



**IMPACT OF MONETARY
POLICY DECISION ON
PROFITABILITY OF
LISTED DEPOSIT MONEY
BANKS IN NIGERIA**

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Abstract

The study examined how monetary policy decision impact profitability of listed deposit money banks in Nigeria from 2011 to 2020. Archived secondary data explored and collated via purposive sampling were tested for robustness, skewness and kurtosis and found fit for purpose. The Multiple Regression Analysis results of General Least Square-fixed effect (as selected by Hausman specification test) shows that, Monetary policy rate as set by the monetary policy committee of the central bank of Nigeria determines to some extent the position of the returns on capital employed of the listed DMBs in Nigeria. Thus, the fluctuations of the MPD in

Introduction

Monetary policy decision has been a measure strictly employed by the Central Bank of Nigeria in managing the operations of Deposit Money Banks and other financial institutions with the aid of instruments such as monetary policy rate and cash reserve ratio. This

Nigeria does result in high or low returns accruing to the DMBs in Nigeria. Therefore, the monetary policy committee of the central bank is advised to

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set a more effective, thoughtful and more flexible Monetary Policy Rate as possible in other to improve the profitability of DMBs in the short-run and the Nigerian economy in the long run.

is done in order to achieve sustainable growth in the economy. Along the line, the policy decision taken by the CBN change the direction of DMBs profitability in some countries of the world (tagged, developed countries), but researches on MPR and CRR in Nigeria and other developing countries are few and far between given the volatile nature of developing economies. The gaps identified in the extant literature and the need for more and consistent investigation into factors that affect the phenomena (profitability) in line with the philosophical paradigm of epistemology are some of the motives for the study. Basic research of this nature are carried out with the intention to extend the barrier of knowledge in a given discipline; in accounting literature, profitability is one of the most consequential element of company characteristics that findings on factors affecting it are mixed and inconsistent, largely due to apparent gaps in domain, variable, methodology, metrics among others. Therefore, this research to uncover the impact of monetary policy decision on profitability of listed Deposit Money Banks in Nigeria as a basic research. Data for the study is secondary and are collected from Audited Annual Reports and Accounts of the DMBs as well as the CBN gazette for the period of ten (10) years.

Monetary policy, for better or worse, has been on the forefront of recurring policymaking in the past two decades, especially during the Great Recession of the 1930s and 2008 as well as the sovereign debt crisis; however, while there is an extensive literature on the US monetary policy and other developed economies of the world, a comprehensive understanding of the Nigerian monetary policy and its effect on listed deposit money banks in Nigeria are yet to materialize. This is partly due to the lack of a systematic database of high frequency, intraday data for a broad class of asset prices in Nigeria and other developing countries as of the kind that has been employed in the US for more than a decade (Altavilla, Brugnolini, Gürkaynak, Motto & Ragusa, 2019).

Profitability is seen as a desirable objective for all profit-oriented organisations; the absence of it can result to a failure or even lead to liquidation of the organisation (Jhingan, 2008). The multi-faceted

definitions of profitability can as well be used to measure organisations in the same industry or across different industry for the purpose of comparisons and empirical analysis; hence, it is a crucial objective that organisations especially profit-making ventures desire to achieve (Yahaya & Lamidi, 2015). Profitability is a fundamental company intrinsic variable that can be measured using proxy ratios such as Return on Asset (R.O.A), Return on Equity (R.O.E), and Return on Capital Employed (R.O.C.E) among others. Moreover, Return on Capital Employed (ROCE) being a profitability ratio is used to measure the profit earned by the business irrespective of how that business is financed. It is calculated on the quotient basis of profit before interest and taxation by the capital employed in the business irrespective of whether the organization is financed by equity shareholders or borrowings (Capital employed means shareholders equity plus liabilities). In this study, return on capital employed was used as a proxy for profitability. It is pertinent to note that, the profitability of the Deposit Money Banks in Nigeria are influenced by many policies among which is the monetary policy. Monetary policy has been a measure adopted by the Central Bank of Nigeria (C.B.N) in order to stabilize the economy of Nigeria to a path of sustainable growth; it also refer to the process by which the government, monetary authority or Apex Bank of a country controls the supply of money, availability of money and cost of money or interest rate to attain a set of objectives oriented towards the growth and stability of the economy (USFRB, 2006). In the light of the foregoing, the Central Bank of Nigeria uses various monetary policy decision in shaping the economy among which are Monetary Policy Rate (MPR), Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR). Therefore, Monetary Policy Rate is the bench mark rate for tracking the movement of money market rate of interest and exchange rate issued by the Central Bank of Nigeria Monetary Policy Committee to regulate the state of the economy in achieving stability and a balanced position. However, Cash Reserve Ratio (CRR) has been the percentage of deposits which DMBs are required to keep as cash according to the directive of the Central Bank Nigeria (CBN) in their reserve account (CBN, 2018). It is against these background and considering the huge

