country's economy and its gross domestic product (GDP). They argue that strict requirements on a bank's capital base reduces the amount a bank can invest, leading to lower returns and declining profitability. Also, Banerjee and Mio (2018) conducted a survey of banks in the Nigeria and concluded that the new liquidity requirements adversely affected the profitability of Nigerian banks, as the tighter liquidity requirements forced them to shift to low-interest liquid assets with lower returns. On the contrary, Santos and Elliott (2012) found, using the case of banks in the United States, Europe, and Japan, that the implementation of regulatory compliance regime did not significantly reduce lending rates or affect the risk behaviour of banks in the regions. They further added that despite the strict requirements, banks' financial results were not negatively affected, thanks to banks' ability to adapt to regulatory changes within their risk capacity. Also, Mashamba (2018) conducted similar research on emerging markets and found that the stricter liquidity standards were less effective in emerging economies because banks in emerging economies already had elevated liquid asset holdings or large liquidity buffers before regulation came into effect. Hence, liquidity requirements adoption in emerging markets did not have adverse effects on banks' profitability but rather increased their financial performance. Similarly, Parcon-Santos and Bernabe (2012) added that the new capital adequacy requirements enhanced the financial stability and profitability of commercial banks in Bangladesh.

This study investigates the relationship between regulatory compliance measures and financial stability of deposit money banks in Nigeria. The novelty of the study makes significant contributions to the literature in several ways. The study, therefore, provide some innovative perspective on the relationships between regulatory compliance measures and financial stability of deposit money banks in Nigeria.

Literature Review

Theoretical Review

The Dialectic Regulatory Theory (DRT): This theory was established to elucidate the correlation between the financial institutions and their regulators, centered on the work of Kane (1981). The regulators try to sanction limitations on the financial system (geographic, interest rate and product risk control). Organizations with wealth maximization driven intention try to evade regulatory constrains because they perceive such constrains as structural arbitrage. This procedure is toxic (contagion) and creates benefit cost analysis for officers of government for sensitive modification in functioning codes of supervision and control. Generally, the theory examines the effort of both financial institutions and regulators to achieve their aims. In the process some modification results in supervision and control variation to achieve monetary or financial stability (Gummi, 2018).

Conceptual Review

Regulatory compliance

Concept of banking regulation is also viewed as an assemblage of particular tenets of concurred conduct either forced by some legislatures' unequivocal agreement within the industry, that point to the confinement, the exercises and tasks of financial institutions (Olorushola, 2003). Therefore, financial regulation stands in position to ensure that rules are followed, behavior is sanitized and operations among stakeholders are guided toward effective and efficient financial system. Financial system is a composition of various institutions, markets, instruments and operators that interact within an economy to provide financial services (Uffot, 2003). The broad meaning of the concept of banking regulation and supervision is control over the creation, activity, and liquidation of banks. Such control is extremely different, carried out by specialized banking supervisory specialists. Supervision over the bank's operational exercises aims to protect the interests of depositors and to guarantee effective working of the banking industry. This supervision is the most imperative and fundamental part of the functions of banking supervisory authorities, which is done for the sake of a sound banking framework (Austin, 2006). The banking sector has been singled out for the special protection because of the vital roles that banks played in preventing bank failures and ensuring that they carry out their activities in they do their work in accordance with more extensive financial and social goals of the nation. Banks regulation and supervision are generally known to processed with the following objectives among others: To reduce the level of risk bank creditors are exposed to, which is otherwise referred to as prudentialism. Systemic risk reduction which is the reduction in the level of risk of disruption resulting from adverse trading conditions for banks causing multiple or major bank failures. Avoidance of misuse of banks; protection of banks confidentiality; monetary and financial stability (Chude, *et al.,* 2014). Idam, (2005) identified two types of regulation in the banking sector as internal and external. Internal regulation concerns situation whereby control of the banks are exercised from the head office on their various branches across the nation; while external is the control established by the government through various regulatory bodies like: Central Bank of Nigeria (CBN), Nigerian Deposit Insurance Commission (NDIC), Security and Exchange Commission (SEC), Nigerian Stock Exchange (NSE), Federal Ministry of Finance (FMF), Chartered Institute of Bankers of Nigeria (CIBN), the Institute of Chartered Accountants of Nigeria (ICAN), Bankers Committee, Insurance Company and Clearing House Committee. Regulation in the banking sector in Nigeria had resulted in two implications; positive and negative.

Dimensions of regulatory compliance

Regulatory compliance has variously been explained, therefore to examine the meaning and role of the individual dimensions as they relate to this research becomes imperative. The dimensions of Regulatory compliance as considered in this research include the following.

Monetary policy regulation

Monetary policy is the process of overseeing a nation's money supply to complete specific objectives such as restraining inflation, or achieving full employment. Monetary policy can involve setting interest rates, margin requirements, capitalization standards for banks, and acting as the lender of last resort. The primary tool of monetary policy is open market operations. This entails overseeing the quantity of money in circulation through the buying and selling of a variety of credit instruments, foreign currencies, or commodities. Among such credit instruments, one finds public bonds. Monetary policies play significant role in the realization of various macro-economic policies or objectives of government of any nation. In developing countries like Nigeria, its potency on the influence of direction of cost and volume of credit within the economy is not in doubt. It essentially influences the behaviour of the monetary sector. Nzotta (2014) noted that changes in the behaviour of the monetary sector influence various monetary variables. The author further observed that monetary policy in force at any point in time, affects the level of money supply either by way of expansion or contraction. Monetary policy, according to Uzoaga cited in Okereke, *et al*., (2009) refers to the management of the expansion and contraction of the volume of money in circulation for the specific purpose of achieving certain desired national objectives. It influences the cost and availability of credit or alternatively at controlling the supply of money with a view to counteract undesirable trend in the economy.

