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Monetary Policies and the Achievement of Bank Profit Objective

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Abstract: This study examined the nexus between monetary policy and the achievement of a bank's profit objective. There have been lots of arguments about the benefits of monetary policy implementation on deposit money bank's operations, since the policies have been seen to impact on their performance. This study was carried out to establish the influence of variables like Liquidity Ratio, Interest and Money supply (M_2), which are used as monetary policy instruments, on deposit money bank profitability objective. The study covers the period from 2002-2019. The Auto Regressive Distributed Lag and Error correction model were adopted in the analysis of the data. The study revealed that there was a positive long run relationship between Liquidity Ratio and deposit money bank's profitability; there also existed a negative long run relationship between interest rate and deposit money bank profitability; lastly, there existed a positive long run relationship between Money Supply (M_2) and deposit money bank's profitability. Based on the findings, monetary authorities should put in place measures for Liquidity ratio, interest rates and M_2 implementation to aid deposit money banks operations in the achievement of their profit objective.

Keywords: Monetary Policy, Profit, Banks, Interest Rates, Money, Credit.

JEL Code: E52, E58, B22.

Introduction

According to the Central Bank of Nigeria (CBN, 2011), monetary policy is an action of the government through its monetary authorities to influence the quantity, cost and availability of money credit in order to achieve desired macroeconomic objectives. Monetary Policies could either be expansionary or contractionary, with the aim of achieving macroeconomic objectives in the country.

These Macroeconomic Objectives include, Full employment where those who are willing and able to work gain employment or jobs.

Price stability, that is, the general prices of goods and services are continually stable, with controlled inflation that is used to reduce the cost of living and also raise standard of living (Ucheaga, Omankhanlen, Olokoyo, Isibor, and Ighodalo (2020).

Increased productivity, which is, increase in output per unit of labour and favourable balance of payments in equilibrium. This means having more foreign income through exports and less expenses through imports.

The activities and performance of the banking sector directly influences the achievement of macroeconomic objectives as well as driving economic growth and development (Isibor, Ojo, and Ikpefan, 2017; Isibor, Ojo, and Ikpefan, 2018). Over the past several decades, financial markets and institutions underwent radical transformation and a sudden expansion, induced by general trends in deregulation, liberalization, globalization, as well as computer technologies advances (Fabris, 2019). Through the intermediation function of the banks which involves the mobilization of funds from the surplus to the deficit sectors of the economy, the need for effective regulating and control of the sector through the use of monetary policies is inevitable. Also, monetary policy may have far-reaching impact on financing conditions in the economy by controlling the availability and the costs of credit. (Ali, 2019; Ndigwe, Omankhanlen, Isibor, Okafor, Ighodalo, and Achugamonu, 2020).

The Central Bank of Nigeria (CBN) is responsible for the formulation and implementation of monetary policies as well as regulation of the financial institutions in the economy involving primarily the bank financial institutions.

The Central bank uses monetary instruments such as bank rate or interest rate, Open market operations (OMO), reserve requirements, credit control as well as setting targets on monetary variables.

Monetary authorities directly affect the operations of the bank by the control laid on them through the monetary policies put in place which eventually affects the general economy of a nation as banks and other financial institutions are major players in the economy. These controls may affect bank policies and objectives which are unique to various banks, but generally they impact profitability, liquidity and maximization of shareholder's wealth. A change of policy affects the operations of the banks in many ways by affecting their ability to achieve corporate goals and objectives. Omankhanlen, Senibi and Senibi (2018) stated that monetary authority which is the Central Bank can only achieve macroeconomic objectives through some channels. One of the channels for achieving these objectives is the stock market and the banking sector.

The debate on the validity of stock prices to be adequately predicted by changes in macroeconomic variables is a serious debate which has posed serious concern to both practitioners and academia worldwide over the years, (Omankhanlen, Senibi and Senibi, 2016; Ucheaga, Omankhanlen, Olokoyo, Isibor, and Ighodalo, 2020).

The CBN in regulating banking operations and how banks comply with these regulations as well as what is driving their individual objectives are the main focus of this study.

United Bank of Africa (UBA) was used as a case study in this research, through the use of their performance records in comparison with their compliance with monetary policies.

