
Effect of Monetary Policy on Returns on Risk Assets Evidence from Tier One Banks in Nigeria.

Ajibola, Joseph Olusegun, (Ph.D)
Dean, College of Postgraduate Studies,
Caleb University,
Imota-Ikorodu, Lagos,
Nigeria.

joeoluajibola@yahoo.co.uk, abiola100417@gmail.com

ABSTRACT

This study investigates the effect of monetary policy on the returns on risk assets; evidence of tier one banks in Nigeria. Eco Transnational bank and First Bank of Nigeria were used. The study ranges from 1986-2014, a period of 30 years. The Vector Auto-regressive (VAR) model was used to integrate the multi-variate time series. The variables used were; inflation rate, real interest rate, Treasury bill rate, loan to deposit rate for Eco bank and First bank, and the returns on asset for Eco bank and First Bank. Treasury bill rate was the only variable that was statistically significant. The regression showed that the dependent variables were responsible for half of the variations in the returns on assets. The estimated parameters were not significant in the regression model, thus, we can say monetary policy has a partial effect on the returns on assets of tier one banks in Nigeria. This could be as a result of lack of credibility in the Nigerian monetary policy system and lack of proper implementation. This study therefore recommends that the MPC needs to enforce their policies better so as to control the financial sector which is a main driver of economic growth and achieve their set objectives and targets.

Key words: *Monetary Policy, Returns on assets, tier one banks, risk assets*

1.0 INTRODUCTION

Banks play an important role in supporting the growth of any economy, this explains why their operations are conceivably the most heavily regulated and supervised of all businesses (Soyibo and Adekanye 1991). The history of modern banking in Nigeria dates back to 1892. The Central Bank of Nigeria (CBN), established in the year 1959 is the pinnacle institution of Nigeria's monetary system. Monetary policy affects the overall level of price and the rate at which the price level raises that is, inflation. In an attempt to control inflation and bring about desired effects, the Central Bank through the Monetary Policy Committee (MPC) uses monetary policy, which affects the values of assets or debts, such as housing, stocks, bonds, and fixed- or adjustable-rate mortgages. (Central Bank Act 2007, Amended, Section 12).

The Nigerian economic environment was characterized by the domination of the oil sector and the overdependence on the external sector. To achieve price stability, the use of direct monetary instruments such as credit ceilings, selective credit controls, interest rates, exchange rates, cash reserve requirements and special deposits were employed. The

use of market-based instruments was not feasible at that point due to the underdeveloped nature of the financial markets. However, Open Market Operation (OMO), which was introduced on the 30th of June 1993, is one of the most used monetary policy instruments in the Nigerian economy due to its flexibility.

In August 1987, controls in interest rates were removed and by 1992, the markets were free of interest rate controls. In August 1990, stabilization securities were introduced to reduce the bulging size of excess liquidity in banks. The cash reserves requirement were increased in 1989, 1990 and 1992. In 1991, bank maximum lending rates were pegged at 21% with a 13.5% minimum stipulated for saving deposits. In February 1990, the monetary authority increased the minimum paid capital of commercial banks from 40 million to N50 million. This was later increased to N500 million in 1997. Also, in 1990, the apex bank introduced the risk-weighted measure of capital adequacy. Treasury bills were introduced in 1989 and these treasury instruments were made bearer bills so as to enhance transferability and promote secondary trading (CBN Statistical Bulletin).