Other market-based instruments introduced in addition to OMO were: reserve requirement which specifies the proportion of bank's total deposit liabilities that should be kept with the central bank, and discount window operations under which the Central Bank performs the role of lender of last resort to deposit money banks, as well as moral suasion adopted as a means of establishing two-way communication with the banks thereby creating a better environment for the effectiveness of monetary policy (Nnanna, 2001). However, despite the appreciable progress made since the introduction of various financial sector reforms in the 1980s, monetary policy management in Nigeria is still faced with severe challenges as the expected stabilization and growth benefits may sometimes fail to materialize (Onyeiwu, 2012).

Credit allocation regulation

Many economists have stressed that banks as a major component of financial system, provide linkages for the different sectors in order to ensure the attainment of the macroeconomic objective of government. A bank is a financial intermediary that accepts deposit from customers and channels the amount mobilized to borrowers in the form of loans and advances. Bank credits represent the amount of loan and advances to individuals and organizations from banking system. Production sector as used is a generic name for organizations in agriculture, manufacturing, mining and quarrying, and real estate and construction. General commerce covers companies involved in bill discounting, domestic trade, import and export. Service sector comprises of public utilities, transport and communications and credit financial institutions while others consist of government, personal and professional and miscellaneous. According to Schumpeter (2001), the role of financial intermediation is central to economic development. The financial intermediation role of the

banking system affects the allocation of savings, thereby improving productivity, technical change and the rate of economic growth hence it plays a pivotal role in economic development (Sanusi, 2011). The banker stands between those who wish to form new combinations and the possessors of productive means. It is essentially a phenomenon of development, though only when no central authority directs the social process. It makes possible the carrying out of new combinations, authorizes people, in the name of the society as it were, to form them. It is the ephor of the exchange economy Schumpeter (2004) as cited in Sinha (2001). Financial intermediation theory first formalized by Goldsmith (2009), McKinnon (2003) and Shaw (2003), describes financial market as playing allocational function.

Financial stability

An operational definition of the term financial stability has gained prominence in international policy discussions and has become an actively discussed academic topic since the mid-1990s. However, a precise definition still eludes the work done so far. As Issing (2003) and Padoa-Schioppa (2003) note, a number of authors find it easier to define financial instability, instead of its positive counterpart. Following Issing, two types of positive definitions are emerging from the literature. Some sources take a systemic view and emphasize the resilience of the financial system as a key component of stability. In this view, an individual bank failure is not necessarily proof of financial instability. Such an event can even contribute to more efficient financial intermediation, and thus help maintain or enhance stability. Following Mishkin (2007), one can say that financial stability stems from the prevalence of a financial system that is able to provide, on a durable basis and without major disruptions, an efficient allocation of savings to investment opportunities Padoa-Schioppa (2003) and Haldane, *et al.,* (2001). The second approach to defining financial stability is to liken it to situations without banking crises and with asset-price stability. The advantage of this approach is that more directly observable variables can be used (for instance, interest rate smoothness), but on the whole, it is conceptually less appealing, because the absence of banking crises still offers no insights in the relative strength of the financial system. The definition offered by Crockett (2007) in many ways bridges the two strands. As Crockett states (2007) stability requires (i) that the key institutions in the financial system are stable, in that there is a high degree of confidence that they can continue to meet their contractual obligations without interruption or outside assistance; and (ii) that the key markets are stable, in that participants can confidently transact in them at prices that reflect fundamental forces and that do not vary substantially over short periods when there have been no changes in fundamentals. However, he acknowledges the operational limitations of such a broad definition: one needs to decide which are the "key institutions" whose stability is important, and what degree of price stability in financial markets is required.

Measure of financial stability

Capital adequacy: Capital adequacy ratio is one of the important concepts in banking which measures the amount of a bank's capital in relation to the amount of its risk weighted credit exposures. The Basel Capital Accord is an international standard for the calculation of capital adequacy ratios. The Accord recommends minimum capital adequacy ratios that banks should meet. Applying minimum capital adequacy ratios serves to promote the stability and efficiency of the financial system by reducing the likelihood of banks becoming insolvent. When a bank becomes insolvent, this may lead to loss of confidence in the financial system, causing financial problems for other banks and perhaps threatening the smooth functioning of

financial markets. In the aftermath of the financial crisis, there have been efforts by regulatory authorities to make banks stronger.

Empirical review

Ogunyomi (2011) in a study "the impact of monetary policy on Commercial Banks loans and Advances in Nigeria: an empirical investigation (1975 – 2009); observed that out of the five explanatory variables, it was only broad money supply (M2) that was positively related to the volume of commercial bank loans and advance as well as statistically significant.

Ashamu, *et al.,* (2011) examined the effect of monetary policy instruments on Bank credit in Nigeria between 1990 to 2010; with the specific objective to determine the influence of money supply, interest rate, minimum rediscount rate on bank credit. Time series analysis was conducted to observe the movement of these policy instruments as against the movement in bank loans and advances. A multiple regression test was employed and the result revealed that only interest rate and exchange rate proved to have significant impact on bank credit. The signs of money supply conform to economic theories but not statistically significant. They were of the view that monetary authorities should rely more on the use of money supply, interest rate and exchange rate having all passed a priori test, while minimum rediscount rate should be reexamined.

Benjamin and Kamalavali (2006) had current ratio, quick ratio, inventory turnover ratio, working capital turnover ratio, debtor's turnover ratio, ratio of current asset to total asset, ratio of current asset to operating income, comprehensive liquidity index, net liquid balance independent variables while the dependent variable was return on investment (ROI) in an investigation that revealed a negative association between ROI and current ratio, cash turnover ratio, current asset to operating income and leverage. There was a positive association between ROI and quick ratio, debtor's turnover ratio, current asset to total asset and growth rate.

Nworji and David (2011) examined bank deposit management and commercial banks' profitability in Nigeria. Findings of this study indicate that there is significant relationship between bank deposit management and profitability. That means profitability in commercial banks is significantly influenced by deposit volume and vice versa.