1.1 Statement of the Research Problem

Commercial banks are major factors in driving an economy this is because they perform fund intermediation functions in the economy, that is; they mobilize funds from deposit of customers for investments in the economy thereby stimulating the economy as well aiding the attainment of economic objectives. But banks do not operate and carry out its activities on its own will and way. The CBN has a duty to regulate their activities to ensure they move in the direction of attaining the economic objectives through the use of Monetary policy instruments either contractual or expansionary, this affects the banks operations and its objectives as monetary policies affects operations such as bank liquidity, loans and advances, which eventually affects the ability of banks to attain their profit objective which is a major objective of banks using net profit of banks as a measure of profit objective.

Policies such as Liquidity ratio is one of the significant worries of monetary supervisors as liquidity issues can greatly affect operational effectiveness and gainfulness. When a bank is unable to meet its short term obligations such as paying deposits of customers on request, paying debts etc. it may lead to bank insolvency and eventually lead to bank failure. Aggressive liquidity ratios may also reduce banks solvency, which is the banks' ability to meet its long term financial obligations. Money supply also affects the liquidity of any bank. This affect the bank's ability to mobilize deposits, hence its ability to grant credit. Once credit is affected the interest income is also affected (Isibor, Omankhanlen, Mathias, Komolafe, and Okereke, 2020).

Interest rates have large effect on loans and advances that banks give out to its customers which may reduce its customer base hence difficulty in bank ability to achieve corporate goals and objectives as well as perform their intermediation function affecting the economy in the long-run.

Another policy affecting a bank's profit objective is the Bank rate, referring to the interest rate by which the CBN lends money to commercial banks through short term loans. Higher bank rates may contract the economy by increasing the cost of funds for borrowers, hereby discouraging borrowing for capital investments by borrowers, which is essential in driving the economy.

In addition to bank rate, rate of exchange which refers to the foreign exchange rate volatility affects banks profitability. Some banks fail to adhere to stipulated requirements for issuing of loans and advances, which has caused the many setbacks in the achievement of macroeconomic objectives, (Ehimare, Ikpefan and Babajide, 2014).

1.2 Research Questions

This research aims at answering the following questions:

- To what extent has the Liquidity ratio affected bank profit objective?
- How have Interest rate impacted on bank profit objective?
- How does M_2 affect bank profit objective?

1.3 Research Objectives

The objectives of the study include the following:

- To evaluate the extent to which the liquidity ratio affects bank Profit objective.
- To show the effect of Interest rate on bank profit objective.
- To show the extent of impact of M_2 on bank profit objective.

1.4 Statement of Hypothesis

Hypothesis 1

H_0 : Liquidity ratio has no significant effect on bank profit objective.

H_1 : Liquidity ratio has a significant effect on bank profit objective.

Hypothesis 2

H_0 : Interest rate has no significant effect on bank profit objective.

H_1 : Interest rate has significant effect on bank profit objective.

Hypothesis 3

H_0 : M_2 has no significant effect on bank profit objective.

H_1 : M_2 has a significant effect on bank profit objective.

1.5 Scope of Study

The period covered in this study is between 2002-2019 (17 years), the response of banks to these policies in their activities and operations as well as their performance during the period was analyzed using the United Bank of Africa (UBA) as a case study, Using one bank as a case study is more appropriate because a bank can be used to make a general conclusion of the various banks, as all operate under the same economic conditions.

2.0 Review of Literature

Monetary policy incorporates the development and usage of approaches by the central bank to accomplish the set large scale monetary goals. In spite of the fact that money related methodologies are pointed towards the satisfaction of increased value in an economy, there is so far a necessity for the central bank to strike a balance between creating value, budgetary reliability and yield security with the main objective to meet the general full scale fiscal goals.

Thus, the targets of monetary policy include:

1. Economic Growth:
2. Maintenance of Balance of Payment Equilibrium:
3. Price stability:
4. Full Employment:

2.1 Monetary Policy Instruments

These policies can be classified into quantitative and qualitative monetary instruments.

2.1.1 Quantitative Instruments

These direct or control the aggregate volume of bank credit in an economy. They include Cash Reserve Requirement, Discount Rate and Open Market Operations.

2.1.1 Qualitative Instruments

These are used to direct the different uses of credit. They include Direct Credit Control and Moral Suasion.

