
EFFECT OF MONETARY POLICY RATE ON PERFORMANCE OF SELECTED QUOTED DEPOSIT MONEY BANKS IN NIGERIA

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ABSTRACT

This research examines the effect of monetary policy rate on the performance of selected quoted deposit money banks in Nigeria. One of the major problems confronting the banking industry today is the increasing incidence of loan defaults and consequent loan losses which manifested on the profitability of the banks. The specific objectives are to; determine the effect of monetary policy rate on the return on assets of quoted deposit money banks in Nigeria; assess the effect of monetary policy rate on the return on equities of quoted deposit money banks in Nigeria and analyse the effect of monetary policy rate on net profit margin of quoted deposit money banks in Nigeria. Secondary data were sourced from CBN Statistical Bulletin of various years and Nigerian Bureau of Statistics. Specifically, the econometric technique of multiple regression analysis with ordinary Least Square (OLS) was used for the analyses. From the result of the tested hypotheses of the study, it was found that there is a significant effect of monetary policy rate on the return on assets of quoted deposit money banks in Nigeria. There is also a significant positive effect of monetary policy rate on the return on equities of quoted deposit money banks in Nigeria and a significant effect of monetary policy rate on net profit margin of quoted deposit money banks in Nigeria. Based on the findings of this study the researchers recommend that government should adopt policies that will help Nigerian deposit money banks to improve on their performance through the reduction of monetary policy rates. Central Bank of Nigeria should ensure effective and efficient regulation and supervisory framework of banks in order to strike a balance in their loan pricing decisions. This will help them to be able to cover cost associated with lending and at the same time, maintain good banking relationship with their borrowers.

Keywords: Bank performance, profit, lending, bank supervision, loan pricing

INTRODUCTION

Monetary policy rate is the rate at which Central Bank of Nigeria lends to Deposit Money Banks. Over the years, it has been a major monetary tool used in controlling money supply and lending. The Rate increased in 2022 and 2023 due to cost-push inflation. Deposit money banks are the most important savings, mobilization and financial resource allocation institutions. Consequently, these roles make them an important phenomenon in economic growth and development. In Nigeria as in other developing countries, the objectives of monetary policy include full employment, domestic price stability, adequate economic growth and external sector stability. The supplementary objectives of monetary policy include smoothening of the business cycle, prevention of financial crisis and stabilization of long term interest rates and real exchange rate (Abata, 2012). According to Somoye and Iio (2009) in pursuing these objectives, the CBN recognises the existence of conflicts among the objectives necessitating at some points some sort of trade-offs. The Bank manipulates the operational target (monetary policy rate, MPR) over which it has substantial direct control to influence the intermediate target (broad money supply, M2) which in turn impacts on the ultimate objective of price stability and sustainable economic growth (Somoye and Iio, 2009).

By manipulating these instruments, central banks affect the rate of growth of the money supply, the level of interest rate, security prices, credit availability and liquidity creation from commercial bank. These factors, in turn can exert monetary imbalances or shocks on the economy by influencing the level of investment, consumption, imports, exports, government spending, total output, income and price level in the economy. Amidu and Wolfe (2008) studies cited in Ajayi and Atanda (2012) provided empirical evidence to support the effect of monetary policy changes on loan supply of less liquid banks, deposit base and induce banks ability to perform their expected roles within the financial system. Ogunyemi (2013) reported that some monetary policy instruments like minimum rediscounting rate (MRR); liquidity ratio, exchange rate in the recent time in Nigeria was not in favour of the increase in the volume of deposit money banks loans and advances in Nigeria due to poor infrastructural facilities and high cost of operating in such a volatile environment.

As earlier pointed out, loans and advances constitute the largest proportion of the banks' earning asset hence loan defaults which results in bad debts, destroy this asset and subsequently reduce banks profitability as bad debt or provision for bad debt are charged to profit and loss account. Loans is vital both to the banks and to the general public in that it is the source of earnings as well as the essential items that determines the liquidity and ultimate solvency of the banks. Bank credits in form of loans and advances are funds transferred to the deficit unit of the economy for investment purposes and any lowering of banks asset (loans and advances) due to bad debts will affect the amount available for future credits. Consequently, this will affect production, employment, taxes due to the government and funds available for social services, and also affect the bank growth. The incidence of huge bad debts resulting in non-profitability and subsequent bank failure/distress in the banking industry has not only attracted the attention of the monetary authorities but the public at large.