Saleem and Rehman (2011) sought to reveal the relationship between bank deposit volume and profitability. The main results of the study demonstrate that each ratio (variable) has a significant effect on the financial positions of enterprises with differing amounts and that along with the deposit or liquidity ratios in the first place. Profitability ratios also play an important role in the financial positions of enterprises.

Mitku, (2018) examined the effect of cash required reserve on commercial bank lending in Ethiopia using panel data of eight purposively chosen commercial banks over eleven years (2005 to 2015). The investigation tested the relationship between commercial bank lending and cash required reserve. Eleven years of financial data of eight purposively chosen commercial banks were used for analysis purposes. Ordinary least square model was applied to test the impact of the predictor variable on commercial bank lending. The result revealed that there is no significant relationship between commercial bank lending and cash required reserve in Ethiopian commercial.

Shan and Jianhong (2006) examined the impact of financial development on economic growth in China by using a Vector Autoregression (VAR) approach. They found that financial development comes as the second force (after the contribution from labor input) in leading economic growth in China. In addition, they found a two-way causality between financial development and economic growth.

Muhsin and Eric (2000) found unidirectional causality running from growth to financial sector development.

Nwosa and Saibu (2012), investigating the channels of monetary transmission across the different sectors of the Nigerian economy, found that the channels through which monetary policies were transmitted to various sectors were different. On the one hand, interest rate channel was liable for the transmission of monetary policy impulse to the agriculture and manufacturing sectors whereas the exchange rate channel transmits monetary policy impulse directly to the building and construction, mining, service and wholesale and service sectors. In a similar study, using auto regressive distributed lag modelling technique,

Olusanya,*et.al.* (2012) investigated the determinants of commercial banks' lending behavior in Nigeria using a co-integration analysis. The study adopted the Error Correction Model technique using secondary data between 1975 and 2010. The study found that loans and advances have positive relationship with volume of deposit, exchange rate, gross domestic product and cash reserve ratio, but a negative relationship with lending rate and investment portfolio. However, there was a long-run relationship between loans and advances and all the explanatory variables in the study which signaled that commercial banks have huge impact on their lending behavior. The study concluded that banks should try to create more deposit to enhance their lending behavior.Using the Ordinary Least Square (OLS) multiple regression method, Hassan (2016) examined the effect of interest rate on commercial bank deposits in Nigeria. The study made use of secondary data between 2000 and 2013 and established an inverse relationship between the interest rates and the commercial bank deposits. This suggests that interest rates is not a driver of customers' deposits in Nigeria, while the GDP has a positive relationship with commercial bank deposits.

From the foregoing, the following research hypotheses were formulated in the Null form to address the research objectives for this study:

$H0_1$: there is no significant relationship between monetary policy regulation and capital adequacy of quoted DMBs in Nigeria;

$H0_2$: there is no significant relationship between credit allocation regulation and capital adequacy of quoted DMBs in Nigeria;

Methodology

Research Design: The Ex-post facto research design was employed in this study. This type of research design is suitable where the subject(s) of study is already in existence. The use of this type of research design was justified since it is a realistic approach to behavioural science research which is devoid of experimentation and manipulation of the variables.

Population of the Study: A population of study refers to the entire members of the target group with similar attributes from which the sample of interest is drawn. Therefore, the target population for this study comprised of all quoted DMBs that currently trade shares in the Nigerian Stock Exchange (NSE). However, available information from the Nigerian Stock Exchange (NSE) office showed that the following thirty-three (33) DMBs are currently quoted and legally permitted by the Securities and Exchange Commission to issue securities in Nigeria. The banks are:

(1) Access Bank Plc
(2) Fidelity Bank
(3) First City Monument Bank Plc
(4) Fidelity Bank Plc
(5) First Bank Nigeria Limited
(6) Union Bank of Nigeria plc
(7) Guaranty Trust Bank Plc
(8) United Bank for Africa Plc
(9) Zenith Bank Plc
10) Sterling Bank Plc
(11) Citibank Nigeria LTD
(12) ECOBANK Nigeria Plc
(13) Unity Bank Plc
(14) Wema Bank Plc
(15) Heritage Bank Ltd
(16) Keystone Bank Ltd
(17) Polaris Bank Plc
(18) Stanbic IBTC Plc
(19) Standard Chartered bank Ltd
(20) Titan Trust bank Ltd
(21) Globus Bank Ltd
(22) Suntrust Bank Nigeria Ltd
(23) Providus Bank Plc
(24) Parallex Bank Ltd
(25) Jaiz Bank Plc
(26) Premium Bank Ltd
(27) Taj Bank Ltd
(28) Lotus Bank Ltd
(29) Coronation Merchant Bank
(30) FBN Merchant Bank

(31) FSDH Merchant Bank

(32) Nova Merchant Bank

(33) Rand Merchant Bank

Sampling Method: The census sampling approach was employed on the sampling frame of twenty-four (24) quoted DMBs in Nigeria as the remaining nine banks do not possess published financial statements. The suitability of this method for this research is to give every subject in this finite population an equal chance of appearing in the selection.

Sampling Procedure: Using the census sampling method, DMBs that were selected under this method are those that have fulfilled the cumulative pre-tax profits from continuing operations of at least 2 years and possesses accessible financial records.

Data Collection Method: The secondary source of data collection method was utilized for this research. Available source of secondary data was the published annual financial statements and CBN statistical bulletin of the twenty-four quoted DMBs in Nigeria that are under investigation for various years including 2011 to 2021. The generated secondary data were treated as polled or panel data.

Operational Measures of Variables

This research investigated two variables, namely; predictor variable, and criterion variable.

Predictor variable

Regulatory compliance (RCM) was used as the predictor variable. The two dimensions that were applied in this study are: monetary policy regulation (MPR) and credit allocation regulation (CAR).

Monetary policy regulation **(**MPR**):** the natural logarithm for volume of money supply by banks as reported pursuant to published CBN financial statistical bulletin for the years under investigation was used as the econometric measure.