Financial specialists are less divided in their view of the aims of monetary policy than about what part the central bank should play in accomplishing its objective.

The CBN monetary policy objectives include the following:

- Attainment of domestic price and exchange rate stability (Isibor, Felicia, Maria, Godswill, and Chisom, 2018)
- Maintaining a healthy balance of payments position.
- Improvement of a sound financial system
- Advancement of fast and sustainable rate of economic growth and development

2.2 The Impact of Monetary Policy on the Economy

Economic growth is viewed as an important objective of economy policy, with so much research committed to clarifying how this objective can be accomplished (Fadare, 2010). As indicated by Khosravi and Karimi (2010), traditional investigations assess that economic growth is to a great extent connected to labour and capital as components of factors of production. The rise of the endogenous growth theory has encouraged specialist to scrutinize the role of different factors in clarifying the economic growth phenomenon, (Bogdana, 2010).

Monetarist emphatically believe that monetary policy has more notable effect on economic movement as unforeseen change in the supply of cash affect output and growth, that is, the load of cash must increase for central bank to advance economic growth. Actually, they are of the belief that an expansion in government spending would crowd out private sector and such can exceed any fleeting advantages of an expansionary monetary policy, (Adefaso and Mobolaji, 2010).

2.3 Bank Profitability

Profitability is a necessity for banks in maintaining ongoing activities of the banks as well as obtaining fair returns for its shareholders and other stakeholders.

Therefore, bank profitability refers to the earnings of a bank by its services and activities. Banks profit by earning more than what it gives out as expenses. Banks earnings come from receipts of charges from their services and interest on assets, while its expenses are mostly interest payments on liabilities.

According to Ponce (2009), Bank profitability is of two main groups. The first consider the effect of managerial decisions which incorporate asset structure, asset quality, capitalization, financial structure, efficiency, size and income broadening. The second incorporates factors identifying with industry structure and the macro-economic environment with which the banks operate, for example, effect of monetary policies, interest rates, industry focus, and economic growth. In this study Net profit which is profit after tax is utilized to measure the profitability of banks in Nigeria.

2.4 Liquidity Ratio (LQDR)

Essentially, a bank like any other business entity needs to ensure its short term survival by being liquid enough to be able to meet short term obligations and avoid technical insolvency. Liquidity is the ability to realize value from short term investments to meet maturing obligations.

Liquidity Management, therefore, involves the management's ability to optimize the bank's investment in the various components of its current assets. It follows; therefore, that management of the bank's liquidity is the determination of the optimum level of investment in Cash, Marketable Securities, Debtors or Receivables and Inventories/stocks.

The central bank of Nigeria (CBN) have set the general liquidity ratio at 30%, this is reviewed or allowed to remain constant during the central bank's monetary policy committee (MPC) meetings. Any bank that operates above this rate is operating at a liquidity risk.

2.5 Interest rate (INT)

This refers to the rate by which the commercial banks lend to companies and customers. This is affected by the monetary policy rate (MPR) which the CBN use to lend to commercial banks. The higher the MPR the less favorable it is for customers to borrow from banks as it causes an increase in interest rate. It is of interest to consider how exchange rate affects the interest rate setting and the overall monetary transmission mechanism (Nana, Paul, and Eric, 2020).

2.6 Money supply (M_2)

This refers to the supply of money that includes all elements of M_1 as well as 'near money'. Amadeo (2018) stated that money supply is raw or physical cash in circulation plus the money held in savings and current account. It does not involve other forms of wealth such as assets, investments, properties etc., or credits such as loans, mortgages etc. as other forms of wealth must be converted to cash to qualify as part of money supply.

2.7 Theoretical Framework

Macro-economic factors such as monetary policies which directly influence bank performance stand on certain economic theories. The main economic school of thought that was considered in this study is:

2.7.1 The theory of Keynes

The theory states that a change in the supply of money can permanently change such variables as the rate of interest, the aggregate demand and the level of employment, output and income. In a situation of unemployment, Keynes advocated a cheap monetary policy, (Udeh 2015).

