

REGULATORY SHOCKS AND SHAREHOLDERS' RETURN OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

Across the globe, investors' interest is to maximize their worth and can only be achieved when the operations of the entity are being monitored by regulatory bodies especially the financial institutions as the backbone of the economy. The study examined the effect of regulatory shocks on shareholders' return in financial institutions in Nigeria. Secondary data extracted from the financial statements of the selected banks were used, while multiple regression analysis was employed to test the study hypothesis with the aid of Stata/IC 11.0. The findings indicated that regulatory shocks have significant impact on shareholders' return of Nigeria listed deposit money banks. capital adequacy ratio; reserve requirement; monetary policy rate and banking reform significantly affect shareholders' return of listed deposit money banks in Nigeria. The study concluded that regulatory shocks significantly impacted on shareholders' return of Nigeria listed deposit banks. The study opined that regulatory bodies, especially CBN should critically evaluates both the short-run and long run effect of new reforms in relation to banks capital adequacy, reserve requirements, monetary policy rate, and lending rate; ensure that its benefit outweighs cost; would result to improvements in banking operations and increase in earnings.

Keywords: Banking sector reform, Capital adequacy, Reserve requirement, Monetary Policy rate, Regulatory shocks and Shareholders' returns.

Introduction

The world economy in time past has been hit by extraordinary financial and economic crisis especially in 1998 and 2008 and these resulted in recession. The crisis led to the collapse of a famous financial institution (Sanusi, 2012). The collapse of Lehman Brothers investment bank was an upshot of the global crisis. Nigeria also felt the brunt of the crisis as the economy waned, stock market collapsed by nearly 70% and the banking industry incurred irrecoverable high losses due to meltdown in capital markets and high level of exposure risk especially between 2007 and 2008.

The banking sector is one of the most critical sectors of the economy in any world. This can be attributed to the fact that the banking sector most especially the deposit money banks are used by the government to achieve certain economic objectives and promote financial intermediation. The banking sector is therefore a tool used by the government in achieving economic growth. It is for this reason that the banking sector perhaps remains one of the most regulated industries in the economy. In Nigeria, the Central Bank of Nigeria being the apex bank is responsible for issuing guidelines and regulations to monitor the operations of the deposit money banks in Nigeria so as to attain certain economic objectives. These guidelines and regulations most times come unexpected and are usually given to ensure the survival of the banking sector.

The banking sector in Nigeria has experienced a lot of changes as a result of different regulations and reforms. Igbinosa, Ogbeide and Akanji (2017) opined that these various reforms were done to strengthen the banking system in Nigeria and lead to economic growth. According to Igbinosa, Ogbeide and Akanji (2017), the issue of financial regulations for the banking industry has been the duty of the Central Bank of Nigeria alongside the Nigerian Deposit Insurance Corporation (NDIC) who ensures that the deposits of the public are secured and that financial stability is achieved so as to improve performance and strengthen the economy as a whole. The whole essence of regulating the banking industry is to prevent distress in the banking sector and ensure investor confidence to grow the economy.

Financial regulations in Nigerian have been in different phases. According to Omankhanlen (2012), financial regulations in Nigeria can be traced as far back as the 1950s. Following that, more reforms came in the 1990s, 2004 by Charles Soludo, 2009 by Sanusi Lamido Sanusi which led to the incorporation of Assets Management Corporation of Nigeria (AMCON). The focus of the first reform between 1986 and 1993 was deregulation to ensure that there were substantial investments by the private sector, this was followed by the re-regulation era due to the occurrence of financial crisis in 1998 across the world. The next reform focused on liberalisation and adoption of universal banking in 1999 and this centred on liberalisation and adoption of universal banking. In 2003, Soludo brought a new reform which focused on consolidating the banking sector through merger of so many banks in Nigeria. The capital base of banks was raised from N2 billion to a minimum of N25 billion.

This reduced the number of banks from 89 to 25 in 2005, and later to 24. The banking reforms of 2009 focused on removing some of the weaknesses in the banking sector and the disintegration of the financial system; also, resulted into integration of diverse ad-hoc reforms so as to optimize the economy potentials of the nation (Sanusi, 2012).

Despite the series of reforms promulgated especially in the banking industry, the growth rate is still not improving and the financial sector still suffers setback with huge non-performing assets. The arguments as to whether the series of reforms implemented yield its ultimate goals remains unresolved which this paper sought to look into. Therefore, this paper examined the how regulatory shocks have impacted on shareholders' return of banking industry in Nigeria. To curb total market failure, it is expected that the central bank being the apex regulator puts in place proper regulations and policy framework lower risks exposure by banks and maintain resilience (Igbinosa, Ogbeide & Akanji, 2017).