The global financial crisis of the late 2000s was felt in various sectors of the Nigerian economy. The government was faced with constrained revenue as revenue from oil and foreign exchange earnings dropped significantly. The stability of banks and other financial institutions were threatened. In the process of asset creation, banks exposed themselves to the oil and gas sector of the economy, which left them with great losses when the oil prices fell during the crisis. The Non-Performing Loan (NPL) ratio of banks rose to 20.7% in 2009. This led to the conduction of a 'stress test' on the banks by the CBN and the NDIC (Nigeria Deposit Insurance Corporation) in which only 14 banks passed. This brought about the banking reforms by the then CBN governor, Lamido Sanusi, which led to the creation of Asset Management Corporation of Nigeria (AMCON). Thus, monetary policies implemented in recent years in Nigeria have been aimed at fast tracking economic reform programs with the objective of providing enabling financial system infrastructure and environment to support sustainable economic growth. (Ebiringa, O.A. 2014)

Ecobank Transnational Incorporated (ETI), commonly referred to as Ecobank is the leading independent regional banking group in West Africa and Central Africa. It was founded in 1985. Ecobank Nigeria Plc, known as Ecobank Nigeria was founded in 1986. Ecobank has two specialized subsidiaries: Ecobank Development Corporation (EDC) and eProcess International (eProcess). In 2011, they acquired 100% of the shares of Oceanic Bank They have a total asset of NGN 4.832 trillion.

FirstBank of Nigeria (FBN) often referred to as FirstBank was founded in 1894 as Bank of British West Africa and later renamed in 1979 to FirstBank of Nigeria. In 1957, its name changed to Bank of West Africa (BWA). In 1965, they were acquired by Standard Bank and their name was changed to Standard Bank of West Africa. Due to reforms in the banking laws following the global crisis of the late 2000s, FirstBank re-organized themselves into four business groups under a holding company called FBN Holdings and has retained the groups. It is one of the largest banks in the country in respect to assets with a total of NGN3.186 trillion.

2.0 LITERATURE REVIEW

According to Mbutor (2007), the reason for the financial reforms follows from the understanding that a sound financial system will render monetary policy more effective

and also support growth in the real sector of the economy. He believed the existence of sound banks would help to effectuate monetary policy, and thus, must be as a result of the idea that there is a definite link between monetary policy action and the lending behavior of deposit money banks.

In the works of Ndugbu and Okere (2015), fiscal and monetary policies are needed for economic stabilization and appropriate liquidity management aids economic growth. Monetary policy is thus an important tool for economic growth stability. However, some objectives are not consistent with each other, and this affects the profitability of the banks thus making them look for other means to make profit. Thus, banks invest customer deposits in various short term and long term investments.

For monetary policy to be effective it needs to be credible, that is, the monetary policy implemented should be consistent in order to reduce the risk associated with speculation. Monetary policy is expected to affect the level of overall prices as well as the rate at which the level is raising, that is, inflation. But inflation cannot always be monitored. When monetary policy causes unexpected changes in inflation, some people might gain or lose because they hold different kinds of assets or debts based on how much inflation they expect in coming years.

Monetary policy practices in developed economies differ from the practices in developing economies. For starters, they have different main objectives. The monetary policy objective for a developed economy could be to ensure full employment or price stabilization or exchange rate stabilization, while in an underdeveloped economy their main objective is to ensure economic growth. This is due to the difference in their economic conditions.

Claudio Borio, Leonardo Gambacorta and Boris Hofmann carried out a study showing the effect of monetary policy on the return on assets of banks in developed economies. The scope used was from 1995-2012, a period of 18 years. The research was based on 109 large commercial banks in fourteen advanced economies which are; Australia, Austria, Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States. It was discovered that the interest rates for the developed economies were near. The monetary policy indicator used was the interbank rate and the slope of the yield curve. The slope of the yield curve is the difference between the government bond and the interbank rate. The macroeconomic indicator taken into consideration was the interest rate. The study was based on the hypothesis that certain bank-specific characteristics such as size, liquidity, short-term funding, cost- to-income ratio, can only influence the loan supply.

This study showed that the overall effect of monetary policy on bank profits would depend on the impact of monetary policy on macroeconomic conditions. It depends on the ability of monetary policy to boost aggregate demand at the zero lower bound and in adverse balance sheet conditions. The study thus showed that as the interest rates were increased their significance on the returns on assets was lowered. There was positive correlation between high interest rate and the return on assets.