economic importance of the monetary policy decision on the profitability of all the firms in various domains in the economy that this study examines the impact of monetary policy decisions on the profitability of listed DMBs in Nigeria.

Deposit money banks remain an appropriate platform through which monetary policy decision is implemented by the Central banks. This implies that any changes in the monetary policy instruments by the central bank tends to affect the profitability of the deposit money banks. Globally, for example, economic meltdown due to COVID-19 of recent that prompted shut-down of the entire world economy and other historical ones before this has affected the world economy by putting countries into recession of which Nigeria is not an exception. The volatile nature of Nigeria's economy and how some exchange rate and MPR decision affects the profitability of DMBs and given the huge role the DMBs play in balancing between both side of the aisle of the Nigerian economy (lenders and depositors) and considering the fact that CBN has now taken over most of that responsibility by providing interest free loan and other similar frequent interventions due to COVID-19 pandemic among others are some of the problems that this study intends to investigate on how all these affects profitability of DMBs as a service to basic research and a quest to extend the barrier of knowledge in accounting and finance discipline. Also, previous studies were carried out in developed countries in developed countries using different variables, methods, scope, domain, among others (Altavilla, et al.,2019); the need to investigate exchange rate, monetary policy and how it affects profitability in Nigeria (a developing country) are some of the problems identified in line with the philosophy of positivism and critical realism. It is against these background and considering the huge economic importance of the monetary policy and exchange rate decision on the profitability of all the firms in various domain in the economy that this study examines the impact of monetary policy decisions on the profitability of listed DMBs in Nigeria.

Review of Related Literature

Several empirical studies relevant to this study on monetary policy and financial performance of DMBs were examined. Central bankers and the

central banking literature are increasingly attuned to the importance of communications as a policy tool. However, less is known about how central bank communications should be drafted for maximal impact. Bholat, Broughton, Ter-Meer, and Walczak, (2019) contributes new insights in this regard. Using a large-scale online experiment with a sample representative of the UK population, the paper documents the communicative techniques that increase public comprehension and trust in monetary and macroeconomic policy messages. Key findings include that the simplification of language increases public comprehension more than the inclusion of visuals, and that public comprehension can be improved by making monetary policy messages relatable to people's lives. Relatable content also increases the public's trust in central bank communications, and improves people's perceptions of the central bank. Our findings shed light on how central banks can improve communication with the public at a time when trust in public institutions has fallen, while the responsibilities delegated to central banks have increased.

Enders, Hünnekes, and Müller (2019) assess empirically whether monetary policy announcements impact firm expectations. Two features of the data set are key. First, they rely on a survey of production and price expectations of German firms, that is, expectations of actual price setters. Second, they observe the day on which firms submit their answers to the survey; they compare the responses of firms before and after monetary policy surprises and obtain two results. First, firm expectations respond to policy surprises. Second, the response becomes weaker as the surprise becomes bigger. A contractionary surprise of moderate size reduces firm expectations, while a moderate expansionary surprise raises them. Large surprises, both negative and positive, fail to alter expectations. Consistent with this result, they find that many of the ECB's announcements of non-conventional policies did not affect expectations significantly. Overall, our results are consistent with the notion that monetary policy surprises generate an information effect which is endogenous to the size of the policy surprise.