Review of extant literature

Conceptual review

Financial regulatory shocks

Financial regulation of Nigeria banking sector means formulation and implementation of different regulatory policies by the Central Bank of Nigeria to control the activities of the sector (Obilikwu, 2018). The policies are usually established to serve as a protection to depositors' funds, empower and prevent the banks from shocks both internally and externally, ensure banks financial stability, enhance performances as well as overall improvement of the economy (Igbinosa, Ogbeide & Akanji, 2017; Agu & Nwankwo, 2019). One of the primary reasons for establishing CBN is to oversee the affairs and operations of the financial sector of the economy, that is financial institutions operating in Nigeria; therefore, regulating the sector is a process of achieving its aim of enactment; CBN is to prevent the market failure and control the liquid fund in circulation towards growth and development of the economy. The success of any nation's financial regulatory bodies in preventing the collapse of its capital market is hinged on the promulgation of regulatory rules showcasing effective accountability and transparency (Antwi, 2019). To safe guide the wealth of the shareholders which could be impaired in case of winding up, the CBN comes with perceived favorable regulatory policy through reforms and other methods to address it (Mwangi, 2018).

Monetary Policy Rate

The monetary policy rate in Nigeria has been another area of financial regulation that affects the banking sector. According to Mishkin (2010), monetary policy entails the use of monetary instruments in regulating money in circulation towards the attainment of macroeconomic objectives such as full employment, price stability, and sustainable economic growth (Nwude, 2013). The Central bank of Nigeria usually sets a monetary policy rate to control the interest rate in Nigeria and regulate the money in circulation in the economy. Nguyen, Vu and Le (2017) opined that the banking system is the instrument for the application of the monetary policy in Nigeria. Monetary policy affects the performance of the banking sector as it usually influences the demand for credit facilities by their customers. Theoretically, ease accessibility to funds for investments opportunities enhances bank's financial performance.

Reserve requirement ratio

As one of the monetary policy measures in controlling supply of money in circulation, it is the least percentage of banks total deposits to be statutorily deposited to Central Bank (Abid & Lodhi, 2015; Muhindi & Ngaba, 2018). The reserve requirement ratio as stipulated by the Central bank of Nigeria is used to influence the availability of funds in the banking sector. Given that the banking sector depends on the funds available to them for their activities, it is expected that this affects the performance of banks in Nigeria. In Nigeria the current cash reserve ratio stands at 22.5%. However, the Central bank of Nigeria has issued a guideline stating that banks should bring up their loan to deposit ratio to 65% or face a higher cash reserve requirement equal to 50% of the lending shortfall (Ohuocha, 2019). Excess reserves is any deposit by a bank with the central bank in excess of the reserve requirement (Kurotamunobaraomi, Giami, & Obari, 2017). In a bank's statement of financial position, the cash reserves are referred to as cash and balances with the central bank and they shield the bank against unexpected events such as unusual large withdrawals by depositors or bank runs. A bank always tries to avoid capital injection from the

government because it may place it at the government's mercy (Oganda, Mogwambo, & Otieno, 2018). Dare and Okeya (2017) stated that reserve requirement serves to limit the expansion of credit and money supply. Banks' ability to expand money supply through credit creation is often limited to the amount of its legal reserve.

Capital Adequacy Ratio

One of the essential regulations in the banking sector of the economy is capital adequacy ratio. The proportion of the bank total capital to total risk weighted assets is capital adequacy ratio (Sahyouni, & Wang, 2019). It is the expression of the of a bank's overall capital as a ratio of risk weighted credit exposures. This ratio is used to protect depositors and promote stability and efficiency of financial systems around the world (Abid & Lodhi, 2015). Adequacy of capital of the financial institution is referred to as the proportion of capital to its assets. It is mainly used in assessing the financial strength and stability of the financial institutions (Asikhia & Sokefun, 2013). Gidigbi (2017) defines adequate capital/capital adequacy as a situation where the adjusted capital is sufficient to absorb all losses and fixed assets of the bank having enough surpluses for the current operations and future expansion. Central Bank of Nigeria adjusted capital is made up of ordinary share capital, statutory reserves, general reserves, net provisions for non-performing accounts including other losses arising from frauds, A bank is said to have adequate capital when the bank has enough funds to meet the stipulated amount and capital ratios for its level of business, ensure safe operation of the bank and retain public confidence, and enough to acquire the infrastructure needed for sound operations (Olokoyo, 2013). Adequate capital creates an avenue for better standards in any business establishment. It spurs business exertion and a better performance

Currently in Nigeria, the capital adequacy ratio is 16%. It is used as a signal to the investors on how strong the bank is. Banks with capital adequacy ratio lower than 16% are believed to be showing signs of distress (Dare & Okeya, 2017). Victor, Ozioma, Nze and Samuel (2017) asserted that earnings are directly related with capital adequacy, therefore dwindling capital negatively impacted on the profitability of the banks (Osano & Gekara, 2018).