The main objective of this study is to examine the effect of monetary policy rate on performance of quoted deposit money banks in Nigeria. The specific objectives are to;

- (i) determine the effect of monetary policy rate on the return on assets of selected quoted deposit money banks in Nigeria
- (ii) assess the effect of monetary policy rate on the return on equities of selected quoted deposit money banks in Nigeria

(iii) analyse the effect of monetary policy rate on net profit margin of selected quoted deposit money banks in Nigeria

The hypotheses of the study are stated in null form and were formulated in line with the research objectives. They are as follows;

H0₁: There is no significant effect of monetary policy rate on the return on assets of selected quoted deposit money banks in Nigeria.

H0₂: There is no significant positive effect of monetary policy rate on the return on equities of selected quoted deposit money banks in Nigeria

H0₃: There is no significant effect of monetary policy rate on net profit margin of selected quoted deposit money banks in Nigeria.

Review of Related Literature

Effects of High Monetary policy rate on Interest

Odimaya (2000) noted that “banks no longer want to lend on long-term it is usually at cut-throat interest rates”. This situation has continued to affect several sectors in Nigeria especially the manufacturing sector, even in this democratic dispensation with the federal government economic policy of deregulation of the banking sector. This condition according to Kazeem (2004) has greatly affected the manufacturing sector. This opinion of Kazeem is made stronger when he wrote that the banks high interest monetary policy rates continue to threaten the agreement reached by the Nigerian government, the central bank of Nigeria (CBN) and the banks that monetary policy rates should not be more than the minimum rediscount rate.

The above agreement was to encourage bank lending to industrialists and so, stimulate the manufacturing sector development and improvement of the national economy which would guarantee rapid industrialization in line with development objectives. Manufacturing which cannot afford the high bank monetary policy rates hardly survive and they are mostly neglected by government policies and it's these small scale industries that respond to the lives and needs of the ordinary citizens.

According to Obidigbo (2003) this development coupled with the galloping inflation has equally affected bank-monetary policy rate to all borrowers of money from banks. However, Obidigbo (2003) noted that the manufacturing sector that sources for bank loan is adversely affected. Obidigbo (2003) equally stated that unlike the large scale industries that can turn in much foreign exchange because most of them are under foreign ownership, the indigenous small and medium scale industries that need the bank financial support seem trapped by this unpleasant development. Komolafe (2005) opined that the high bank monetary policy rate affected all sectors in the economy defending his claim in this direction;

Monetary policy rate and Economic Boom

A typical capitalist or mixed economy is made up of surplus and deficit units. In performing their primary function of intermediation, banks collect deposit from the surplus unit of the economy and lend it out to the deficit unit in form of loans and advances (Kalu, 2009). The role of the financial system in mobilizing and channeling of funds to the real sectors of the economy cannot be taken for granted. Sound financial system is recognized as a necessary and sufficient condition for rapid growth and development for every modern economy (Sanusi, 2012).

The financial system consists of institutions like banks, insurance, stock market, and other financial institutions. In Nigeria, the banking sector is an important part of the financial system. The banking sector dominates the Nigerian financial system as it accounts for about 90 % of the total assets in the system and about 65 % of market capitalization of the Nigeria Stock Exchange (Soludo, 2009). However, the banking sector has not contributed significantly to the growth and development of Nigerian economy as expected. The poor performance of the sector has been attributed to numerous problems that faced the sector such as inadequate capital, high nonperforming assets which had led to frequent distress in the sector and collapse of some banks in the past (Sanusi, 2012).

If banks cannot grant loans to the deficit economic units within their immediate operational environment, the business sector will not grow, deposits will be limited and this will hinder the ability of banks to generate income (Galac, 2001). For most banks, loanable funds account for about fifty percent or even more of their total assets and about half to two-thirds of their revenue (Udoka & Effiong, 2006). This made lending the first and most important function of banks. The function is considered important due to number of reasons. First, the general public or customers use lending in assessing banks stability. Banks that are willing and able to give out loans are considered more stable than those that mostly reject loans proposals of their customers.