2.8 Empirical Framework

Some of the empirical works are given below:

Omankhanlen (2011) examined the effectiveness of monetary policy in achieving economic growth in Nigeria between 1980 and 2009. His study employed regression analysis and found out that monetary policy rate (MPR), exchange rate and Treasury bill rate have negative impact on GDP. In addition during the period under review it was seen that the manipulation of monetary instruments has not proven to be effective in achieving economic growth.

Ekpong, Udude, Uwalaka (2015) Examined the effect of Monetary Policy on the Banking sector in Nigeria. Their study covered the period 1970-2006 and utilized the OLS regression method. They tested the relationships between Exchange rate, Deposit rate, minimum re discount rate (now called monetary policy rate) and bank performance. Their result showed that monetary policy plays a vital role in determining the volume of bank's deposit liabilities in Nigeria.

Nguyen, Huong Vu, and Thu Le (2017) concentrated on the impact of monetary policy on commercial banks' profit using the case of Vietnam'. Their paper primarily concentrated on analyzing the effect of monetary policy on commercial banks' profit in Vietnam by utilizing panel data for the period 2007 to 2014 in annual frequency. In their investigation, the data was gathered from 20 business banks which were doing business in Vietnam's banking market. Monetary base (MB), discount rate (DIS) and required reserve ratio (RRR) were utilized as proxies for monetary policy. Profit before tax (PROFIT) was utilized to represent

commercial banks' performance. The result showed that there is a positive relationship between banks' profits and monetary policies.

Tamunosiki, Giambi, Baribefe, and Obari (2017) empirically investigated the interrelationship between liquidity and corporate performance of banks in Nigeria with the utilization of yearly information from 1984 to 2014. The work used Cash Reserve Ratio, Liquidity Ratio and Loan-to-Deposit Ratio as proxies for liquidity; and Return on Shareholders' fund as proxy for performance. They applied Ordinary Least Square Regression, Johansson Cointegration, Granger Causality test and Error Correction Model in their analysis. Their result showed a significant negative short-run relationship between Cash Reserve Ratio and corporate performance, as well as a positive relationship between Loan-to-Deposit Ratio and Liquidity Ratio on one hand and corporate performance on the other albeit significantly and insignificantly respectively. Likewise, cash reserve ratio and liquidity ratio are statistically significant enough to influence return on Shareholders' Fund in the long run, while the Loan-to-Deposit Ratio displays complacency in instigating performance in Deposit money banks in Nigeria; a position corroborated by the Causality result, implying that other factors could be responsible for banks' performance in Nigeria.

3.0 Model Specification

The model specification equation is given below

$$DMBP = b_0 + b_1Lqdr + b_2INT + b_3M_2 + \dots u_i$$

DMBP = Deposit money bank Profitability using Net Profit (NPR) as measure for profitability

LQDR = Liquidity Ratio

INT = Interest Rate

M_2 = Money supply

U_i = stochastic variable

Where the dependent variable is bank profit and the independent or monetary variables include Liquidity Ratio, Interest Rate and Money Supply.

The unit root test, the ARDL estimation technique and vector error correction method will be used in the analysis.

3.1 Measurement of Variables

In this study, deposit money banks profitability is proxy by the bank's Net Profit, while the monetary variables used include: liquidity ratio, Interest rates, and M_2 . The scope of study will cover the period of 2002-2019 (17 yrs).

3.2 Sources of Data

In this study, data relating to, Liquidity ratio, Interest rate and M_2 are all derived from the CBN, while data relating to the bank's Net profit was derived from annual reports of UBA. The published documents from these institutions include:

1. Central Bank of Nigeria Statistical Bulletin
2. U.B.A annual report

4.0. Empirical Analysis and Results

This study is primarily interested in finding out the relevance of selected monetary policy indicators such as liquidity ratio, interest rate and M_2 in predicting the trends of banks' profitability from the period of 2002-2019.

4.1 Econometric Analysis

This part of the study examines the time series data from 2002-2019. The E-views 9 was used to the test for stationarity of the variables was done through the Augmented Dickey-Fuller test. While the long run relationship between variables was tested using the Auto-Regressive Distributed Lag tests.