Banking sector reform

Gidigbi (2017) represented financial reforms, as "deliberate policy response to correct perceived or impending financial crisis and subsequent failure". The objective of the reforms established in the financial sector of the economy is to solve governance issues, operational inefficiencies and to mitigate risk. The vortex of most financial reforms is around firming up capitalization. Jegede (2014) opined that reforms are formulated to help the banking system in gaining strength needed to function in the of financial intermediation, thus supporting economic development of the nation. Olokoyo (2013) asserted that the hike in the occurrences of financial crisis facilitated the implementation of reforms in the financial institutions. Frailty banking system, described as undercapitalization, prolonged illiquidity, huge non-performing loans, insolvency, and bad corporate governance are major causes of banking crisis in Nigeria (Olokoyo, 2013). Yahaya and Salaudeen (2017) described reform as the process of improving the current state of the economy, usually derived at by the establishment of several rules guided by policy and enacted laws, and focusing on waste elimination and efficiency maximization.

Several reforms have been implemented in the financial sector of Nigeria economy over time, which is not limited to the recapitalization in 2005 which led to the reduction of

87 banks to 25 as at then through acquisition, adoption, merger and amalgamation of the banks; the invention of e-banking system, initiation of cashless policy, introduction of bank verification numbers (BVN), halt of universal banking, scaling down of the tenures in office of the MDs and CEOs of the banks, separation of roles duality as MDs and CEOs (Combey & Togbenou, 2017). Also, in 2010, asset management corporation of Nigeria act was enacted, and their citation stated in Part V(62) of the Act as “to revive the financial system by efficiently resolving the non-performing loan assets of the banks in the Nigeria economy”. Summarily, the main objective of financial regulations or reforms is to increase the level of productivity of the economy, improve credit accessibility and allocation to the private sector, and strengthen the capital base of the banks to absorb both internal and external shocks as well as engender increase in shareholders’ wealth and the reduction of the social costs of bank failure to the economy.

Measurement of Shareholders’ return

Olokoyo (2013) defined total shareholder return as the profit generated by a combination of the change in the share price over the measurement period, plus any dividends paid by the company in the interim. In fashionable, of path, the higher the return or income earned, the better the placement of the owner of the agency (Purnamasari, 2015). This study used profit after tax in billions as the measurement of shareholders’ return.

Underlying theory

Samuels (1978) postulated that the prevalence of normative theory of regulation can be traced to the work of Adam Smith in early 60s. The theory proposition rest on the roles of the regulatory bodies in establishing regulatory processes of positive values; thus, minimizing or eradicating the inefficiencies caused by market failure. Keeler (1984) explained that normative theory as regulations of the industry by the government of a nation via enacted laws and policies towards the attainment of maximized economic efficiency. Keeler (1984) opined that government regulations of the industry entails exercising control over its operation such as firm entry and exit rules, price regulations, taxes and subsidies. Normative theory of regulation deduced that regulators should encourage competition where feasible, keep information asymmetry cost to the barest minimum by gathering comprehensive information and make it available to the operators with encouragements to enhance their performance, regulate price structures towards the improvement of economic efficiency. Regulators are to formulate regulatory policies with adequate provisions under the law and independence, predictability, transparency, , and credibility and legitimacy for the regulatory system (Samuels, 1992). Samuels (1978) affirmed that normative premises are important and unavoidable, but should be expressed explicitly. Also, Brookings (2017), Forbes (2017), and Rose (2014) claimed that the global financial crisis which occurred in 2007 was caused by deregulations of the financial sector.

Brookings (2017), Forbes (2017), and Rose (2014) supported the postulation of regulation and opined that it is a means of stabilizing the economy of any nation.