Credit allocation regulation (CAR)**:** the natural logarithm for banks subsidies in Agric loans as published in the annual financial statistical bulletin of quoted DMBs in Nigeria between 2011 to 2021 was used as the econometric measure.

Criterion variable

Financial stability (FLS) was used as the criterion variable. The three measures of financial stability that were applied in this study include, bank deposits (BDT), bank reserves (BRV) and capital adequacy (CTA).

Capital adequacy (CTA): capital adequacy ratio is measured by the ratio of total capital to total risk-weighted assets of a bank.

Model Specification

The model specified for this study was carried out in line with the multiple and partial regressions. This model is imperative as the research established the relationship between regulatory compliance and financial stability of quoted DMBs in Nigeria. Therefore, the functional, mathematical and econometric model specifications for this research are as follows:

Functional Form

FLS = f(MPR, CAR) -- - - -(1)

Using equation 1, gives;

Mathematical Form

$\wedge \quad \wedge \quad \wedge \quad \wedge$

FLS= f(MPR, CAR) - - - - - (2)

Using equation 4 gives;

Econometric Form

$FLS = \mu_0 + \mu_1 + \mu_2 MPR + \mu_3 CAR + \ldots + \mu_{1,t}$ - (3)

Econometric model for moderator regression

$FLS = \beta_0 + \beta_1 RCM + \beta_2 BSE + \beta_3 RCM^{*} BSE + \text{----} + \mu_{1,t}$ - - - - - - - (4)

From equations 3 and 4, it is expected a priori that $\mu_1, \mu_2, \mu_3, \beta_1, \beta_2, \beta_3 > 0$.

Where:

FLS = Financial stability

RCM = Regulatory compliance measures

MPR = Monetary policy regulation

CTA = Capital adequacy

μ_0, β_0 = Regression constant

$\mu_1, \mu_2, \mu_3, \beta_1, \beta_2, \beta_3$ = Regression coefficient

$\mu_{1,t}$ = Stochastic error term

$\wedge$ = Statistical estimator

***** = Statistical interaction symbol

Data Analysis Techniques: Three types of data analytical techniques were used in this research namely; descriptive data analysis, inferential data analysis and test for causality.

Descriptive data analysis: This involves a univariate analysis which was used to describe the distribution of the variables of study in relation to the companies under investigation.

Descriptive data for the independent and dependent variables wereanalysed using the mean scores, frequency distribution and standard deviation.

Inferential data analysis: This falls within the domain of statistical testing. It involves the bivariate and multivariate null hypotheses testing at $\alpha = 0.05$ level of significance. The multiple regression analysis was employed to test the composite hypotheses. Pointedly, these analyses were carried out using the Ordinary Least Square (OLS) method of E-view 10.0 version statistical software.

Test of causality

In order to strengthen the analysis, Wiener Granger Causality was also employed. This was done because regression analysis alone deals with the strength of dependence of one variable upon the. other, it does not imply relationship.

Results and Discussion

Univariate Data Analysis

Univariate data analysis was employed in the form of descriptive statistics to access the data trend.

Table 1: Results of descriptive statistics.

	BDT	BRV	CTA	MPR	CAR	BSE
Mean	9.03603	58.2278	6.72270	35.4250	40.5184.	40.0566
Median	7.12330	41.8200	5.42333	130599.	116243.	180500.
Maximum	79.9600	22.1400	474.000	7326723	994990	4.5E+08
Minimum	3.39300	3.47000	-27.6000	2750.00	3214.00	1050.00
Std. Dev.	9.06222	55.8450	47.0548	826006	114780	555836
Skewness	5.13089	4.39505	5.82731	5.77827	5.66842	4.77901
Kurtosis	47.9900	6.61971	85.1077	41.3271	38.6806	29.0611
Jarque-Bera	4641.97	69.1420	42133.9	1269.88	11037.8	6068.01
Probability	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Sum	4515.45	7245.01	993.700	6.7E+08	7.6E+08	3.5E+09
Sum Sq. Dev.	1873.41	2851.08	73077.4	1.8E+16	2.8E+16	5.1E+17
Observations	240	240	240	240	240	240

Source: E-view 10 Output (Authors Computation).

The univariate data analysis above showed that the dataset produced a total of 240 observations with 24deposit money banks investigated within the period of 10 years (2011 to 2021). The result disclosed that bank reserve had the highest average of 58.2278. While credit allocation regulation got the second highest average of 40.5184, bank size had an average of 40.0566. The maximum value in the dataset was 4.5E+08 under bank size which signified the high level of bank capitalization, while the minimum value was -27.6000 under capital adequacy. The standard deviation which indicates the level of risk showed that monetary policy regulation had the risk of 826006while bank size had the second highest risk of 555836.

Bivariate Data Analysis

This research employed the bivariate analysis in the form of graphs to show the trend of the observation as follows.

Multivariate Analyses

The multiple regression analyses were carried out at 0.05 significance level to test the null hypotheses, while partial correlation was employed to test the moderation of bank size on regulatory compliance measures and financial stability of quoted deposit money banks in Nigeria.

Hypothesis 1 Test

Hypothesis 1 Test

$H0_1$: there is no significant relationship between monetary policy regulation and capital adequacy of DMBs in Nigeria.

Table 2: Panel OLS regression result for MPR, CAR, BSE and CTA

Dependent Variable: CTA
Method: Least Squares
Date: 11/24/23 Time: 18:15
Sample: 1 240
Included observations: 241

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.938458	2.335203	3.126427	0.0021
MPR	7.53E-09	3.47E-09	1.975021	0.0380
CAR	-4.40E-09	2.69E-08	-0.213813	0.0309
BSE	-2.64E-09	3.28E-08	-1.182831	0.0429

R-squared	0.670540	Mean dependent var	3.499471
Adjusted R-squared	-0.000753	S.D. dependent var	14.72156
S.E. of regression	14.72710	Akaike info criterion	8.243355
Sum squared resid	39907.31	Schwarz criterion	8.329115
Log likelihood	-773.9970	Hannan-Quinn criter.	8.278098
F-statistic	0.974639	Durbin-Watson stat	1.903357
Prob(F-statistic)	0.538189		

Source: E-view 10 Output (Authors Extractions).