Factors that Militate against Efficient Monetary policy rate in Nigeria

According to Abor and Biekpe (2007), the bank capital channel views a change in interest rate as affecting lending through bank's capital, particularly when banks lending is constrained by a capital adequacy requirement. Thus, an increase in interest rates will raise the cost of banks external funding, but reduce banks profits and capital. The tendency is for the banks to reduce their supply of loans, if the capital constraint becomes binding.

However, banks could also become more willing to lend during certain periods because of an improvement in their underlying financial condition. This bank behavior is explained by the capital constraint models. Basically, banks are subjected to both market- and regulator – imposed capital requirements. For prudential purposes, banks regulators generally require banks to maintain capital at not less than a stated fraction of the bank's total assets. For instance, banks are expected to meet the capital adequacy requirement of the Basel Accord of ten per cent.

Mensah (2004) suggest that in such situations, the banks would prefer to lend by way of loan rather than overdraft to the customers. By this mechanism the bank can establish an automatic monitoring mechanism for ensuring repayment as well as trying to ensure that the funds are used for the purpose for which they are granted. Mensah (2004) revealed that there have been many instances where customers have used trading overdraft facilities for fixed asset purchases which has robbed them of much-needed working capital and led to its ultimate demise. He suggests that businesses should be able to provide the bank with monthly information to enable progress to be monitored and that, accuracy is important and one should not try to cover up bad news.

Financial Performance

Financial performance is an indicator of how profitable a company is relative to its total assets. It is measured by return on asset (Nduati, 2013). There has been a wide variety of definitions of firm performance that have been proposed in the literature. Performance is the

ability to sustain income stability and growth. A profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial systems.

The overall financial performance of the banking industry in Nigeria in the last two decades has been improving. However, this doesn't mean that all players in the industry are profitable; there are those that are declaring losses (Oloo, 2009). This does not leave out the deposit money banks. Over the past two decades, institutions that make microloans to low-income borrowers in developing and transition economies have focused increasingly on making their lending operations financially sustainable by charging interest rates that are high enough to cover all their costs. They argue that doing so will best ensure the permanence and expansion of the services they provide (Rosenberg, 2009). Profit is the ultimate goal of these deposit money banks. However, this does not mean that deposit money banks have no other goals. They could also have additional social and economic goals.

Monetary policy is one of the macroeconomic instruments with which nations (including Nigeria) do manage their economies (Ajie & Nenbe, 2010). According to Ubi, Lionel and Eyo (2012), monetary policy is an aspect of macroeconomics which deals with the use of monetary instruments designed to regulate the value, supply and cost of money in an economy, in line with the expected level of economic activity. It covers gamut of measures or combination of packages intended to influence or regulate the volume, prices as well as direction of money in the economy per unit of time. Specifically, it permeates all the debonair efforts by the monetary authorities to control the money supply and credits conditions for the purpose of achieving diverse macroeconomic objectives. In Nigeria, the responsibility for monetary policy formulation rests with the Central Bank of Nigeria (CBN) and the Federal Ministry of Finance (FMF) (Ajie and Nenbe, 2010; Ajayi and Atanda, 2012; Abata, 2012).

Monetary Policy as a Major Economic Stabilization Weapon

Monetary policy being a major economic stabilization weapon involves measures taken by the Central Bank to regulate and control the volume, cost, availability and direction of money and credit in an economy to achieve some specified macroeconomic policy objectives and to counter all undesirable trends in the economy. According to the United States Federal Reserve Board, (2006), 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. Monetary policy represents a combination of measures design to regulate and control volume of money and credits in order to achieve certain macroeconomic objectives. CBN Annual Report (2004) defined monetary policy as a measure introduce by the monetary authority on monetary targeting and the mopping up of excess liquidity, aimed at ensuring a noninflationary macroeconomic environment. Similarly, CBN Annual Report (2009) refers to it as specific action taken by the Central Bank to regulate the value, supply and cost of money in the economy with a view to achieving Government's macroeconomic objectives. In a nutshell, the aims of monetary policy are basically to control inflation, maintain healthy balance of payments position in order to safe guard the external value of the national currency, and promote adequate and sustainable level of economic growth and development.