Empirical Review

Antwi (2019) examined the effect of cost-income ratio and capital adequacy ratio on the performance (return on assets, ROA and return on equity, ROE) of banks listed on Ghana Stock Exchange using regression analysis; the result revealed that capital adequacy ratio inversely influenced ROE significantly but insignificantly affects and ROA. In Nigeria, Agu and Nwankwo (2019) investigated the effect of capital adequacy on Commercial Bank’s

financial performance using regression analysis, the result showed that there exists a negative but insignificant effect of capital adequacy ratio on net interest income of commercial banks in Nigeria. Also, the results of the error correction model (ECM) and Johansson co-integration carried out by Igbinosa, Ogbeide and Akanji (2017) confirmed that financial regulations measured as capital adequacy ratio significantly affects the performance of Nigerian banks both in the short-run and long-run, it was disclosed that four-year lagged CAR negatively impacted on of banks in Nigeria. Likewise, Ozili (2017) reported that regulatory capital positively and significantly impacted on the return on asset of listed banks in Nigeria. Contrarily, Aymen (2013) reported a significant positive relationship between capital adequacy and performance of banks in Tunisia using 19 banks as sample subjects.

Kurotamunobaraomi, Giami, and Obari (2017) empirically examined the effect of Cash Reserve Ratio (CRR), Loan-to-Deposit Ratio (LDR), and Liquidity Ratio (LR), on Return on Shareholders' funds using Ordinary Least Square Regression, Johanson Cointegration, Granger Causality test and Error Correction Model. The short-run analysis revealed that CRR exerted significant negative on shareholders' return, LDR positively and significantly influence shareholders' return, LR has insignificant positive impact on shareholders' return. While in the long run, CRR also exerted significant negative on shareholders' return, LR positively and significantly influence shareholders' return, but LDR has insignificant positive impact on shareholders' return. Kurotamunobaraomi, Giami, and Obari (2017) opined that bank performance could be influenced by others macro indicators such as government policy and industry structure based on the results of the granger causality test. Likewise, Oganda, Mogwambo, and Otieno (2018) obtained a significant negative effect of cash reserves on the performance of the commercial banks in Kenya. Also, similar findings were reported by Abid and Lodhi (2015) in their study on Pakistan banks.

The assessments of the relationship between liquidity management and performance of Nigeria banks by Dare and Okeya (2017) adopting multiple linear regression technique showed that there is a positive but statistically insignificant relationship between MPR and ROA in the chosen bank. The analysis further indicated negative and statistically insignificant relationships between CRR, LR and ROA. Similar study conducted by Edem (2017) on the association between liquidity management on the financial performance of deposit money banks in Nigeria, revealed that cash reserve and liquidity ratios have significant positive correlation with return on equity while . loan to deposit ratio negatively and significantly impacted on bank performance. In the same vein, the study conducted in Vietnam by Ngugen, Vu, and Le (2017) revealed that monetary policy, that is, Monetary base (MB), required reserve ratio (RRR), and discount rate (DIS) positively impacted on profit before tax of banks in Vietnam.

Victor, Ozioma, Nze and Samuel (2017) studied the relationship between monetary policy regimes and the performance of Nigeria commercial banks using correlation and regression analyses. The results of the comparative analysis of the pre and post implementation of structural adjustment programme (SAP) in the periods of 1986 to 1999, and 2000 to 2013 revealed that monetary policy rate has insignificant impact on the performance of commercial banks in Nigeria prior the implementation of SAP as compared to the post-implementation era.

Osano and Gekara (2018) sampled forty-two (42) commercial banks in Kenya to assess the relationship between government regulations and the performance of banks using regression analysis; and found that forex exposure negatively impacted earnings of

Kenya commercial banks while liquidity regulation ratio, interest rate capitalization, and capital adequacy requirements exerted significant positive effect bank earnings. Similarly, Gidigbi (2017) assessed the effect of banking reforms and government regulations on the performance of the banking sector and Nigeria economy between 1981 and 2015 using stepwise regression and ANOVA model. The study adopted dummy variable for the periods of the occurrences of reforms, and the result of the analysis revealed that banking reforms and government regulations, for example implementation of treasury single account in 2015, positively impacted on the economy while the banking sector was negatively affected. Sahyouni and Wang (2019) determined the liquidity creation by the Syrian banks and its impact on the performance, putting into consideration the industry-level, bank-level, and macroeconomic variables. The study deduced that bank liquidity creation positively but insignificantly influenced the performance; dwindled steeply during the war period; and reflected a significant negative effect on bank earnings.

Obilikwu (2018) investigated the controlling effect of economic growth and inflation in the relationship between bank consolidation metrics and performance of the banking industry; the result of the VECM revealed that the objective of implementing consolidation policy was futile as consolidation metrics measured as bank size, concentration, and liquidity negatively influenced the performance of the banking industry, while capital adequacy positively affects bank performance.