Ayodele (2014), evaluates the effect of monetary policy on DMBs lending. The study was conducted in Nigeria. The data gathered were analysed using

Vector Error Correction Mechanism of Ordinary Least Square econometric technique. The findings of the study revealed that there exists a long run relationship among the variables in the model. Specifically, exchange rate and interest rate significantly influenced commercial bank lending while liquidity ratio and money supply exert negative effect on commercial bank loans and advances. The study recommended that monetary authority should make efforts to develop indirect monetary instruments and exercise appropriate control over the monetary sector. This particular study was conducted in Nigerian DMBs. However, there is need for such study to be carried out in other part of West African countries such as Ghana, Gambia, Liberia and Sierra Leone to compare their findings as to whether it concur with the one in this study or not.

In the same vein, Zaman, Arslan, Sohail and Malik (2014), investigated the impact of monetary policy on financial performance of banking sector. The study was carried out in Pakistan. A sample of twenty (20) banks was selected to represent the Pakistan financial sector. The data were gathered and analysed using correlation analysis followed by ordinary least square regression analysis. The finding of the study revealed that interest has significant inverse relationship on firm financial performance which is measured by ROA and ROE. The study recommended that government should moderate the interest rate to reflect a better performance for the financial sector. In this study, the sample of twenty (20) DMBs was a fair representation of the entire banking sector in Pakistan.

In the same light, Mulwa (2015), examined monetary policy tools on the financial performance of DMBs. The study was carried out in Kenya. The data collected were analysed using descriptive and inferential statistics. The findings of the study revealed that open market operation (OMO) and cash reserve ratio (CRR) have no significant effect on the financial performance of DMBs. Bank size was however found to have a weak positive effect on financial performance of DMBs in Kenya. The study therefore recommends that DMBs need to focus more on the internal factors that affect financial performance of DMBs. The study further recommends that DMBs should focus on monetary policy changes to the extent of complying with the CBK

guidelines and adjusting their variables accordingly. This study focuses on Kenya which is East Africa, there is need for such study to be conducted in West, Central and South African countries to compare results to be obtain. Similarly, Ndugbu and Peter (2015), investigated the impact of monetary policy on the performance of deposit money banks. The study was carried out in Nigeria (1993-2013). Data for this study were collected and analysed using ordinary least square (OLS) technique and co-integration. The findings of the study revealed that bank deposit rate, bank lending rate, cash reserve ratio and liquidity ratio considered, only bank deposit rate has a significant though inverse relationship. The study recommended that the CBN should moderate the deposit rate as a tool for regulating deposit money banks operations. The findings of this study focused on deposit money banks which is a combination of DMBs and merchant banks. Therefore, there is need for such study to be conducted only on DMBs or merchant banks to see the extent of the relationship among the instruments.

In the same vein, Meshack and Nyamute (2016), investigated the effect of monetary policy on the financial performance of listed DMBs. The study was carried out in Nairobi Securities Exchange. The data collected were analysed using multiple regression and Pearson correlation techniques. The findings of the study revealed that open market operation influenced returns of the listed DMBs on the Nairobi Securities Exchange. However, the study also established that OMO were positively correlated with the financial performance of the DMBs listed on the NSE while central bank rate (CBR) and cash reserve ratio (CRR) rates negatively influenced financial performance of DMBs listed on the NSE. The study therefore recommended that the country should handle its macroeconomic variables such as CBR, CRR and OMO not to bring about devaluation of the country's currency which affect performance of the listed DMBs. Similar study should be undertaken in the manufacturing sector listed on the NSE.

Moreover, Victor, Ozioma, Chiaka and Samuel (2017), evaluates the impact of monetary policy regime on the performance of DMBs. The study was conducted in Nigeria. The study covered SAP period (1986-1999) and post SAP period (2000-2013). Data collected were analysed using regression and

Pearson product moment correlation technique. The findings of the study revealed that MPR during the SAP period did not have significant impact on the total asset value, Deposit mobilisation, loan and advance and credit to the private sector while MPR during the post SAP period had significant impact on the total asset value, deposit mobilisation, loan and advances and credit to the private sector respectively. This study recommended that government should review the position of the monetary policy rate in the country through its monetary authority in a way that will be friendly to the DMBs. Monetary policy rate in the country needs to be study with financial performance measures such as liquidity, leverage and profitability to understand its position in the country. From the above empirical studies, it shows that most of the findings of the studies are mixed up, this could possibly be attributed to difference in environment and therefore calls for further studies