Credit on the other hands refers to the status of being trusted to pay money back to somebody who lends it to one (Oxford Advanced Learners Dictionary, 1998). It means a sum of money lent by a bank (Central Bank) to someone (Federal Government) who agrees to pay back with interest at a future date. Credit to the Federal Government enable it finance her budget

deficits and carry out developmental projects in the country. Olokoyo (2011) argued that credit constitutes the largest single income-earning asset in the portfolio of most banks, thus explained why banks spend enormous resources to estimate, monitor and manage credit quality. This is understandably, a practice that impact greatly on the lending behaviour of banks as large resources are involved. Deposit money banks perform three major functions, namely, acceptance of deposits, granting of loans, and the operation of the payment and settlement mechanism. In terms of flow of funds, the banking system, clearly dominates and has an important impact on the level of economic development. Adedoyin and Sobodun (2006) assert that “lending is undoubtedly the heart of banking business. Therefore, its administration requires considerable skill and dexterity on the part of the bank management”.

Return on Equity (ROE)

Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity since shareholders' equity is equal to a company's assets minus its debt. ROE is considered the return on net assets. ROE is considered a gauge of a corporation's profitability and how efficient it is in generating profits. The higher the ROE, the more efficient a company's management is at generating income and growth from its equity financing. Abdullah (2020) explains that sustainable growth rates and dividend growth rates can be estimated using ROE, assuming that the ratio is roughly in line or just above its peer group average. Although there may be some challenges. ROE can be a good starting place for developing future estimates of a stock's growth rate and the growth rate of its dividends. These two calculations are functions of each other and can be used to make an easier comparison between similar companies.

$$\text{Return on Equity} = \frac{\text{Average Shareholders' Equity}}{\text{Net Income}}$$

Return on Assets (ROA)

According to Ejigbo (2021), return on assets (ROA) refers to a financial ratio that indicates how profitable a company is in relation to its total assets. Corporate management, analysts, and investors can use ROA to determine how efficiently a company uses its assets to generate a profit.

The metric is commonly expressed as a percentage by using a company's net income and its average assets. A higher ROA means a company is more efficient and productive at managing its balance sheet to generate profits while a lower ROA indicates there is room for improvement.

$$\text{ROA} = \frac{\text{Net income}}{\text{Total Asset}}$$

Net Interest Margin (NIM)

Oluoha (2020) defines Net Interest Margin (NIM) as a measurement comparing the net interest income a financial firm generates from credit products like loans and mortgages, with the outgoing interest it pays holders of savings accounts and certificates of deposit (CDs). Expressed as a percentage, the NIM is a profitability indicator that approximates the likelihood of a bank or investment firm thriving over the long haul. This metric helps

prospective investors determine whether or not to invest in a given financial services firm by providing visibility into the profitability of their interest income versus their interest expenses.

Simply put: a positive net interest margin suggests that an entity operates profitably, while a negative figure implies investment inefficiency. In the latter scenario, a firm may take corrective action by applying funds toward outstanding debt or shifting those assets towards more profitable investments.

Liquidity Preference Theory

The liquidity preference approach views interest rates from the supply and demand of the stock of money in the financial system. The concept was first developed by Keynes (1936) where he stated that the demand for money is expressed as a function of level of income and interest rate. $MD=(Y, r)$ where: MD = money demanded: Y =Level of income r = interest rate. This framework holds that the interest rate is determined by the interaction of supply and demand of money stock. According to Keynes (1936) money is demanded mainly for the following motives; transaction, precautionary and speculative motive. He further stated that investors will always prefer short term securities to long term securities. To encourage them hold long term bonds, long term securities should yield higher interests than short term bonds. Therefore, the yield curve will always be upward sloping. It is based on the observation that, all else being equal, people prefer to hold on to cash (liquidity) and that they will demand a premium for investing in non-liquid assets such as bonds, stocks, and real estate. The theory suggests that the premium demanded for parting with cash increases as the term for getting the cash back increases.