Equation Summary: R^2=0.67, DW=1.90

The E-view result above established a positive relationship between monetary policy regulation and capital adequacy with estimated coefficient of4.938458. The coefficient also disclosed that monetary policy regulationincreased by 7.53E-09 ascapital adequacy increased by a constant term of 4.938458. The R^2=0.67 represent 67% change in capital adequacy could be apportioned to monetary policy regulation. While the remaining 33% was attributed to other factors not captured in the model. The Durbin Watson statistics is 1.90 disclosed that it was of good fit because of the absence of autocorrelation.

With the critical value approach of +1.96 and -1.96 and applying the decision rule with t-statistic 1.975023greater than +1.96 at 0.05 alpha and for a 2-tailed test implied that $H0_1$ was rejected.

Hypotheses 2 Test

$H0_2$: there is no significant relationship between credit allocation regulation and capital adequacy of quoted DMBs in Nigeria.

Table 3: Panel OLS regression result for CAR, MPR, BSEand CTA

Dependent Variable: CTA
Method: Least Squares
Date: 11/24/23 Time: 18:15
Sample: 1 240
Included observations: 241

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.827347	1.224192	3.126427	0.0021
CAR	-2.42E-08	3.36E-08	1.907501	0.0580
MPR	-3.39E-08	1.58E-07	-0.213813	0.8309
BSE	-1.55E-08	2.17E-07	-0.071720	0.9429

R-squared	0.620540	Mean dependent var	3.499471
Adjusted R-squared	-0.000753	S.D. dependent var	14.72156
S.E. of regression	14.72710	Akaike info criterion	8.243355
Sum squared resid	39907.31	Schwarz criterion	8.329115
Log likelihood	-773.9970	Hannan-Quinn criter.	8.278098
F-statistic	0.914639	Durbin-Watson stat	1.920357
Prob(F-statistic)	0.418189		

Source: E-view 10 Output (Authors Extractions).

Equation Summary: R^2=0.62, DW=1.92

The E-view result above established a positive relationship between credit allocation regulation and capital adequacy with coefficient of 3.827347. This value further implied that credit allocation regulation decreased by -2.42E-08 as capital adequacy increased by a constant term of 3.827347. R^2=0.62 confirmed the 62% change in capital adequacy was attributed to credit allocation regulation. While the remaining 38% was apportioned to other factors not captured in the model but covered by the stochastic error term. A Durbin Watson of 1.92 close to 2 implied the lack of serial autocorrelation in the model meaning that the model is of good fit. Also, an F-statistic value of 1.907501 greater than Prob(F-statistic) value of 0.418189 indicates a significant relationship in relation to the overall model

Using the critical value approach of +1.96 and -1.96 and applying the decision rule with t-statistic -0.213813 greater than -1.96 at 0.05 level of significance and for a 2-tailed test showed that $H0_2$ was significant and thus rejected. While HA_2 was accepted.

Discussion of Findings

The findings of this study are discussed as follows:

i. Positive and significant relationship between monetary policy regulationcapital adequacy. This finding signified that monetary policy regulation has a major (significant) potential to change the capital adequacy of banks of DMBs in Nigeria within the period 2011 to 2021. Therefore, an increase in monetary policy regulationcould cause asignificant or major increase incapital adequacy. This finding corroborated with the result by Nwosa& Sabu (2012).

Positive and significant relationship between credit allocation regulation and capital adequacy. This finding showed that credit allocation regulation could change capital adequacy of quoted DMBs in Nigeria within the period under investigation. More so, the

result indicates that credit allocation regulationmoves in like direction with capital adequacy. This finding supported the result by Olusanya *et al*. (2012)

Conclusion

Given the finding, this research concluded as follows:

i. That there exists a positive and significant relationship between monetary policy regulation and capital adequacy. Further, the study concluded thatmonetary policy regulationand capital adequacy increases whenever there is an influence, however.

ii. That there exists a positive and significant relationship between credit allocation regulation and capital adequacy. The study concluded that credit allocation regulation and capital adequacy move in the same manner. That is any increase in one variable affects the other variable in similar quantity

Recommendations

Based on the findings and conclusions, this research recommended as follows:

i. That shareholders of quoted DMBs in Nigeria should understand the complex nature of banks' capital adequacy in relation to financial regulations. This is because capital adequacy exhibited significant relationship with monetary policy regulation and this should be sustained over time.

References

Abdel Karim, R.A. (1996). The Impact of the Basel Capital Adequacy Ratio Regulation on the Financial and Marketing Strategies of Islamic Banks. *International Journal of Bank Marketing, 3*(3), 32-44.

Ahmed, S. U., Ahmed, S. P., Islam, M. N., & Ullah, G. M. W. (2015). Impact of basel II implementation on the financial performance of private commercial banks of Bangladesh. *European Journal of Economics, Finance and Administrative Sciences, 77*(5), 73-84. https://doi.org/10.2139/ssrn.2644108.

Bilal, Z. O., & Salim, B. F. (2016). Does Basil III implementation impact on financial performance? evidence from Omani's Commercial Banks. *International Journal of Economics and Financial Issues, 6*(2), 963-970. http://www.bis.org/publ/bcbs238.pdf

Central Bank of Nigeria – CBN (2011). *What is monetary policy? understanding monetary policy series No 1*, Abuja, Nigeria: Central Bank of Nigeria. (http://www.cbn.gov.ng/documents/statb ulletin.asp.

Central Bank of Nigeria (2007) Annual Report (2007).