4.1.1 The Unit root test

The augmented Dickey-Fuller test was utilized for this exploration. A variable is considered stationary when the supreme estimation of the ADF t-detail is higher than the total estimation of the ADF t-detail at 5% level of significance. A noteworthy quality of the ARDL strategy for estimation is that it does not require pre-testing of factors. Nonetheless, if the outcomes are incorporated in the second request, at that point the outcomes will be invalid yet when the factors have coordinated requests of 1 and 0. In this way the unit root test provides data to

support the decision to ARDL technique for estimation as the suitable estimation strategy given the required suspicions expressed. The dismissal of the invalid theory depends on McKinnon (1996) basic qualities.

Table 4.1: The Unit Root Test at level

| VARIABLES | ADF TEST STATISTICS | CRITICAL VALUE @ 0.05 | ORDER OF INTEGRATION | REMARKS |
|----------------|---------------------|-----------------------|----------------------|----------------|
| NPR | -1.28363 | -3.098896 | I(0) | non-stationary |
| INT | -3.650388 | -3.11991 | I(0) | stationary |
| LQDR | -2.261314 | -3.098896 | I(0) | non-stationary |
| M ₂ | 2.341979 | -3.098896 | I(0) | non-stationary |

Source: Computed by researcher using EViews9

Table 4.2: The Unit Root Test at 1st Difference

| VARIABLES | ADF TEST STATISTICS | CRITICAL VALUE @ 0.05 | ORDER OF INTEGRATION | REMARKS |
|----------------|---------------------|-----------------------|----------------------|------------|
| NPR | -3.426909 | -3.175352 | I(1) | Stationary |
| LQDR | -3.669718 | -3.11991 | I(1) | Stationary |
| M ₂ | -8.716700 | -4.107833 | I(1) | Stationary |

Source: Computed by researcher using EViews9

From the tables 4.1 and 4.2 above, it is clear that all variables are not of the same order of integration.

With reference to table 4.1, it is obvious that all variables appeared to be non-stationary except the variables of (INT) with an ADF t-stat of -3.650388 and a critical value of -3.11991, which indicates stationarity. Also represented above in table 4.2, are the variables which were non-stationary. When they were tested at first difference, the variables turned out to be stationary. This further implies that only (INT) is integrated of order zero I(0), while the rest are integrated at the first order I(1). The result from both tables clearly satisfy the use of the Auto-Regressive Distributed Lag (ARDL) technique of estimation, as one of the requirements for this technique, is the flexibility of several orders of integration.

4.1.2 ARDL Bounds Test

Utilizing the Akaike data paradigm (AIC) and a most extreme slack request of 1 was utilized for the auto-backward distributive slack model. The F-statistic from the bound test is done to test whether the regressors are mutually critical. The limits test is directed by setting certain confinements on the evaluated long-run coefficients of (NPR), (INT), (LQDR) and (M_2). The computed F- statistic is given as 3.936564 approximately and is compared with the upper and lower bounds at 5% significant. This shows that there exist a long run relationship between net profit and the explanatory variables though at 10 percent significance level.

Table 4.3: ARDL Bounds Test

| Test Statistic | Value | K |
|-----------------------|----------|----------|
| F-statistic | 3.936564 | 3 |
| Critical Value Bounds | | |
| Significance | I0 Bound | I1 Bound |
| 10% | 2.72 | 3.77 |
| 5% | 3.23 | 4.35 |
| 2.5% | 3.69 | 4.89 |
| 1% | 4.29 | 5.61 |

Source: Computed by Researcher using EViews9

If the F-statistics is greater than the upper bound, then we can state that there is co-integration among $I(0)$ and $I(1)$ variables. In this way, we are able to accept that there is a short run to long run relationship among the $I(0)$ and the $I(1)$ variables. If the F- statistics is between the upper bound and lower bound, then we conclude that the relationship is inconclusive, and the result is spurious. If the F-statistics is lower than the lower bound, then we conclude that there is no co-integration among $I(0)$ and $I(1)$ variables. From the table 4.3 above, the F- statistics is between the upper and lower bounds values, giving an undecided conclusion about the existence of a long run relationship.