In a developing economy, monetary policy has a special role to play as they strive to attain economic growth. Many developing countries, like India have used an inflation targeting regime. Based on a study by Punita Rao to discover the impact of monetary policy on the profitability of banks, he took into consideration the lending rates of banks;

the cash reserve ratio and the statutory ratio. Their monetary policy is characterized by a low cash reserve requirement and statutory liquid ratio, increase in micro finance, prudential norms and the attainment of capital to risk weighted assets ratio by banks.

However, they are still faced with budgetary deficit. They also cover only commercial banking, leaving other banking institutions untouched. Their money market is also disorganized which reduces the effectiveness of monetary policy. The economy is still far from cashless and due to their discretionary monetary policy there is increase in volatility (Jadhav, Narenndra 2005).

The regression analysis thus showed that all the independent variables were statistically significant. Multiple regression analysis was conducted and Bank rate was included. The results showed that there was no significant relationship between monetary policy and public sector banks; thus, it shows a strict credit policy practiced by banks in India to control inflationary pressures.

A lot of factors have influenced the effectiveness of monetary policy in Nigeria. Since 1986, there has been a significant difference between the targeted intermediate monetary policy objective and the actual income.

Uchedu (1995) developed a bank profitability model in which the bank performance (measures interest earning as a ratio of total assets of banks to the return on asset, ratio of gross profit to industry paid-up capital) is taken as dependent variables while interest rate (savings or lending), exchange rate, commercial banking reserves, concentration ratio and unit labour cost were used as explanatory variables using data from commercial banks for 1970-1994. He estimated the model by the method of ordinary least squares which showed interest rate variation is a major source of change in commercial banks performance. Exchange rate changes had negative effect on bank performance while marginal efficiency had no clear influence size impact.

A study by Ekpong, Udude and Uwalaka showed a significant relationship between monetary policy and the risk assets of banks in Nigeria. They covered 36 years (1970-2006) and considered the exchange rate, deposit rate and the minimum discount rate. Exchange rate showed to be a strong explanatory variable of the ability of banks to take on risks, while the discount rate and the minimum discount rate proved to have negative or no relationship whatsoever. This was seen as a result of poor implementation of monetary policies which led to disincentives to save and low investments.

According to Fisher (2015), there is no monetary policy framework suitable for every economy at every point in time. The monetary policy framework for any economy should depend on their objectives, the challenges faced in their economy and their financial market structure.

SUMMARY AND GAPS IN THE LITERATURE

Past studies have proven that monetary policy affects the profitability of banks. The performance of the created risk assets of banks, that is, the return on assets, is a key factor of the profitability of banks. This study aims to enlighten and clarify the effect monetary policy has on the performance of created risk assets by taking into consideration;

1. Banks with a large capital base (Tier One banks). Past studies have made no distinction in tier one and tier two banks in Nigeria. Due to the difference in their

capital size, tier two banks are unable to create the same level of risk assets as tier one banks.

2. The quality of the assets. Most studies only took into consideration the quantity of the assets, not the quality of the assets and this is an important aspect because higher quantity does not necessarily mean high returns, but it is the quality of the risk assets invested in that determines the returns.

3.0 RESEARCH METHODOLOGY

Time series data is used for this study. The time series data used in this research work includes data that captures the impact of monetary on the created risk assets of banks, data that captures the general state of the Nigerian economy and data that expresses the quality of the created risk assets. This research work is highly descriptive and empirical as it makes use of multiple regression techniques of design. The study makes use of a multivariate regression analysis to examine the relationship between monetary policy and the returns on assets in the banking sector.

The model below, shall use for the three banks; Eco Transnational Bank and First Bank of Nigeria.