*Chiaramonte, L., & Casu, B. (2017). Capital and liquidity ratios and financial distress: evidence from the European Banking Industry. *The British Accounting Review, 49*(4), 138-161. https://doi.org/10.1016/j.bar.2016.04.001

Chude, N. P. &Chude, D. I. (2014). The Relationship between Regulatory Inconsistencies and Nigerian Banking Industry. *Global Journal of Management and Business Research: Finance 14* (4), 5-9.

Chuku, A. C., (2009). Measuring the effects of monetary policy innovations in Nigeria. Africa Journal of Accounting, Economics, Finance and Banking Research, 5(5), 112-129. Retrieved from http://www.researchgate.net/publication/228272597_ Measuring_the_Effects_of_Monetary_Policy_Innovations_in_Nigeria_A_Structural_ Vector_Autoregressive_%28SVAR%29_Approach/file/3deec51a939e56eeb7.pdf.

Chukuigwe, E.C. &Abili, I.D. (2008) An econometric analysis of the impact of monetary and fiscal policies on non-oil exports in Nigeria. *Review African Economic and Business, 6*(6), 59-64.

Čihák, M., &Demirgüç-Kunt, A. (2013). Rethinking the state's role in finance. World Bank Policy Research Working Paper 6400. The World Bank. https://doi.org/10.1596/1813-9450-6400

Claessens, E., Swati, G. & Roxana, M. (2013). Macro prudential policies to mitigate financial system vulnerabilities. *Journal of International Money and Finance, 3* (9), 153-185.

Clementina, K., &Isu, I. G. (2016). Security challenge, bank fraud and commercial bank performance in Nigeria: an evaluation. *Journal of Business and Management, 5*(2), 1-21

Coenen, G., Orphanides, A. & Wieland, V. (2003). *Price stability and monetary policy effectiveness when nominal interest rates are bounded at zero.* Paper No. 231, European Central Bank.

Cooke, T. E. (2002). The impact of size, stock market listing and industry type on disclosure in the annual reports of Japanese listed corporations. *Accounting and Business Research, 22*(87), 229-237. https://doi.org/10.1080/00014788.2002.9729440

Crockett, A. (2007). *Why is financial stability a goal of public policy? in maintaining financial stability in a global economy, 7–36.* proceedings of a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming.

Culp. S. (2014). *Turning regulatory investments into growth opportunities for banks*. Retrieved from https://www.forbes.com/sites/steveculp/2014/11/12/turning-regulatory- investments-into-growth-opportunities-for-banks/#2aca76403eea.

Dang, C., (Frank) Li, Z., & Yang, C. (2018). Measuring firm size in empirical corporate finance. Journal of Banking & Finance, 8 (6), 159-176. https://doi.org/10.1016/j.jbankfin.2017.09.006

Daniel, M (2000). Value maximization, stakeholders' theory and the corporate objective Function, *Journal of Applied Corporate Finance, 2*(6), 45-50.

Das, U.S. and M.G. Quintyn. (2002). Crisis prevention and crisis management: the role of regulatory governance. In Financial Sector Governance. Brookings Institution Press.

De la Torre, A., Feyen, E. and Ize, A. (2013), Financial development: structure and dynamics, *The World Bank Economic Review, 27* (3), 514-541

Delis, M. (2015), "Bank risk, financial stability, and the role of regulation. *Journal of Banking and Finance, 6*(1), 1-2.

Dell'Ariccia, G., Igan, D., Laeven, L., Tong, H., Bakker, B. & Vandenbussche, J. (2012). *How to deal with credit booms.* IMF Staff Discussion Note 12/06

Demirguç-Kunt, A. & Levine, R. (2010). Finance and inequality: theory and evidence, annual review of financial economics. *Annual Reviews, 1* (1), 287-318.

Deutsh, V. (2005). Impact of board composition on firms' critical decisions, a meta-analytic review. *Journal of Management, 31* (3), 424-444.

Donaldson, L. & Davis, J.H., (2007). Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns. *Australian Journal of Management, 1*(6), 11-19.

Doron, G. (2009). *The smoking paradox: public regulation in cigarette industry*, Cambridge, Massachusetts: Abut Books.

Dwivedi, D. N. (2005). *Managerial economics 6th Edition.* VIKAS Publishing house PVT LTD, New Delhi India.

Edwards, J. R. (2000). *British company legislation and company accounts*. New York: Arno Press.

Ekpu, V. (2016). *Micro prudential versus macro prudential approaches to regulation and supervision*. Lecture Presented at a Regional Course and Advanced Banking supervision and Financial Stability for Members of the College of Supervisors of the West African Monetary Zone (CSWAMZ), Lagos

Ekpung E. G; Udude C. C; &Uwalaka H. I (2015). The impact of monetary policy on the banking sector in Nigeria. *International Journal of Economics, Commerce and Management United Kingdom, III* (V), 1015 -1031

Ekundayo, B.I. (2006). *Financial and real sector interactions in developing economies: the case of Nigeria.* A paper submitted to African Development Finance Policy Workshop for Consideration in The Workshop.

Emami, M, Ahmadi, M. & Tabari, N. A. Y. (2013). The effect of liquidity risk on the performance of commercial Banks. *International Research journal of Applied and Basic Sciences 4*(6),1624-1631.

Eriki, P. O., & Osifo, O. (2015). Determinants of performance efficiency in Nigerian banking industry? ADEA approach. *International Journal of Economics, Commerce and Management, III* (2), 113-118.

Erina, J. & Lace, N. (2013). Commercial banks profitability indicators. *Journal of Empirical Business Review, 2* (1), 1-9

Ezike, J. E. (2013). Capital adequacy standards, basle accord and bank performance: the Nigerian experience (a case study of selected banks in Nigeria). *Asian Economic and Financial Review, 3*(2), 146 – 159.

Fasanya, I. O., Onakoya, A. B. O. &Agboluaje, M. A., (2013). Does monetary policy influence economic growth In Nigeria? Asian Economic and Financial Review, 3(5), 635-646. Retrieved from www.aessweb.com/download.php?id=1883.