Profit can be seen as the difference between revenues and expenses over a period of twelve months' time that is one calendar year (Heibati, Nourani & Dadkhah, 2009). This is a desirable objective which all profit-making entity should pursue in its endeavour for proper survival. Gomez, Landier, Sraer, and Thesmar (2020) in a study on Banks' exposure to interest rate risk and the transmission of monetary policy found that, the cash-flow exposure of banks to interest rate risk, or income gap was a significant determinant of the transmission of monetary policy to bank lending and real activity. Also, when the Federal Reserve of the United State Funds MPR increases, banks with a larger income generate stronger earnings and contract their lending by less than other banks. This finding is robust to controlling for factors known to affect the transmission of monetary policy to bank lending. It also holds on loan-level data, even when we control for firm-specific credit demand. Hence, when monetary policy tightens, firms borrowing from banks with a larger income gap reduce their investment by less than other firms. This findings suggests the need to investigate further, by studying the profitability of financial institution in a developing country like Nigeria and using different monetary policy measure as utilized in their study. It also

justifies the variable, scope, method and demographic gaps identified as some of the problems for the study.

Sims & Wu (2020) studied and evaluated Central Banks' tool kit in the past, present, and future. They developed a structural DSGE model to systematically study the principal tools of unconventional monetary policy –quantitative easing (QE), forward guidance, and negative interest rate policy (NIRP) –as well as the interactions between them. To generate the same output response, the requisite NIRP and forward guidance interventions are twice as large as a conventional policy shock, which seems implausible in practice. In contrast, QE via an endogenous feedback rule can alleviate the constraints on conventional policy posed by the zero lower bound. Quantitatively, QE1-QE3 can account for two thirds of the observed decline in the “shadow” Federal Funds rate. In spite of its usefulness, QE does not come without cost. A large balance sheet has consequences for different normalization plans, the efficacy of NIRP, and the effective lower bound on the policy rate. The findings made by them in the US suggests, that, there are both orthodox and unorthodox monetary policies as part of an apex banks tool kit. The utilization of an orthodox monetary policy tool kit here in Nigeria

Naceur (2003) in a study of the Tunisia banking profitability for 10 banks for the period 1980- 2000. The empirical findings of the study showed that loans has a positive impact on profitability but bank size has a negative impact on profitability of Tunisian banks.

In the same way, Goddard et al. (2004) investigated the profitability of European banks in the 1990s. The results showed irrespective of intensifying competition, there is significant persistence of abnormal profit year in year out. Also, Heibati et al. (2009) examined and compared the performance of private banks in Iran and Arabian countries of Persian Gulf Area. The empirical findings showed statistically significant relationship between liquidity and profitability of those banks specifically in the early years of operations. In the same vein, Javaid, Anwar, Zaman and Gafoor (2011) analysed the determinants of top 10 banks profitability in Pakistan from 2004 – 2008. They concentrated on internal factors only. The results

indicated that higher loans contribute toward profitability but the impact is insignificant. Equity and deposits have significant impact on profitability.

Return on Capital Employed as a proxy for profitability

Return on capital employed is a popular financial instrument and communication tool for the appraisal of companies (Singh & Yadav, 2013). It is a key parameter for measuring the financial performance of the management and the value of a business (Damodaran, 2007). In addition, return on capital employed (ROCE) indicates how well a company is utilizing its capital to generate revenue and is calculated as profit before interest and tax divided by capital employed multiply by one hundred percent (100%) (Mandal, Mahavidyalaya & Goswami, 2010). License of approval issued by the CBN largely depends on the legitimacy of the DMBs. If records on ground shows that, a DMB is not conforming to the policies and laws guiding their operations in Nigeria, the apex bank has the power to withdraw the license and declare the DMB to be illegitimate regardless of its profitability. The theoretical backing that underpins the study is the legitimacy theory; the basic tenet of legitimacy theory is that companies cannot continue to exist and thrive (in a given country) if their beliefs and methods are contrary to those of the society in which they operate. This implies that there is some form of ‘social contract’ between the company and its society. If an organization cannot justify its continued operation, then in a sense the community arm of authority (CBN) may revoke its ‘contract’ to continue its operations. It then loses its ‘licence to operate’. For the reason that, return on capital employed measures profitability with respect to invested capital, it is important for organisations that require large amounts of initial capital investment (as required by the CBN) before they start producing goods/products or rendering services. The advantage of this ratio is that it considers all the factors of a company and is widely used in 1) showing how much a company is gaining for its asset or losing for its liabilities, 2) proving the value the business gains from its asset and liabilities, 3) assessing whether a business generates enough returns to pay for its cost of capital, and 4) making intra and inter-business comparisons