The model in its functional form is expressed below as

$$ROA = f(\text{INFL}, \text{RINR}, \text{TBR}, \text{LTD})$$

The model in its statistical form is expressed below as

$$ROA = \beta_0 + \text{INFL}\beta_1 + \text{RINR}\beta_2 + \text{TBR}\beta_3 + \text{LTD}\beta_4 + \mu$$

The model in its econometric form is expressed as

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \mu$$

Where; ROA is the Returns on Asset and is the dependent variable

β_0 is the intercept

$\beta_1 - \beta_4$ are the coefficients of the variables

Y represents ROA, which is the Returns on Assets

X_1 represents INFL, which is the Inflation Rate

X_2 represents RINR, which is the Real Interest Rate

X_3 represents TBR, which is the Treasury Bill Rate

X_4 represents LTD, which is the Loan to Deposit Ratio

μ is the error term.

3.6 A Priori Expectations

From the above model, the following results are expected;

1. A negative relationship is expected between inflation rate and the return on assets.
2. A positive relationship is expected between real interest and the return on assets.
3. A positive relationship is expected between treasury bill rate and the return on assets.
4. A positive relationship is expected between the loan to deposit ratio and the return on assets.

3.6 Method of Data Analysis

The economic modeling procedure used is the Vector Error Correction (VEC). Ms-Excel is used to input the data and E-View Statistical package will be used to run the regression.

4.0 PRESENTATION AND INTERPRETATION OF RESULT

The estimates from the regression carried out are presented and economically analyzed in this chapter. It summarizes the empirical results of the data to provide viable interpretation to the deduction of the analyzed data. As stated in the previous chapter, multivariate regression analysis was used. The table 1 is the data of the Inflation Rate, Treasury Bill Rate and the Real Interest Rate for the periods 1985-2014. The table also shows the Loan to Deposit Ratio and the Returns on Assets for First Bank and Eco Bank. The data is presented in percentage.

In 1985, the inflation rate was 4.%, real interest rate was 3.7% and treasury bill rate was 12%. The loan to deposit ratio for Eco Bank and First Bank were 65%, and 31% respectively, their returns on assets were 10% and 14% respectively. In 1992, the inflation rate increased to 44.6%. there was also an increase in real interest rate and treasury bill rate to 25.8% and 21.6%. In 1993, inflation rate and treasury bill rate rose to 57.2% and 26.9% respectively, while real interest rate fell drastically to 4.4%. in 1994, treasury bill rate fell to 12.5%. In 1995, inflation rate reached its peak at 72.8% and fell to 29.3% in 1996. The real interest rate was also at -43.6% in 1995 and later rose to -9.7% in 1996. The inflation rate fluctuated from 1997-2014, with a low of 5.4% and a high of 18.9%. The real interest however was far from steady in the consequent years, with a high of 25.3% and low of -42.3%. the treasury bill was slightly steady in 1997-2014.

Eco bank maintained an average of 10% on their return on assets, while their loan to deposit ratio showed their loan habit, which is they give nothing greater than 70% of deposits as loans, however, in 2006, they recorded a loan to deposit ratio of 77%. In 1990, First bank recorded steady returns on assets from 1990-2007, before it dropped slightly in 2008. In 2010, first bank had more loans than deposits.

4.2 DATA ANALYSIS

This research work is based on the findings of two banks, therefore each test would have to be run separately on the two banks. The results of these regression models are estimated with VER technique and are presented for interpretation and discussion. We shall analyze the results from Eco Bank first.