Auerbach (1988) postulates that the rate in the increase of this premium, however, slows down with the increase in the period for getting the cash back. In financial terms, this theory is expressed as “forward rates should exceed the future spot rates”. According to Reilly and Norton (2006), the theory of liquidity preference holds that long term securities should provide higher returns than short term obligations because investors are willing to sacrifice some yields to invest in short maturity obligations to avoid the higher price volatility of long maturity bonds.

According to Howels and Bain (2007), an increased preference for liquidity in the model is equivalent to increased demand for money and therefore demand for money increases wherever more people think interest rates are likely to rise than believes they are likely to fall. The study seeks to identify the rationale of the liquidity preference theory on the relationship between the money supply in form of loans by deposit money banks in times of rising and or falling monetary policy rate, and the financial performance of the lender. On the other hand the borrowers will only invest where the returns on their investment profile exceed the borrowing rates.

METHODS

Research Design

This study made use of *Ex-Post Facto* research design. It is the type of research involving events that have already taken place and for which data already exists, and the researcher is merely involved in data gathering. The aim of a research design is to ensure that the overall strategy chosen to integrate the different components of the study address the research problem as unambiguously as possible. The justification for the adoption of this research design hinges on the unmanipulability of data and the intention of the researcher

to determine the relationship between monetary policy rate and performance of deposit money banks in Nigeria.

Sources of Data

This study basically made use of secondary data. The data for return on asset, return on equity, net interest margin and monetary policy rate were obtained from Annual Accounts of United Bank for Nigeria PLC and Zenith Bank PLC respectively.

Research Variables

The independent variable in this study is monetary policy (MPR) while the dependent variable is bank's performance which is proxied by Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM).

Method of Data Analysis

The analysis of data for this study was done based on the data collected from publications and statistical bulletins of CBN, NBS and Annual accounts of selected Deposit Money Banks in Nigeria. Both the dependent and independent variables were computed from the data extracted from the publications of the CBN, NBS and other relevant sources. Inferential statistics of the data used in this study were conducted via the aid of E-View 10.0 statistical software, using:

- i) Co-efficient of correlation: Which is a good measure of relationship between two variables. It is all about the strength of relationship and the direction of relationship as well.
- ii) Augmented Dickey-Fuller (ADF) test: was used to check for stationarity and to find out if the time series data contain a unit root to avoid a spurious result.
- iii) Regression analysis: predicts the value of a variable based on the value of the other variable and explains the effect of changes in the values of variable on the values of the other variables.
- iv) Ordinary Least Square (OLS) analysis was also used for this study.

Model Specification

This study specifies a functional linear relationship between monetary policy rate and bank performance variables.

The adapted model for this study was specified as follows:

$$\text{MPR} = \beta_0 + \beta_1 + \text{ROA} + \text{ROE} + \text{NIM} + \mu$$

Where:

MPR	=	Monetary policy rate
ROA	=	Return on asset
ROE	=	Return on equity
NIM	=	Net Interest Margin
β_0	=	Constant term (intercept)
β_1	=	Coefficient of bank performance
μ	=	Error term (Stochastic Term)

Decision Rule

Accept the alternative hypothesis, if the P-value of the test is less than 0.05. Otherwise reject and accept H_0 .

Data Presentation

The time series data obtained from the publications and annual Accounts of Selected Banks. The Banks include: United Bank for Africa and Zenith Bank Plc (2008-2022). It is presented in table 4.1 below:

Table 4.1: Operational variables

Bank	Year	Return on Equity (%)	Return on Asset (%)	Net interest margin (%)	Monetary policy Rate (%)
UBA PLC	2008	7.4	0.80	1.8	9.75
ZENITH PLC	2008	6.8	1.07	8.4	9.75
UBA PLC	2009	3.1	0.08	3.3	6.0
ZENITH PLC	2009	1.55	2.14	1.88	6.0
UBA PLC	2010	2.7	2.84	7.88	6.0
ZENITH PLC	2010	2.9	2.81	1.7	6.0
UBA PLC	2011	(2.8)	2.3	8.9	12.0
ZENITH PLC	2011	3.78	4.19	5.7	12.0
UBA PLC	2012	1.8	0.4	7.9	12.0
ZENITH PLC	2012	2.59	29.9	0.6	12.0
UBA PLC	2013	2.8	0.5	9.5	12.0
ZENITH PLC	2013	9.12	2.57	3.6	12.0
UBA PLC	2014	1.50	2.17	1.6	13.0
ZENITH PLC	2014	9.1	1.4	0.6	13.0
UBA PLC	2015	8.1	1.8	9.0	11.0
ZENITH PLC	2015	6.11	0.93	5.6	11.0
UBA PLC	2016	5.58	1.19	9.4	14.0
ZENITH PLC	2016	5.44	1.16	2.6	14.0
UBA PLC	2017	6.2	1.0	7.8	14.0
ZENITH PLC	2017	5.98	1.06	3.5	14.0
UBA PLC	2018	12.65	2.34	1.6	14.0
ZENITH PLC	2018	8.97	2.61	1.7	14.0
UBA PLC	2019	0.38	2.95	6.3	13.5
ZENITH PLC	2019	8.97	2.61	0.5	13.5
UBA PLC	2020	5.64	3.06	3.5	11.50
ZENITH PLC	2020	3.73	2.41	4.6	11.50
UBA PLC	2021	8.75	2.21	4.6	11.50

ZENITH PLC	2021	3.73	2.41	6.1	11.50
UBA PLC	2022	8.69	1.7	0.9	16.50
ZENITH PLC	2022	9.1	1.9	9.6	16.50

Source: Annual Accounts of Selected Banks (Various years)

4.2 Test of Reliability

The researcher tested for stationarity unit root test in order to fulfill the economic theory which states that variables that must enter a regression model must undergo a stationarity test in order to achieve a realistic (non-spurious) result at 1%, 5% or 10% level of significance. The result for the test is shown below in table 4.2. The data used in this study had unit root problem, consequently, the data were detrended using Augmented Dickey-Fuller Test. The result of the differenced data in order to solve the unit root problem is shown in table 4.2.

Table 4.2: Differenced Result

Variables	Test Statistic	Test Critical Values			Status	Prob.
	ADF	1% level	5% level	10% level	Stationary	
ROE	-7.760730	-3.646342	-2.954021	-2.615817	1(1)	0.0000
ROA	-9.701251	-3.646342	-2.954021	-2.615817	1(1)	0.0000
NIM	-8.950262	-3.646342	-2.954021	-2.615817	1(1)	0.0000
MPR	-10.62541	-3.646342	-2.954021	-2.615817	1(1)	0.0000

Source: Researcher's computation using E-view 12.0

Table 4.3: Correlation Matrix

	ROE	ROA	NIM	MPR
ROE	1.0000	0.4765	0.9570	0.1890
ROA	0.4765	1.0000	0.4082	0.4185
NIM	0.9570	0.4082	1.0000	0.1293
MPR	0.1890	0.4185	0.1293	1.0000

Source: Researcher's computation using E-view 12.0

4.3 Interpretation of Correlation Matrix

The correlation matrix result in table 4.3 shows that Bank performance proxied by sub-standard assets, Doubtful assets and losses are positively correlated with Banks profitability as proxied by return on equity, return on assets and net interest margin.

RESULTS

4.4 Test of Hypotheses

Test of Hypothesis I

H₀₁: There is no significant effect of monetary policy rate on the return on assets of selected quoted deposit money banks in Nigeria.

H₁: There is a significant effect of monetary policy rate on the return on assets of selected quoted deposit money banks in Nigeria.

Decision Rule

Accept the alternative hypothesis, if the P-value of the test is less than 0.05. Otherwise accept null hypothesis.

Table 4.4: **OLS (Simple Regression) Analysis testing the relationship between MPR and ROA**

Dependent Variable: ROA

Method: Least Squares

Date: 12/22/23 Time: 11:53

Sample (adjusted): 2008 2022

Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.023257	0.250469	-0.157205	0.8552
MPR	-0.012455	0.009764	4.287217	0.0081
R-squared	0.470777	Mean dependent var	-0.016000	
Adjusted R-squared	0.318961	S.D. dependent var	0.899916	
S.E. of regression	0.891346	Akaike info criterion	-9.663277	
Sum squared resid	26.21841	Schwarz criterion	-9.752154	
Log likelihood	44.60734	Hannan-Quinn criter.	-9.693957	
F-statistic	10.65928	Durbin-Watson stat	1.125300	
Prob(F-statistic)	0.007852			

Source: Researcher's computation using E- View 12.0

Interpretation of Regression (OLS) Result 1

The regressed coefficient correlation result in table 4.4 shows the existence of a statistically significant relationship between MPR ($\beta_1 = -0.012455$) and ROA at 5% significant level. The probability value for the slope coefficient shows that $P(x_1 = 0.007852 < 0.05)$. This implies that MPR has a statistically significant relationship with ROA at 5% significance level although the significance is negative.