Floquet, K. &Biekpe, N. (2008). The relationship between capital structure and risk in emerging market banks. *Journal of Problems and Perspectives in Management, 6* (4), 24-36.

Freeman, R. E, Wicks, C. A & Parmar, B. (2004). Stakeholder theory and the corporate objective Revisited. *Organization Science Journal, 15*(3), 364-369, http://dx.doi.org/10.2307/3665716.

Galbis, V. (1982). An analytical aspect of interest rate policies in less developed countries: a theoretical approach. *Journal Development Study, 2* (13), (59-72.).

Gardener, P. M. (2006). *Supervision in the United Kingdom. in banking supervision: evolution, practice and issues,* London: P. M. Gardener (Ed.) U.K.

George, E.A.J. (2004). The pursuit of financial stability, *Bank of England Quarterly Bulletin, 3*(4), 60-66.

Goodhart, C. (2015), "Linkages between macro-prudential and micro-prudential supervision. *Butterworth's Journal of International Banking and Financial Law, 30* (10), 607-609

Graham. C.& Bordeleau, E. (2010). The impact of liquidity on profitability, *Bank of Canada Journal Review, 3*(8), 6-22.

Gul, H., Mughal, K. & Rahim, S. (2012). Linkage between monetary instruments and economic growth, *Universal Journal of Management and Social Sciences, 2*(5), 69-76

Gummi, U. M. (2012). Financial regulations and the Nigeria's banking sector. Retrieved from www.businessdayonline.com.

Gunningham, N. (2004). *Pollution, social interest and the law.* London: Martin Robertson and Company.

Haldane, A; Hoggarth, G. & Saporta, V. (2001). Assessing financial system stability, efficiency and structure at the Bank of England in marrying the macro and micro-prudential dimensions of financial stability, 138–59. Bank for International Settlements.

Hameed, G., Khalid, M. and Sabit, R. (2012) Linkage between Monetary Instruments and Economic Growth. Universal Journal of Management and Social Sciences, 2, 69-76.

Hanke, S.H. (2013). Basel's Capital Curse. Financial Nigeria. *Development and Finance Journal. 5*(54), 34-37.

Hassan, M. K., Sanchez, B. & Yu, S. J. (2011). Financial development and economic growth: new evidence from panel data. *The Quarterly Review of Economics and Finance, 51*(1), 88-104. DOI: http://dx.doi.org/10.1016/j.qref.2010.09.001.

Huntington, S. (2002). The marasmus of the ICC. *Yale Law Journal, 6*(1), 467 – 509

Igbinosa, S., Ogbeide, S and, Babatunde, A. (2017). Empirical assessment on financial regulations and banking sector performance. *Journal of Central Banking Theory and Practice, 4*(2) 143-155

Ighomwenghian, K. (2010). The pains of Sanusi's reforms, available online at https:allafrica//allafrica.com.

Ioannidou, V. & Penas, M.F. (2010). Deposit insurance and bank risk taking: evidence from international loan ratings. *Journal of Financial Intermediation, 19* (1), 95-115

Ireland, P.N. (2008). *Monetary transmission mechanism. the new Palgrave dictionary of economics hound-mills*, Basingstoke, UK. Palgrave Macmillan.

Iyoha, M.A. (2004*). Macroeconomics, theory and policy (Revised Edition) Benin City*. Mindex Publishing Company Limited.

James, R., Chen, L. Yue, M. Jesús, S. & Frank, M. S. (2013). Do bank regulation, supervision and monitoring enhance or impede bank efficiency? *Journal of Banking & Finance2* (9), 2879–2892

Jensen, M.C. & Meckling, W.H. (2006). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3* (8), 305-360.

John, K. &Senbet, L.W. (1998). Corporate governance and board effectiveness. *Journal of Banking and Finance, 2* (2), 371-403.

Jolliffe, I. T. (2002). *Principal component analysis (2nd ed.).* New York: Springer-Verlag New York, Inc. https://doi.org/10.2307/1270093

Kenyan Wall Street. (2018). Barclays Kenya reports FY pre-tax profit of Sh10.6 billion amid political uncertainties. Retrieved from http://kenyanwallstreet.com/barclays-kenya-reports-fy-pre-tax-profit-of-sh-10-6-billion-amid-politicaluncertainties.

Kim, S. & Mehrotra, A.N. (2017). *Effect of monetary and macro prudential policies-evidence from inflation targeting economies in the Asia-Pacific region and potential implications for China.* Bank of Finland Research Paper Series, Discussion Paper No. 4.

Kıran, B., N.C. Yavuz and B. Guriş (2009). Financial development and economic growth: a panel data analysis of emerging countries. *International Research Journal of Finance and Economics 30* (6), 87-94.

Klingelhöfer, J. and Rongrong, S. (2019). Macroprudential policy, central banks and financial stability: evidence from China. *Journal of International Money and Finance, 93* (1), 19-41.

Klomp, J. & de Haan, J. (2014). Bank regulation, the quality of institutions, and banking risk in emerging and developing countries: an empirical analysis. *Emerging Markets Finance and Trade, 50* (6), 19-40.

Kogar, C. (2005). *Financial innovations and monetary control*. The Central Bank of the Republic of Turkey Discussion Paper No. 9515.

Koshy, M. (2009) What is monetary policy? Finance and Development. IMF Publications. Mordi, C.N.O. (2009) Overview of monetary policy framework in Nigeria. *Central Bank of Nigeria Bulletin. 33* (1), 1-7.

KPMG (2016). *Banks' strategies and business models: capital myths and realities*. Retrieved from https://assets.kpmg.com/content/dam/kpmg/pdf/2016/07/capital-myths-realtities.pdf

Kuttner, K.N. & Shim, I. (2016). Can non-interest rate policies stabilize housing markets? Evidence from a panel of 57 economies. *Journal of Financial Stability, 2* (6), 31-44.