Table 2. Economic Test

Variable	Expected Sign	Observed sign for Ecobank	Observed sign for First Bank	Conclusion
Inflation Rate	-	-	-	Both banks conform
Real Interest Rate	+	-	-	No bank conform
Treasury Bill Rate	+	+	+	Both banks conform
Loan to Deposit Ratio	+	+	+	Both banks conform

4.2.1 ECO BANK

4.2.1.1 REGRESSION

The equations are multiplied by the minus (-) sign so as to normalize the co-integration

VARIABLE	CO-EFFICIENT	STD. ERROR	T-STATISTIC
Inflation rate	-3.948090	0.92096	-4.28691
Real Interest rate	-0.044504	0.01202	-3.70288
Treasury bill rate	0.158195	0.02519	6.27995
Loan to deposit	1.880325	2.68729	0.69971

Source: constructed from Eviews 7 by the author

R-squared = 0.4958666

Adjusted R-squared = 0.126169

F-statistics = 1.341275

$ROA01 = -3.948090INF - 0.044504RINR + 0.158195TBR + 0.1880325LTD$

The above equation shows a negative relationship between inflation rate and the returns on assets, therefore a unit increase in inflation rate would lead to a 3.948090 decrease in the returns on assets and this agrees with the apriori expectation because an increase in inflation rate leads to a depreciation in the value of money in an economy, that is, the real value of money, thus, in an economy with a rising inflation rate, the value of future returns would be less than what was initially expected. A negative relationship also exists between interest rate and a return on assets, a percentage change in the interest rate reduces the returns on assets by 0.044504. This does not agree with the apriori expectation. This could be due to lack of implementation and uncertainty as the interest rates over the years has been volatile. The real interest rate is the interest rate set by the central authority to serve as a guideline for the interest rate of loans from financial institutions, The central authority uses this to control the money in circulation and encourage savings. If the government sets the real interest rate high, banks would increase their interest rate on loans and this is expected to increase their returns. Treasury bill rate and the loan to deposit has a positive relationship with the returns on assets, thus a unit change in the treasury bill rate and loan to deposit would lead to a 0.158195 and 0.1880325 increase in the returns on assets respectively. This is in accordance to the apriori expectations. Treasury bill rate is the interest charged at the maturity of a government bond, high treasury bill rate brings about high return returns. Loan to deposit is a measure of asset quality, the higher the asset quality, the higher the expected returns. The regression analysis shows that $R^2 = 0.4958666$. This implies that 50% of the variations in the returns on assets are explained by inflation rate, real interest rate, treasury bill rate and loan to deposit. The other 50% of the variations is explained by other variables that are not included in the econometric model. This means that inflation rate, real interest rate, treasury bill rate and loan to deposit affect the returns on assets partially. The Adjusted R-squared = 0.12616 which shows implies that inflation rate, real interest rate, treasury bill rate and the loan to deposit ratio of Eco bank explain 12.6% of the variations in the returns on assets of Eco bank.

4.2.2 FIRST BANK

4.2.2.1 REGRESSION

The equations are multiplied by the minus (-) sign so as to normalize the co-integration

VARIABLE	CO-EFFICIENT	STD. ERROR	T-STATISTIC
Inflation rate	-0.093478	0.01394	-6.70805

Real Interest rate	-0.000924	0.00017	-5.44426
Treasury bill rate	0.001143	0.00044	2.57271
Loan to deposit	0.133402	0.00488	-27.3342

R-squared = 0.519924

Adjusted R-squared = 0.167868

F-statistics = 1.476821

$$ROA = -0.093478INFL - 0.000924RINR + 0.001143TBR + 0.133402LTD$$

The above equation shows a negative relationship between inflation rate and the returns on assets, therefore a unit increase in inflation rate would lead to a 0.093478 decrease in the returns on assets and this agrees with the apriori expectation because an increase in inflation rate leads to a depreciation in the value of money in an economy, that is, the real value of money, thus, in an economy with a rising inflation rate, the value of future returns would be less than what was initially expected. A negative relationship also exists between real interest rate and a return on assets, a percentage change in the interest rate reduces the returns on assets by 0.000924. This does not agree with the apriori expectation. The real interest rate is the interest rate set by the central authority to serve as a guideline for the interest rate of loans from financial institutions, The central authority uses this to control the money in circulation and encourage savings. If the government sets the real interest rate high, banks would increase their interest rate on loans and this is expected to increase their returns. Treasury bill rate and the loan to deposit has a positive relationship with the returns on assets, thus a unit change in the treasury bill rate and loan to deposit would lead to a 0.001143 and 0.133402 increase in the returns on assets respectively. This is in accordance to the apriori expectations. Treasury bill rate is the interest charged at the maturity of a government bond, high treasury bill rate brings about high return returns. Loan to deposit is a measure of asset quality, the higher the asset quality, the higher the expected returns.