Materials and Methods

This study was an *expost-facto* research, with the focus on the effect of regulatory shocks on shareholders’ return among 10 selected listed deposit banks in Nigeria for a period of 10years from 2009 to 2018. The choice of the time frame was informed by the banking reform of 2005 recapitalization which led to the collapse of 85 banks into 25 (Combey & Togbenou, 2017); and also, the global financial crisis which occurred between 2007 and 2009, of which Nigeria financial institutions were not left out. Therefore, to avoid distorted results, the study considered a decade of post-financial crisis regime. Financial figures relating to the variables of measurements were extracted from the financial statements of the selected banks as well as CBN statistical bulletin for 2018. Multiple regression analysis was employed to test the study hypothesis; the regression equation was subjected to econometric estimations. The regression equations were analyzed with the aid of Stata/IC 11.0.

Table 1: Model Specification and Measurement of Variables

Variable	Abbreviation	Measurements
Regulatory Shocks		
Capital Adequacy	CAR	Capital divided by Risk weighted assets
Monetary Policy Rate	MPR	Monetary Policy Rate as stipulated by CBN
Reserve Requirement	RRR	Reserve Requirement as stipulated by CBN
Bank Reforms	BRF	Dummy variable of ‘1’ in the years of the occurrence of reforms and ‘0’ otherwise
Shareholders’ Return		
Profit after tax	PAT	Profit for the year after tax deduction

Source: Author’s Compilation (2021)

$$PAT_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 MPR_{it} + \beta_3 RRR_{it} + \beta_4 BRF_{it} + e_i \dots\dots\dots eqn 2$$

Where

e_i = disturbance term; β_0 = intercept; $\beta_1 - \beta_5$ = coefficient of the independent variables.

Results and Discussions

Pre-Estimation Analysis

The pre-estimation analysis entails the description of the variables in the model. Table 4.1 depicts the characteristics of dependent variable (Profit after tax (PAT) and independent variables (Capital Adequacy Ratio (CAR), Reserve requirement (RR), monetary policy rate (MPR) and Banking Reforms (BRF) while the nature of association among the independent variables using correlation matrix and Variance Inflation Factor (VIF) are shown in Table 4.2 accordingly.

Descriptive Statistics

Table 2: Characteristics of the Distribution Series

Variable	PAT	CAR	RR	MPR	BRF
Mean	29.95	12.72	14.18	11.43	0.10
Std. Dev	57.67	32.88	8.19	2.84	0.30
Min	-281.37	-198.56	1.00	6.00	0.00
Max	193.42	44.00	22.50	14.00	1.00

Source: Authors' Computation (2021).

Interpretation

The statistical properties of the variables are highlighted in Table 2; and the emphasis here is on the mean, minimum, maximum and measures of dispersion of the variables involved in this study. The characteristics of Profit after tax (PAT) showed that the earnings of the companies are highly volatile with standard deviation of 57.67 which measures the dispersion of the range of the figures from the mean. Also, the minimum value of -281.37 indicated that there are periods within the time frame when the companies reported huge losses as evidenced in the negative sign of the data. The maximum figure of 193.42 implies that the maximum return of 193.42% was generated by the companies within the time frame of this study but on the average net profit is 29.95% which is extremely low.

The minimum and maximum values of Bank reforms (BFR) indicated a minimum of 0 and maximum of 1, the maximum reforms show that bank reconstructions for improvement and reforms by CBN to improve the banking sector and allow for strengthen of banking sector. Looking at that of Reserve requirement (RR) with the minimum of 1% and maximum of 22.5%, this shows the development that takes place in banking sector as a result of reforms and laws regulated by CBN for effectiveness of the sector for income generation. The minimum value of 1 is as a result of the second banking reform to increase bank capitalization for competitive edge with international banking sector. Also, the minimum and maximum values of Monetary policy rate (MPR) indicated a minimum of 6 and maximum of 14, the maximum rate shows that bank reconstructions for improvement and reforms by CBN to improve the banking sector and strengthen the banking sector leading to lending and financial inclusion to SME's and firms. The CBN structure the banks' lending rate to grant SMES and firm access to banks loan at a discounted rate. The establishment of AGSMEIS scheme served as one of the major restructuring to cushion the effect of the pandemic on small businesses, granting them 'collateral free' loan at 5-9% lending rate (NIRSAL, 2020)

The characteristics of Capital adequacy ratio (CAR) showed that the total capital of the companies is highly volatile with standard deviation of 32.88 which measures the

dispersion of the range of the figures from the mean. Also, the minimum value of -198.56 indicated that there are periods within the time frame when the companies reported negative capital as a result of accumulated losses as evidenced in the negative sign of the data. The maximum figure of 44 implies that the maximum total capital of 44% for total risk weighted assets was generated by the companies within the time frame of this study but on the average total capital is 12.71% which is extremely low.