Table 4.4: Estimation of the Auto Regressive Distributed Lag

| Selected Model: ARDL(1, 0, 0, 1) | | | | |
|----------------------------------|-------------|-----------------------|-------------|----------|
| Variables | Coefficient | Std. Error | t-Statistic | Prob.* |
| LNPR(-1) | 0.113051 | 0.285886 | 0.395442 | 0.7029 |
| INT | -0.210702 | 0.166628 | -1.264506 | 0.2416 |
| LMS | 0.919082 | 0.530219 | 1.733400 | 0.1213 |
| LQDR | 0.037236 | 0.022387 | 1.663325 | 0.1348 |
| LQDR(-1) | 0.031994 | 0.026711 | 1.197784 | 0.2653 |
| C | -5.947714 | 13.96406 | -0.425930 | 0.6814 |
| R-squared | 0.823311 | Mean dependent var | | 23.46750 |
| Adjusted R-squared | 0.712881 | S.D. dependent var | | 1.133536 |
| S.E. of regression | 0.607388 | Akaike info criterion | | 2.138229 |
| Sum squared resid | 2.951361 | Schwarz criterion | | 2.412111 |
| Log likelihood | -8.967604 | Hannan-Quinn criter. | | 2.112876 |
| F-statistic | 7.455478 | Durbin-Watson stat | | 2.336253 |
| Prob(F-statistic) | 0.007000 | | | |

* Note: p-values and any subsequent tests do not account for model

Source: Computed by Researcher using EViews9

From the table 4.4 above, the variable (INT) has t-stat of -1.264506 and probability 0.2416 confirming its insignificance statistically. This is because the criterion for establishing the significance of a variable is if it has a probability of t-stats that is less than 0.05 (5%) and insignificant when it is higher than 5%. Also (INT) has a negative coefficient of 0.21 approximately, implying that economically, the percentage increase in (INT) will bring about a 21% decrease in NPR.

However, the variable of (LQDR) has a t-stat of 1.663325 and a probability 0.1348 confirming it is insignificant statistically. This is because of the Criterion established above. Also (LQDR) has a positive significance of 0.037 approximately, implying that economically, the percentage increase in (LQDR) will bring a 3.72 increase in NPR.

Lastly, the variable of (M_2) has a t-stat of 1.733400 and a probability of 0.1213 confirming it is insignificant statistically. This is because of the Criterion established above. Also (M_2) has a positive significance of 0.092 approximately, implying that economically, the percentage increase in (M_2) will bring a 91.90 increase in NPR.

Table 4.5: Long Run Form

| The Long Run Coefficients | | | | |
|---------------------------|-------------|------------|-------------|--------|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| INT | -0.237559 | 0.215367 | -1.103042 | 0.3021 |
| LMS | 1.036229 | 0.379979 | 2.727070 | 0.0260 |
| LQDR | 0.078054 | 0.030455 | 2.562909 | 0.0335 |
| C | -6.705816 | 14.729943 | -0.455251 | 0.6610 |

Computed by researcher using EViews9

From the table 4.5 above, the variable (INT) has a t-stat of -1.103042 and Probability of 0.3021 confirming its insignificance statistically. This is because the Criterion for establishing the significance of a variable is if it has a probability of t-stats that is less than 0.05 (5%) and insignificant when it is higher than 5%. Also (INT) has a negative coefficient of 0.24 approximately, implying that economically, the percentage increase in (INT) will bring about a 24% decrease in NPR.

However, the variable of (LQDR) has a t-stat of 2.562909 and a probability of 0.0335 confirming it is significant statistically. This is because of the Criterion tested above. Also (LQDR) has a positive significance of 0.078054, implying that economically, the percentage increase in (LQDR) will bring a 78.1 increase in NPR.

Lastly, the variable of (M_2) has a t-stat of 2.727070 and a probability of 0.0260 confirming it is significant statistically. This is because of the Criterion established above. Also (M_2) has a positive significance of 1.036229 approximately, implying that economically, the percentage increase in (M_2) will bring a 103.6 increase in NPR.

Table 4.6: Error Correction Model

| The Cointegrating Form | | | | |
|--|-------------|------------|-------------|--------|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| D(INT) | -0.210702 | 0.166628 | -1.264506 | 0.2416 |
| D(LMS) | 0.919082 | 0.530219 | 1.733400 | 0.1213 |
| D(LQDR) | 0.037236 | 0.022387 | 1.663325 | 0.1348 |
| CointEq(-1) | -0.886949 | 0.285886 | -3.102452 | 0.0146 |
| Cointeq = LNPR - (-0.2376*INT + 1.0362*LMS + 0.0781*LQDR - 6.7058) | | | | |

Computed by the researcher using EViews9

The short run adjustment process is measured by the ECM t-1 and depicts how quickly variables adjust to shocks and return to equilibrium. The criterion for an equilibrium error correction coefficient is that it must be negative and statistically significant. The figure is between 0 and 1.