The regression analysis shows that $R^2 = 0.519924$. This implies that 52% of the variations in the returns on assets are explained by inflation rate, real interest rate, treasury bill rate and loan to deposit. The other 48% of the variations is explained by other variables that are not included in the econometric model. This means that inflation rate, real interest rate, treasury bill rate and loan to deposit affect the returns on assets. The Adjusted R-squared = 0.167868 which shows implies that inflation rate, real interest rate, treasury bill rate and the loan to deposit ratio of Eco bank explain 16.8% of the variations in the returns on assets of Eco bank.

4.2.3 STATIONARY TEST RESULT

The unit root test was being carried out on the variables to determine their stationary levels. The Augmented Dickey Fuller (ADF) and Phillip Perron tests were implemented to make the data more reliable before carrying out the regression.

STATEMENT OF HYPOTHESIS

Null Hypothesis (H_0): The time series data has unit root, that is, the variable is not stationary

Alternative Hypothesis (H_1): The time series data has no unit root, that is, the variable is stationary.

DECISION CRITERIA

If absolute test statistic > critical value (absolute) then reject null hypothesis and accept alternative hypothesis

If absolute test statistic < critical value (absolute) then accept null hypothesis and reject alternative hypothesis

Series	5% Critical Value	ADF at first difference (Prob.)	ADF Test at first difference	Equation Specification	Order of integration
ECO BANK LTD	-3.012363	0.0003	-5.451127	Intercept	I(1)
FIRST BANK LTD	-3.004861	0.0001	-5.756790	Intercept	I(1)
ECO BANK ROA	-3.020686	0.0006	-5.100777	Intercept	I(1)
FIRST BANK ROA	-3.004861	0.0000	-7.130296	Intercept	I(1)
INFLATION RATE	-2.991878	0.0173	-3.493754	Intercept	I(1)
REAL INTEREST RATE	-2.976263	0.0000	-6.771751	Intercept	I(1)
TREASURY BILL RATE	-3.012363	0.0000	-6.534294	Intercept	I(1)

Source: constructed from Eviews 7 by the author

In the above table, we can see the results whereby all the variables, Eco bank LTD, First bank LTD, Eco bank ROA, First bank ROA, Inflation rate, real interest rate and treasury bill rate are all stationary at first difference because their respective absolute test statistic is greater than their 5% critical values at constant intercept which made us to accept the alternative hypothesis and reject the null hypothesis. To further verify the result, probability was also tested and each of the variables respective probabilities were lower than the 5% significance.

Series	ADF at level (Prob.)	ADF at first difference (Prob.)	Equation Specification	Order of Integration
ECO BANK LTD	0.05	0.0003	Intercept	I(1)
FIRST BANK LTD	0.05	0.0001	Intercept	I(1)
ECO BANK ROA	0.05	0.0006	Intercept	I(1)
FIRST BANK ROA	0.05	0.0000	Intercept	I(1)
INFLATION RATE	0.05	0.0173	Intercept	I(1)
REAL INTEREST RATE	0.05	0.0000	Intercept	I(1)
TREASURY BILL RATE	0.05	0.0000	Intercept	I(1)

Source: constructed from Eviews 7 by the author

The unit root test as presented in table 2.1 and table 2.2 shows that all the variables are stationary at first difference and hence integrated of the order unity which is agreed by both the Augmented Dickey Fuller (ADF) and Phillip Perron (PP) test. The determination of the orders of integration, the test for co-integration and upon detection of co-integration, the estimation of the long run co-integrating relationships are carried out in the next section – along with the relevant summary and diagnostic tests of the vector error correction.