Multicollinearity Analysis

In order to determine whether the series in the distribution are correlated; correlation matrix test and Variance Inflation Factor test are carried out and the results presented in Table 3 respectively. Variance Inflation Factor test denotes the existence of multicollinearity or otherwise without estimating the magnitude of the association among the variables but Pearson Correlation Matrix showed the magnitude of the associations as reflected in the correlation matrix test in Table 3. A correlation ratio denotes the existence or non-existence of relationship among variables which do not necessarily mean that the variables influence one another, that is; it is not an indication of causal effect.

Table 3: Multicollinearity Test

Variable	CAR	RR	MPR	BSE	VIF	1/VIF
CAR	1.000				1.860	0.538
RR	-0.325	1.000			1.710	0.586
MPR	-0.164	0.101	1.000		1.310	0.765
BSR	0.055	-0.072	0.640	1.000	1.280	0.781
					Mean = 1.46	

Source: Authors' Computation (2021).

Interpretation

Baltagi (2015) indicated that there exists a multicollinearity problem among variables when the correlation coefficients between variables exceed the benchmark of 0.75 in absolute value. The result of the correlation test presented in Table 3 showing the minimum and maximum correlation coefficients in both periods and within the combined periods of -0.33 and 0.33 which are less than the benchmark shows that multicollinearity problem did not exist among the data series. Correlation matrix does not measure causal-effect relationship but depicts the direction of association. In Table 3, Capital adequacy ratio is positively correlated with banking sector reform. The Variance Inflation Factor (VIF) result confirmed that no multicollinearity problem among the data series; with the mean value of 1.46 which is less than "5" threshold, likewise none of the individual inverse figures is up to "1".

Table 4: Regression Result

Variable	Coeff	Drisc/Kraay Std.Err	z-test	Prob
Constant	-18.245	16.241	-1.12	0.290
CAR	0.233	0.109	2.13	0.062
RRE	-0.0005	0.0002	-2.66	0.026
MPR	4.370	1.977	2.21	0.054
BSR	-38.15	8.709	-4.38	0.002
Adj. R ²		0.1715		
Wald chi2(4)		291.44		
Prob > chi2		0.0000		
Hausman Test		chi ² ₍₂₎ = 0.35 (0.9503)		
Breusch & Pagan LM Test		chi ² ₍₁₎ = 98.23 (0.0000)		

Heteroskedasticity Test	$\chi^2_{(1)} = 5.32 (0.0210)$
Serial Auto-Correlation	$F_{(1, 9)} = 0.900 (0.3676)$
Pesaran's test	$F = 5.115(0.0000)$

Source: Author's Work (2021)

Interpretation

Diagnostic Tests

The results of the Hausman tests for both models (p -values of 0.9503 and 0.9994) as presented in Table 4 revealed that Random Effect is the most appropriate estimator but the results of the confirmatory tests carried out using Breusch and Pagan LM Tests with p -values of 0.0000, and 0.0000 supports the Hausman Test results, thus confirm the appropriateness of the Random Effect; therefore Random effect is the most appropriate and used for the analyses of both main models with and without control variables.

Breusch-Pagan/Cook-Weisberg Test with p -values of 0.0210 and 0.7430 indicated that there is presence of heteroskedasticity problem in the first model and absence in the second model; which implies that the variations in the residuals of the model over the period "t" in the first models are not constant over time and opposite in the second model.

The result indicates that testing for cross-sectional dependence is important in estimating panel data models. The result of Pesaran's test of cross-sectional independence for both models had a p -value of 0.0000 and 0.0000 which is less than 1 percent level of significance selected for the study is an indication of cross-sectional dependence presence in the data. The average absolute correlations for both models are 0.442 and 0.441, which are of very high value. Hence there is enough evidence suggesting the presence of cross-sectional dependence in the model. The test strongly rejects the null hypothesis of no cross-sectional dependence at 1% level of significance. There is cross-sectional dependence in the models. The correction of the standard errors can be done by the approach proposed by Driscoll and Kraay (1998) using Regression with Driscoll-Kraay standard errors for Random-effects GLS regression.