(Damodaran, 2007; Singh & Yadav, 2013); hence its adoption as a proxy for profitability in this study.

Monetary Policy

Monetary policy has been viewed as the regulations instituted by any government in order to control the amount of money circulating within an economy. These regulations are usually developed by the central bank of a country. The legitimacy theory that is utilized to underpin the study explains that, failure of a DMB to comply and conform to the CBN's policy may render its operations to be declared as illegitimate and lead to withdrawal of its operating license. Therefore, Central Banks around the globe employ certain monetary policy instruments like bank rate, open market operation, liquidity ratio, inflation rate, changing reserve requirements, foreign exchange rate and other selective credit control instruments; Apex bank also determines certain targets on monetary variables (Ajayi & Atanda, 2012). In addition, monetary policy is the process by which the government, monetary authority or central bank of a country controls the supply of money, availability of money and cost of money or interest rate to attain a set of objectives oriented towards the growth and stability of the economy (United States Federal Reserve Board, 2006). In view of the above assertions, monetary policy can be viewed as a measure adopted by central Bank of a country through its monetary authority to regulate the volume of money in circulation in the economy using various instruments with the view of having a free inflationary environment. The essence of monetary policy is to ensure smooth and better economic growth and development especially in this contemporary world.

Monetary Policy Decision

Monetary policy committee of the central bank of Nigeria takes decision from time to time on these indicators such as monetary policy rate, exchange rate and cash reserve ratio for stabilising the economy to the path of growth (CBN, 2018). Also, Monetary Policy Rate formerly known as Minimum Rediscount Rate (MRR) was introduced by the Central Bank of

Nigeria as a discount rate for its lender of last resort functions but was later replaced when the MRR failed to serve as an appropriate anchor rate in the financial system. Thus, the Exchange rate regime and MPR is the anchor rate issued by the central bank through its monetary policy committee which influences other money market interest rates (CBN, 2006). In addition, monetary policy rate is the benchmark rate for tracking the movement of other market rates of interest and maintaining economic stability as set by the monetary policy committee of the central bank (Kelikume, 2012). An increase in the MPR signifies the desire of the monetary authorities to pursue a restrictive monetary policy, while a decrease implies a more accommodating or expansionary monetary policy. A change in the MPR has implication for the money market interbank interest rates, growth in credit and price development in the economy (CBN Working Paper Series, 2015). In same way, monetary policy rate has been viewed as the rate at which central bank of Nigeria lends to DMBs in performing their duties as lender of last resort. It is expected to communicate its stance of monetary policy and acts as a guide for all other market interest rates (CBN, 2016).

Cash Reserve Ratio

Cash Reserve Ratio (CRR) is generally defined as a particular minimum amount of deposits that needs to be maintained as a reserve by every commercial bank in a country according to the requirement of the Apex Bank requirement (RBI, 2000). The CRR will be fixed as per the rules and regulations of the Apex Bank. Any fluctuations in cash reserve ratio will be having direct impact on stock market and overall economy of the nation. Cash Reserve Ratio (CRR) is the percentage of deposits which DMBs are required to keep as cash according to the direction of the Central Bank of Nigeria (CBN, 2006). This instrument is used by the central bank to influence the level of bank reserves and hence, their ability to grant loans. Reserve requirements are lowered in order to free reserves for banks to grant loans and thereby increase money supply in the economy. On the other hand, they are raised in order to reduce the capacity of banks to provide loans thereby reducing money supply in the economy. The reserve

requirement (or cash reserve ratio) is a central bank regulation that sets the minimum fraction of customer deposits and notes that each commercial bank must hold (rather than lend out) as reserves. These required reserves are normally in the form of cash stored physically in a bank vault (vault cash) or deposits made with a central bank. The required reserve ratio is sometimes used as a tool in monetary policy, influencing the country's borrowing and interest rates by changing the amount of funds available for banks to make loans with.