4.2.4 COINTEGRATION TEST RESULT

The co-integration test applied in this research paper was the Johansen Co-integration test. One of the assumptions which must be satisfied before this test can be carried out is that the variables must be stationary at first difference I(1) and the lag interval must be determined which was at lag2. Two tests would be considered under the Johansen test, these are; Eigenvalue and Trace statistic test.

RESULTS FOR ECO BANK

	Calculated Value	Critical Value	Probability
Trace Statistics	47.85613	33.87687	0.0005
Maximum Eigenvalue	39.50919	33.87687	0.0096

	T-Cal	T-Stat	Decision Criteria
Return on Assets	0.232425	2.78917	Accept null
Inflation Rate	-0.090195	-1.27310	Reject null
Real Interest Rate	-10.35257	-0.98922	Accept null
Treasury Bill Rate	-1.684034	-0.62435	Accept null
Loan to Deposit Ratio	0.059334	2.26995	Accept null

The above results show that the null hypothesis is rejected for both Eco bank and First bank and the acceptance of the alternative hypothesis for both Eco bank and First bank signifying the existence of cointegration. The calculated value of the trace statistics for Eco bank is 65.17781 which is greater than the critical value which is 47.85613, while the maximum Eigenvalue is 39.50919, which is greater than the critical value 33.87687 with the probability of the trace statistic test and maximum eigenvalue at 0.0005 and 0.0096 respectively. This simply means that a long run relationship exists between the returns on assets, real interest rate, inflation rate, treasury bill rate and the loan to deposit rate of Eco bank. All but inflation rate have their Tcal less than the Tstats. The Tcal was -0.090195 and the Tstats was -1.27310 this signifies that only the Returns on assets has a short run relationship.

FOR FIRST BANK

	Calculated Value	Critical Value	Probability
Trace Statistics	130.0256	69.81889	0.0000
Maximum Eigenvalue	37.99241	27.58434	0.0016

	T-Cal	T-Stat	Decision Criteria
Return on Assets	-0.387769	-1.07275	Reject null
Inflation Rate	-5.211141	-1.86204	Accept null
Real Interest Rate	-257.6837	-0.48981	Accept null
Treasury Bill Rate	-205.0261	-2.04148	Accept null
Loan to Deposit Ratio	-4.188007	-1.25310	Accept null

The calculated value of the trace statistics for First bank is 130.0256 which is greater than the critical value which is 69.81889, with a probability of 0.0000, while the maximum eigenvalue is 37.99241, which is greater than the critical value; 27.58434 with a probability of 0.0016. Thus, a long run relationship exists between the returns on assets, real interest rate, inflation rate, treasury bill rate and the loan to deposit rate of First bank. All but returns on assets have their Tcal less than the Tstats. Tcal was -0.387769 and the Tstats was -1.07275 this signifies that only the Returns on assets have a short run relationship.

4.3 DATA INTERPRETATION AND DISCUSSIONS OF FINDINGS

Starting with Eco bank, from the findings above we can say the monetary policy instrument, real interest rate and treasury bill rate has a negative and positive relationship respectively with the returns on assets. A unit increase in the real interest rate would cause the return on assets to fall by 0.044504. When the government increases the interest rate they are trying to reduce the money in circulation and increase investments and savings, which according to the Keynesian theory would lead to an increase in liquidity and increase in demand. A unit increase in the treasury bill rate would cause the returns to increase by 0.158195, it is the returns on government securities. The T statistics showed only treasury bill rate to be statistically significant to their returns on assets, thus, using systematic risk theory, they would buy treasury bills because of the expected returns, there is usually very little risk associated with this. The F statistics shows the model is not statistically significant, thus, the monetary policy instruments used in the model and the other variables do not collectively affect the returns on assets. They had an R square of approximately 50%, which shows other exogenous variables affect the model. The adjusted R square was 0.167868 which shows that 16.8% of the parameters fit the model. The Durbin Watson shows that there is no positive autocorrelation.