The coefficient of determination obtained is 0.32 (32%), which is commonly referred to as the value of R^2 . The cumulative test of hypothesis using R^2 to draw statistical inference about the explanatory variables employed in this regression equation, shows that the R-Squared value shows that 32% of the systematic variations in the dependant variable can be jointly predicted by the independent variable (MPR) while 53% was explained by unknown variables that were not included in the model. The Durbin-Watson statistic of 1.125300 indicates that there is no auto-correlation problem. The overall significance of the model Prob F-statistic (0.006974) is statistically significant at 5%.

Consequently, since the P-value of MPR at 0.00708 is less than the critical value of 0.05, thus, therefore the alternative hypothesis, which states that there is a significant effect of monetary policy rate on the return on assets of selected quoted deposit money banks in Nigeria, is accepted.

Test of Hypothesis II

H₀: There is no significant positive effect of monetary policy rate on the return on equities of selected quoted deposit money banks in Nigeria.

H₁: There is a significant positive effect of monetary policy rate on the return on equities of selected quoted deposit money banks in Nigeria.

Table 4.5: Testing the relationship between Monetary Policy Rate (MPR) and Return on Equity (ROE)

Dependent Variable: ROE

Method: Least Squares

Date: 12/22/23 Time: 11:54

Sample (adjusted): 2008 2022

Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.019980	0.154943	-0.121070	0.9041
DOU	-0.000731	0.012002	4.068381	0.0060
R-squared	0.600141	Mean dependent var	-0.014000	
Adjusted R-squared	0.430156	S.D. dependent var	0.899914	
S.E. of regression	0.813389	Akaike info criterion	-9.712125	
Sum squared resid	23.53094	Schwarz criterion	-9.801002	
Log likelihood	45.46219	Hannan-Quinn criter.	-9.742805	
F-statistic	10.04676	Durbin-Watson stat	1.171771	
Prob(F-statistic)	0.005377			

Source: Researcher's computation using E- View 12.0

4.6 Interpretation of Regression Result

The regressed coefficient correlation result in table 4.5 shows the existence of a statistically significant relationship between MPR ($\beta_1 = -0.000831$) and ROE at 5% significant level although the significance is negative. The probability value for the slope coefficient shows that $P(x_1 = 0.0060 < 0.05)$. This implies that MPR has a statistically significant relationship with ROE at 5% significance level. The coefficient of determination obtained is 0.50 (50%), which is commonly referred to as the value of R^2 .

The cumulative test of hypothesis using R^2 to draw statistical inference about the explanatory variables employed in this regression equation, shows that the R-Squared value tells that 50% of the systematic variations in the dependent variable can be jointly predicted by the independent variable (MPR) while the remaining 50% was explained by unknown variables that were not included in the model. The Durbin-Watson statistic of 1.171771 indicates that there is no auto-correlation problem. The overall significance of the model Prob. F-statistic (0.005377) is statistically significant at 5%.

Consequently, since the P-value of MPR at 0.0060 is less than the critical value of 0.05, thus, therefore, the null hypothesis, which states that there is a significant positive effect of monetary policy rate on the return on equities of quoted deposit money banks in Nigeria is accepted.

Test of Hypothesis III

H₀: There is no significant effect of monetary policy rate on net profit margin of selected quoted deposit money banks in Nigeria.

H₁: There is a significant effect of monetary policy rate on net profit margin of selected quoted deposit money banks in Nigeria.