Exchange Rate/Foreign Exchange Rate

International exchange refers to any payment made by one country to another; also, it refers to the market in which national currencies are bought and sold by those who require them for such payments. Countries may make payments in settlement of a trade debt, for capital investment, or for other purposes; moreover, other transactions may involve exporters, importers, multinational corporations, or persons wishing to send money to friends or relatives. However, the reasons for such payments, the methods of making them, and accounting for them are matters of importance for economists and national governments. Exchange rate (prevailing) is the rate at which the money of one country can be changed for the money of another country; likewise, it is the price of a unit of a currency expressed in terms of another currency, or better still the price at which a foreign currency can be bought with a domestic currency (Wonnacott, Forbes, & Pierce, 2014).

Theory and Methodology

Early developers of the concept of legitimacy theory were Shocker and Sethi (1974) as cited in Patten (1992). The basic tenet of legitimacy theory is that companies cannot continue to exist and thrive if their beliefs and methods are contrary to those of the society in which they operate. This implies that there is some form of 'social contract' between the company and its society. If an organization cannot justify its continued operation, then in a sense the community may revoke its 'contract' to continue its operations. It then loses

its 'licence to operate'. In order to ensure that society continues to view the company's activities as congruent to its own, the company should disclose its activities and ensure conformity to policy and laws guiding its operations. As a consequence, in a quest for DMBs to legitimize their operations, they need to conform with the tenets of CBN as a way of getting the legitimacy license from the Apex Bank to operate in Nigeria without any let or hindrance.

The research study utilized a secondary source of data obtained from the gazette of the Central Bank of Nigeria and Audited Annual Reports and Accounts of the listed Deposit Money Banks for the period of ten (10) years. An archival-longitudinal strategy was utilized in the study bearing in mind the nature of the data and the study. A judgmental/purposive sampling technique was used to arrive at a working sample of the DMBs from the total population due to the fact that, not all the banks are listed during the course of the study scope. Multiple regression analysis was employed to predict whether the predictor variables namely monetary policy rate, exchange rate and cash reserve ratio have significant impact or not on the outcome (dependent) variable return on capital employed (proxy for profitability). The hypotheses were tested using multiple regression with the aid of the latest version of STATA15. The research paradigm for this work is epistemology, it is supported by positivism and critical realism philosophies.

Results and Discussion

The normal p-plot of the regression standardized residual (see Appendix B) indicates a good fit and does not suggest the presence of many outliers among the regression standardized residuals. In other words, the points on the plot do not appear to deviate significantly from the line of best fit indicating that the normality assumption is valid and fulfilled. The VIF in excess of 10 should be taken as an indication of harmful Multicollinearity (Neter, Wasserman, & Kutner, 1989 and Gujarati, 2003). Therefore, Multicollinearity test carried out to check whether there is a sequential correlation between independent variables which will mislead the result of the study shows that the maximum VIF is 4.06 and the minimum VIF is 1.17

and this is less than 10 which indicate absence of Multi-collinearity (See Appendix B). Skewness and Kurtosis test carried out on all the variables indicates that, none of the variables were highly skewed with a value of 1.35 to 0.62 respectively (Appendix B). The results of the tests therefore affirm that the dependent variable data of the research did not differ significantly from a normal distribution, as evidenced by the normal Skewness and Kurtosis test. Hence, there is no need to normalize the variable data found to be highly skewed using Winsorization by limiting extreme values in the statistical data to reduce the effect of possibly spurious outliers.