Levine, R. (2003). More on finance and growth: more finance, more growth? *Review of Federal Reserve Bank of St. Louis*, *85*(4), 31-46.

Lucas, R.J. (1972). Expectations and the neutrality of money. Journal of Economic Theory, 4 (7), 103-144.

Maaka, Z. A (2013). *The relationship between liquidity risk and financial performance of commercial banks in Kenya.* University of Nairobi.

Marshal, I., Igbanibo, D.S. and Onuegbu, O. (2015). Causality modeling of the banking sector credits and economic growth in Nigeria. *IIARD International Journal of Banking & Finance Res 1*(7), 1–12.

Mashamba, T. (2018). The effects of Basel III liquidity regulations on banks' profitability. *Journal of Governance & Regulation, 7*(7), 34-48. https://doi.org/10.22495/jgr_v7_i2_p4

McKinnon, R. (2003). *Money and capital in economic development*, Washington DC: Brookings Institute.

Mershack, D. & Wallis, A.G. (2009). An inducement–contribution approach to corporate financial reporting, *Accounting, Organization and Society, 4*(1/2), 53-65 http://dx.doi.org/10.1016/0304-405X(94)00809-F.

Mishkin, F.S. (2002). *The role of output stabilization in the conduct of monetary policy.* Working Paper No. 9291.

Mitku M.Y. (2018). Lending and cash required reserve: empirical evidence from Ethiopian commercial bank. *European Scientific Journal, 14*(13), 179-189.

Modebe, N. J., Ugwuegbe, S. U. & Ugwuoke, R.O. (2014). The impact of bank credit on the growth of Nigerian economy: a co integration approach. *Research Journal of Finance and Accounting, 5* (10), 87- 95.

Monnin, P. & Jokipii, T. (2013). The impact of banking sector stability on the real economy. *Journal of International Money and Finance, 3* (2), 1-16.

Morande, F. & Schmidt, K. (2002). *Monetary policy and inflation targeting in Chile Mimeograph*, Central Bank of Chile.

Muriithi, J.G., Muturi, M.W. & Waweru, K.M. (2016). The effect of market risk on financial performance of commercial banks in Kenya. *Journal of Finance and Accounting, 4* (4), 225-233.

Murty, K.S., Sailaja, K. &Dimissie, W.M. (2012.) The long-run impact of bank credit on economic growth in Ethiopia: evidence from the cointegration approach. *European Journal of Business and Management 4* (14), 45-56.

Musa, A. A. &Oologumek, H. C. (2020). Influence of deposit money banks on Nigeria economy. *Journal of Management. Science & Entrepreneurship,20* (7),458-470. https://doi.org/10.1016/j.jmse.2017.05.008

Nzotta, S.M. (2014). *Money, banking and finance.* Owerri. Osprey Publishers.

Ogege, S. and Boloupremo, T. (2014). Deposit Money Banks and Economic Growth in Nigeria. Financial Asset and Investing, (1), 41-50.

Ogunjimi, S. O. (2007). *Public finance for Polytechnics*, ICAN Students, Bida, Lekem Productions.

Ogunmuyiwa M.S, Okuneye, B.A, Amaefule, J.N. (2017). Bank credit and growth of the manufacturing sector nexus in Nigeria: an ARDL approach. *European Journal of Economics; 2*(36), 62-72.

Ogunyemi O.O. (2013). The Impact of monetary policy on commercial banks loans and advances in Nigeria: an empirical investigation. *Social Science Research Network, 4* (9), 23-29.

Okereke, E.J, Sanni T.A, Anyanwu G.I, & Ogunbiyi, S. (2009). *Money and the Nigerian financial system,* Owerri. Jeso International Publishers.

Olorunshola, A. J. (2003). *Financial system regulation in Nigeria: theoretical framework and institutional arrangements*. Publication of CBN Training Centre, Lagos.

Onyeiwu, C. (2012). Monetary policy and economic growth of Nigeria. *Journal of Economics and Sustainable Development 3*(7), 62 -70

Ozili P.K. (2018). Banking stability determinants in Africa, *International Journal of Managerial Finance, 1*(4), 56-67.

Padoa-Schioppa, T. (2002). *Central Banks and financial stability: exploring the land in between in the transformation of the European financial system*. Proceedings of the Second ECB Central Banking Conference, October.

Ratnovski, L. (2013). *Liquidity and transparency in bank risk management*. IMF Working Paper, No.13.

Santos, A. O., & Elliott, D. (2012). Estimating the costs of financial regulation. IMF staff discussion note. International Monetary Fund. https://doi.org/10.5089/9781475510089.006

Sanusi.L. (2012). *Banking reforms and its impacts on Nigerian economy*: being a lecture delivered at the University of Warwick Economic Summit, UK.

Schildbach, J. (2017). Large or small, how to measure bank size. EU Monitor Global Financial Markets, 124. Retrieved from http://www.dbresearch.com/PROD/RPS_ENPROD/PROD0000000000443314/Large_or_small%3F_How_to_measure_bank_size.PDF

Segoviano, M. A., & Goodhart, C. A. E. (2009), *Banking stability measures*, International Monetary Fund. Working Paper.

Shaw, E. (2003). *Financial deeping in economic development*. London: Oxford University Press.

Shaw, E. S. (2003). *Financial deepening in economic development*, Oxford University Press, London and New.

Shleifer A. &Vishny, R.W. (2007). A survey of corporate governance. *Journal of Financial Economics, 20*(3), 431-460.

Sinkey, J. (2002). *Commercial banks financial management*. Nigeria: Maxwell MacMillan.

Soludo, C. C. (2004). *Consolidating the banking industry to meet the development challenges of the 21st century*; being an address to the special meeting of the Bankers Committees held on July 16th 2004 at the CBN headquarter Abuja

Uffot, L., (2003). *The Nigerian financial system and the role of CBN. Publication of CBN Training Centre,* Lagos. 3(1), 6-16.