The ECM coefficient above is -0.886949, this means that the variables in the short run adjust to shocks at a speed of 88.7% approximately.

5.1 Research Findings and Policy Implementation

The research findings revealed a long run relationship between monetary policy and a bank's Profit objective. While interest rate has a negative long run relationship with bank net profit, it was also confirmed that M_2 and Liquidity Ratio have a positive long run relationship on bank net profit.

Liquidity Ratio has a long run positive relationship, which means that it is one of the major determinants of bank net profit, the increase in Liquidity Ratio leads to an increase in net profit of a bank although this is against the a priori expectation as an increase in Liquidity Ratio may not yield as much profit to banks because the higher the liquid assets, the least profitable they are; for example, cash on the balance sheet because it has a low return and is less risky, also the presence of idle cash is not advisable, but should be rather invested in more non-current asset which yield higher returns even when disposed of. It is therefore advisable for the government through the central bank to maintain a minimal liquidity ratio which will give the United Bank of Africa the ability to meet short term obligations as they fall due.

The negative Long run relationship between Interest rate and bank net profit implies an increase in the interest rate will cause a decrease in bank profitability. This interest rate is affected by the (MPR) which is the rate at which the CBN lends to commercial banks, which will eventually affect the interest rate at which banks lend to their customers, although a high interest rate may be desired by commercial banks due to the large returns on loans because of a high interest rate. According to the analysis of the effect on net profit of banks, banks do not really made as much profit over time as when interest rates are low and this is because low interest rates attract more customers to take credit from banks for business purposes, thereby causing an increase in banks' net profit in the long run as a result of larger aggregate returns from credit facilities granted to a larger number of customers.

The M_2 shows a long run positive relationship which implies that increase in Money supply in the economy will cause an increase in the net profit of banks.

These policies are therefore said to have major impact on banks in attaining their profit objective. The increase in this two variables-liquidity ratio and M_2 will increase their net profit.

5.2 Recommendations

There is no doubt that the role the monetary policy plays is important in helping the deposit money banks achieve their profit objective. With reference to the findings, the following recommendations are given:

The Central Bank should managing the liquidity ratio level efficiently and set the minimum Liquidity ratio for banks which will led to their holding more liquid assets that will aid them in the attainment of their profit objective as well as meeting short term obligations as they fall due.

The Central Bank should do all in its power to reduce the interest rate of banks for lending of credit to their customers by ensuring a minimal monetary policy rate (MPR) which in turn influences the banks' lending interest rates. Therefore, a minimal interest rate should be encouraged so as to aid banks in achieving their profitability objectives through increase in credit taken by their customers, which is also a source of revenue to banks when credit is paid back with the interest assigned, thereby increasing net profit and achievement of the profitability objectives of deposit money banks.

Money Supply (M_2) increases the volume of money in circulation so it is recommended that the government puts in place stringent rules and measures for M_2 to increase profitability of banks through open market operations (OMO) via the purchase of government securities such as treasury bills, and treasury bonds so that there is money available to banks for activities that aid their profitability, thereby increasing the viability of banks in driving macro-economic objectives.

5.3 Conclusion

From the research findings it can be concluded that a nexus exists between monetary policy implementation and bank profitability. If monetary policies are well implemented, monitored, employed and conducted, they can affect and improve

the ability of banks to achieve their profitability objective, thereby making them viable in driving macroeconomic objectives. The research concludes that there is a positive long run relationship between broad money (M_2) Liquidity Ratio and bank profitability, implying an increase in any of the two variables will lead to an increase in bank net profit and the achievement of their profit objective. This helps us to reject the null hypothesis that Liquidity Ratio and M_2 have no significant relationship with bank profitability.

The study further concluded that Interest rate has a negative long run relationship on bank profitability, implying that an increase in this variable will cause a decrease in bank net profit and the achievement of its profit objective.

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