The result of Breusch-pagan/Cook-Weisberg test for heteroscedasticity reveals that errors have non-constant variance (it is heteroskedastic and not homoscedastic), which indicates that the OLS estimators will have the maximum variance of all unbiased estimators, and also the P-values will not be reliable. This is evidenced by the significant probability (p-value) of the chi square of 0.0157 (See Appendix B). This signifies presence of heteroscedasticity and absence of homoscedasticity in the model (Garko, 2014). OLS is no longer an unbiased estimator when heteroscedasticity is present (Gujarati, 2003). As a result, we can no longer rely on the conventionally computed confidence intervals, hence, the presence of Heteroscedasticity in the model suggests the need to add weight to the variables, hence, we adopt the GLS. The fact that there is a trade-off between the efficiency of the random effect (RE) approach and the consistency of the fixed effect (FE) approach, the Hausmann specification test is performed to decide between fixed or random effect models. The result of the test reveals that the two model (Fixed and random effect) are correlated with chi-square probability (p-value) of 0.00 at 1%, 5% and 10% significance level and that the difference in coefficient is systematic, hence, we reject the random effect model in favour of the fixed effect model as shown in Appendix B. From the results of the robustness tests performed to determine the accuracy and reliability of research data used in testing the study hypotheses, it shows that the data is free of regression errors capable of invalidating the research's regression assumptions. In other words, the data is suitable and the regression estimates obtained are reliable.

The study used Pearson correlation coefficient because of the continuous nature of both the predictive and outcome variables and to explain the direction of the relationship between the variables. Here, the sign of the coefficients was taken into consideration, since the correlation gives value between +1 and -1. Where +1 indicates total correlation, 0 means no correlation and -1 denotes total negative correlation. This gives an insight into the magnitude of the pairs of the explanatory variables. The results of the Pearson's correlation between the dependent variable (return on capital employed as a proxy to profitability) and independent variables (monetary policy rate, exchange rate and cash reserve ratio) as presented in Appendix B shows that the relationship between return on capital employed and the explanatory variable cash reserve ratio is very weak and negative while that of monetary policy rate, exchange rate and return on capital employed is negative and moderately weak as well. This shows that, there is a weak non-linear relationship between the monetary policy decision proxies and the profitability of listed banks in Nigeria.

The GLS regression results reveal the cumulative R^2 (0.05) which is the multiple coefficient of determination that gives the proportion or percentage of the total variation in the dependent variable (profitability) explained by the monetary policy decision (Garko, 2014). Hence, it signifies that 5% of the total variation in profitability of listed deposit money banks on the Nigerian Stock Exchange are caused by monetary policy rate, exchange rate and cash reserve ratio, while the remaining 95% of the total variation in the profitability (proxied by return on capital employed) was caused by factors not explained by the model. This indicates that the model is fit and the variable are properly selected, combined and used. This can be confirmed by the p-value statistics of 0.000 at 5% level of significance, confirming the rejection of the null hypotheses and acceptance of the alternate hypotheses, that, monetary policy decision (as proxy by monetary policy rate, exchange rate and cash reserve ratio) have significant impact on the profitability of listed deposit money banks in Nigeria.

Conclusion and Recommendation

Monetary policy rate as set by the monetary policy committee of the central bank of Nigeria determines to some extent the position of the returns on capital employed of the listed DMBs in Nigeria. Thus, the fluctuations of the MPR in Nigeria does result in high or low returns accruing to the DMBs in Nigeria. Therefore, the monetary policy committee of the central bank is

advised to set a more effective, thoughtful and more flexible MPR as possible in order to improve the profitability of DMBs in the short-run and the Nigerian economy in the long run.

Individually, cash reserve ratio which remains the ratio that constitutes the deposit liabilities of the commercial banks in the central bank of Nigeria, exchange rate and monetary policy rate do not significantly impact the profitability of listed deposit money banks in Nigeria.

Based on the findings of the study, we recommend that the monetary policy committee of the central bank of Nigeria should meet from time to time where necessary to set up a moderate policy rate which will assist the commercial banks to have better returns in their operations to sustain them in the long run. Also, the central bank of Nigeria which is an organ of the government saddled with the responsibility of stabilizing the economy should set the statutory liquidity ratio as appropriate as possible to enhance the economic stability and growth prospects in the Nation's GDP.

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