Serial auto-correlation was carried out using Wooldridge test and the statistics derived with p -value of 0.3676 which is greater than 5%(0.05) showed that it is insignificant and a reflection that the model did not exhibit the problem of serial auto-correlation, that is then model's coefficients and the residuals are not related.

Considering the outcomes of the diagnostic tests conducted; the study model was estimated using Regression with Driscoll-Kraay standard errors for Random-effects GLS regression.

$$PAT_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 MPR_{it} + \beta_3 RRR_{it} + \beta_4 BRF_{it} + e_i \dots \dots \dots \text{eqn (1)}$$

$$PAT_{it} = -38.151 + 0.233CAR_{it} + 4.370MPR_{it} - 0.0005RRR_{it} - 38.151BRF_{it}$$

The results presented in Table 4 showed that Capital adequacy ratio (CAR) and Monetary policy rate (MPR) has insignificant positive effect on Profit after tax of listed deposit money banks for both models while Reserve requirement (RRR) has significant negative effect on Profit after tax of listed deposit money banks and Bank reform (BSF) has significant negative effect on Profit after tax of listed deposit money banks. The probability of the F-statistics showed that regulatory shocks have significant impact on shareholders' return of financial institutions in Nigeria.

Discussion of findings

Capital adequacy and shareholders' return

The findings of this study showed that capital adequacy ratio has a positive effect on shareholder's return measured by Profit after tax (PAT). The independence of capital adequacy ratio is responsible for 2.92% variations in profit after tax while the remaining 97.08% is explained by other factors that can impact on the dependent variable not captured in this model. Capital adequacy ratio does not significantly affect shareholders return of listed deposit money banks in Nigeria. The study supported the study of Antwi (2019) conducted in Ghana and Agu and Nwankwo (2019) conducted in Nigeria that stated insignificant impact between capital adequacy and profit after tax. The study of Igbinosa, Ogbeide and Akanji (2017) also corroborated the result above by examining the financial regulation and the performance of the banking sector in Nigeria and stated that the four-year lagged capital adequacy is not statistically significant on bank's performance. The study of Aymen (2013) conducted in Tunisia and Owino and Kivoi (2016) conducted in Kenya negates the findings by stating the relationship between capital and returns had statistically significant. Abba, Ene, Soje and Lilian (2018) analyzed the bank-specific determinants of CAR in the Nigerian Deposit Money Banks (DMBs) and contradicted the study by stating that CAR is largely determined by banks risk-portfolio, deposit level, profitability and asset quality and that CAR of Nigerian banks is well above the regulatory minimum.

Reserve requirement and shareholders' return

The findings of this study stated that Reserve requirement has a negative effect on shareholder's return measured by Profit after tax (PAT). The independence of reserve requirement is responsible for 0.8% variations in profit after tax while the remaining 99.2% is explained by other factors that can impact on the dependent variable not captured in this model. Reserve requirement does not significantly affect shareholders return of listed deposit money banks in Nigeria. The study supported the study of Oganda, Mogwambo, and Otieno (2018) conducted in Kenya and Dare and Okeya (2017) conducted in Nigeria that stated that statistically insignificant relationship between MPR and PAT. The study of Edem (2017) also corroborated the result above by examining the impact of liquidity management on the performance of deposit money banks and stated that the cash reserve ratios have a negative impact on bank's performance. The study of Aymen (2013) conducted in Tunisia and Owino and Kivoi (2016) conducted in Kenya negates the findings by stating the relationship between capital and returns had statistically significant. Kurotamunobaraomi, Giami, and Obari (2017) investigated the interrelationship between liquidity and corporate performance of banks in Nigeria and contradicted the study by stating that Cash Reserve Ratio and Liquidity Ratio are statistically significant enough to influence Return on Shareholders' Fund in the long run. Fatima and Lodhi (2015) examined the relationship between Reserve Requirement Ratio and Banks Profitability in Pakistan and negates the study by stating that CRR taken as measure for Reserve Requirement had significant inverse relationship on banks' financial performance.