Table 4.6: Testing the relationship between MPR and Net interest Margin (NIM)

Dependent Variable: NIM

Method: Least Squares

Date: 12/22/23 Time: 12:03

Sample (adjusted): 2008 2022

Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.482623	0.66019	-0.512319	0.7182
MPR	-0.009350	0.050336	-4.185725	0.0053
R-squared	0.471041	Mean dependent var	-0.391712	
Adjusted R-squared	0.429224	S.D. dependent var	4.432989	
S.E. of regression	3.397302	Akaike info criterion	5.900279	
Sum squared resid	667.4496	Schwarz criterion	5.989156	
Log likelihood	21.02549	Hannan-Quinn criter.	5.930959	
F-statistic	10.04494	Durbin-Watson stat	0.759711	
Prob(F-statistic)	0.005405			

Source: Researcher's computation using E- View, 11.0

4.7 Interpretation of Regression Result 3

The regressed coefficient correlation result in table 4.6 shows the existence of a negative but statistically significant relationship between MPR ($\beta_1 = -0.009350$) and NIM at 5% significant level although the significance is negative. The probability value for the slope coefficient shows that $P(x_1 = 0.005405 < 0.05)$. This implies that MPR has a negative but however, statistically significant relationship with NIM at 5% significance level.

The coefficient of determination obtained is 0.47 (47%), which is commonly referred to as the value of R^2 . The cumulative test of hypothesis using R^2 to draw statistical inference about the explanatory variables employed in this regression equation, shows that the R-Squared value tells that 48% of the systematic variations in the dependent variable can be jointly predicted by the independent variable (NIM) while the remaining 52% was explained by unknown variables that were not included in the model.

The Durbin-Watson statistic of 0.759711 indicates that there is no auto-correlation problem. The overall significance of the model Prob F-statistic (0.005405) is statistically significant at 5%. Consequently, since the P-value of MPR at 0.0054 is less than the critical value of 0.05, thus, this study concludes that there is a significant effect of monetary policy rate on net profit margin of selected quoted deposit money banks in Nigeria at 5% level of significance thereby accepting the alternative hypothesis.

DISCUSSION

Having tested the hypotheses, the **first finding** reveals that there is a significant effect of monetary policy rate on the return on assets of quoted deposit money banks in Nigeria. This means that the higher the monetary policy rate, the smaller the return on assets. This finding

is in line with Study by Felix and Claudineh (2008) which assessed the association between banks' performance and credit risk management practices. Their findings showed that ROA and ROE, both measuring profitability of financial affects total loan of financial institutions hence leading to a decline in profitability.

The **second finding** reveals that there is also a significant positive effect of monetary policy rate on the return on equities of quoted deposit money banks in Nigeria. Moreover, Abreu and Mendez (2002) posit that companies' equity rises as a result profitability and sound management. Therefore, if there is increase in monetary policy rate, it will negatively affect profitability and business expansion. The reverse is the case if MPR decreases.

The **third finding** shows that there is a significant effect of monetary policy rate on net profit margin of quoted deposit money banks in Nigeria. This means that the higher the MPR, the lesser the profit declared by banks and vice versa. This finding is in line with Jibueze (2014) which reveals a negative effect of increase in MPR on profitability of banks. The study maintained that inability of banks to lend to investors due to high MPR affects their earnings.

CONCLUSION AND RECOMMENDATIONS

Both government and deposit money banks should be mindful of the facts that the environments in which they operate are important factors in bank performance. Where the environment is conducive and supportive, performance of banks is enhanced and good lending behaviour is guaranteed. But where the environment is unstable and harsh, the bank's performances suffer. Deposit money banks should note that they need to do a lot in order to ensure good lending behaviour even where a good measure of macroeconomic stability is achieved. This is because of the positive and significant relationship found between bank monetary policy rate and bank performance in both short and long run.

Recommendations

Based on the findings in this study, the following suggestions are recommended:

- Having seen that there exists a long run and short run effect of MPR and bank performance through the use of OLS test and error correction model, government should adopt policies that will help Nigerian deposit money banks to improve on their performance.
- There is need to strengthened bank monetary policy rate policy through effective and efficient regulation and supervisory framework.
- Banks should try as much as possible to strike a balance in their loan pricing decisions. This will help them to be able to cover cost associated with lending and at the same time, maintain good banking relationship with their borrowers.

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