Monetary Policy rate and shareholders' return

The findings of this study stated that Monetary policy rate has a positive effect on shareholder's return measured by Profit after tax (PAT). The independence of monetary policy rate is responsible for 9.9% variations in profit after tax while the remaining 90.1% is explained by other factors that can impact on the dependent variable not captured in this model. Monetary policy rate significantly affects shareholders return of listed deposit

money banks in Nigeria. The study supported the study of Ngugen, Vu and Le (2017) conducted in Vietnam and Victor, Ozioma, Nze and Samuel (2017) conducted in Nigeria that stated that there is a positive relationship between banks' profits and monetary policies. MPR had a significant positive impact on bank's profit at the significance level of 10%. The study of Greg, Udude and Uwalaka (2015) also validated the result above by examining the effect of monetary policy on banking sector performance in Nigeria and stated that monetary policy has a significant effect on the banks deposit liabilities. The study of Ozili (2017) conducted in Tunisia and Owino and Osano and Gekara (2018) conducted in Kenya negates the findings by stating the relationship between monetary policy and returns had statistically significant.

Banking sector reform and Shareholders' return

The findings of this study which discovered that banking reform ratio has a negative effect on shareholder's return measured by Profit after tax (PAT). The independence of banking reform is responsible for 10.60% variations in profit after tax while the remaining 89.40% is explained by other factors that can impact on the dependent variable not captured in this model. Banking reform significantly affect shareholders return of listed deposit money banks in Nigeria. The study supported the study of Olokoyo (2013) conducted in Nigeria and Gidigbi (2017) conducted in Nigeria that stated that banking system reforms in Nigeria have dual impact on the economy and banks' performance. The study of Ikeora, Igbdika, and Andabai (2016) also correlated the result above by examining the relationship between banking sector reforms and performance of Nigerian economy and stated that causality between banking sector reforms and performance of Nigerian economy. The study of Jegede (2014) and Nwanna, and John (2016) both conducted in Nigeria negate the findings by stating the relationship between banking reforms and returns had statistically insignificant.

Regulatory shocks and Shareholders' return

According to the report of this study, it was revealed that Capital adequacy ratio (CAR) and Monetary policy rate positive but insignificant effect on profit after tax of listed deposit money banks. This corroborated the findings of Antwi (2019) and Victor, Ozioma, Nze and Samuel (2017) in the study conducted in Ghana who also reported an insignificant positive relationship between Capital adequacy ratio (CAR), Monetary policy rate and profit after tax. Similar result was reported by Agu and Nwankwo (2019) and Greg, Udude and Uwalaka (2015) in the study carried out in Nigeria. Revenue reserve requirement (RRR) has significant negative effect on Profit after tax of listed deposit money banks and Bank reform (BSF) has significant negative effect on Profit after tax of listed deposit money banks. This corroborated the findings of Kurotamunobaraomi, Giami, & Obari (2017) and Abid and Lodhi (2015) in the study conducted in Nigeria who also reported that Reserve requirement (RRR) has significant positive effect on Profit after tax of listed deposit money banks and Bank reform (BSF) has significant positive effect on Profit after tax. Similar result was reported by Oganda, Mogwambo, and Otieno (2018) in the study carried out in Nigeria. The result of the analysis of this model showed that regulatory framework measured as Capital adequacy ratio (CAR), Monetary policy rate (MPR), Reserve requirement (RRR) and Bank reform (BSF) jointly but significantly impact on shareholders return of financial institutions in Nigeria; this aligned with the assertion of the study of Akpansung and Gidigbi (2014) in Nigeria, Jegede (2014), Nwanna and John (2016) which also reported similar results of significant effect of regulatory framework on shareholder's return. On the contrary, the

report of this model contradicts the findings of Ikeora, Igbdika, and Andabai (2016); the study conducted in Nigeria by Gidigbi (2017), likewise Combey and Togbenou (2017) carried out in Nigeria.

Conclusion

The study examined the impact of regulatory shocks on shareholders return of financial institutions in Nigeria. Conclusively, the result the analysis carried out revealed that regulatory shocks significantly affect shareholders return of financial institutions in Nigeria using Deposit money banks listed on the Nigerian Stock Exchange. The findings of this study justified the relevance of the underpinning theory. Normative theory of regulation deduced that regulators should encourage competition where feasible, keep information asymmetry cost to the barest minimum by gathering comprehensive information and make it available to the operators with encouragements to enhance their performance (Samuels (1978).

Shittu (2012) affirmed that banking reforms in Nigeria have generated a new paradigm to the industry as banks are putting in place best practices in the areas of corporate governance and risk management. It was discovered that banks steeply adjusts to shocks generated by new regulations, and the impact were normalized to have resulted positive feedback. Therefore, the regulatory bodies, especially CBN should critically evaluates both the short-run and long run effect of new reforms in relation to banks capital adequacy, reserve requirements, monetary policy rate, and lending rate; ensure that its benefit outweighs cost; would result to improvements in banking operations and increase in earnings.

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