For First Bank, they also have real interest rate and treasury bill rate inversely and directly proportional respectively with the returns on assets. A unit increase in the real interest rate would cause the returns on assets for First Bank to decline by 0.000924 while a unit increase in the treasury bill rate would lead to a rise in their return on assets by 0.001143. The T statistics showed only treasury bill rate to be statistically significant to their returns on assets. The F statistics shows the model is not statistically significant. They had an R square of approximately 52%, which shows other exogenous variables affect the model. The adjusted R square was 0.167868 which shows that 16.8% of the parameters fit the model. The Durbin Watson shows that there is no positive autocorrelation.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY OF THE FINDINGS

Based on the results of the regression analysis run on the two-different tier one banks, the following was discovered on the effect of monetary policy on the returns on assets; Using the same model for the two banks, it was discovered for Ecobank that real interest rate had a negative effect on the returns on asset and the treasury bill rate had a positive effect on the returns on asset. Given their coefficients, a unit increase in the real interest rate would lead to a decrease in their returns on assets and a unit increase in the treasury

bill rate would lead to a 0.158195 increase in the returns on asset. The R^2 coefficient was 49.6% which means that 49.6% of the variations in the returns on assets is explained by the inflation rate, real interest rate, treasury bill rate and loan to deposit ratio. The T-stat showed that the explanatory variables apart from treasury bill rate are statistically insignificant in explaining the returns on asset in Ecobank. The F-stat also showed no joint significance among the independent variables and the return on assets of Eco bank. For First Bank, the real interest rate had a negative effect on the returns on assets, while treasury bill rate had a positive effect on the returns on assets. A unit increase in the real interest rate would cause the returns on assets for First Bank to decline by 0.000924 while a unit increase in the treasury bill rate would lead to a rise in their return on assets by 0.001143. The R^2 coefficient was 52% which means that 48% of the variations in the returns on assets is explained by the explanatory variables. The T-stat showed that the explanatory variables, apart from treasury bill rate are statistically insignificant in explaining the returns on asset in First Bank. The F-stat however showed that, monetary policy has not significantly contributed to the returns on asset of First Bank.

5.2 CONCLUSION

This research study shows that the real interest rate does not significantly affect the returns on assets, however, treasury bills and maybe other monetary policy instruments may have significant effect on the returns on asset since return on asset is needed to measure bank performance and past works have proven that monetary policy affects the bank performance.

5.3 RECOMMENDATION

Based on the findings, this study recommends that;

1. The CBN needs to ensure proper implementation of their monetary policies so as to ensure proper regulation of the financial system.
2. The government should make the financial sector more viable to aid the smooth execution of the monetary policies.
3. Monetary policy should be used to create a favorable investment climate by facilitating the emergence of market based real interest rate to attract investments.
4. More monetary policy instruments should be practiced so as to strengthen the financial sector.

REFERENCE

- Aderibigbe, J. O. (1997). Monetary policy and financial sector reform. *Bullion Publication of the Central Bank of Nigeria*.
- Ahmed, A. (1992). Indirect Monetary Control in Nigeria: Problems and Prospects. *CBN Bullion*.
- Akatu, P. A. (1993). The challenges of Monetary Policy since 1986. *CBN Economic & Financial Review*.
- Anyanwu, J. C. (1993). *Monetary Economic Theory Policy and Institute*. Onitsha Hybind Publishers.
- Borio, C. Gambacorta, L. Hofmann, B. (2015). *The influence of monetary policy on bank profitability*. Monetary and Economic Department.

- Callier P. (1991). *Financial Systems and Development in Africa*. Economic Development Institute of the World Bank. Washington D.C., World Bank.
- Central Bank of Nigeria. (2007). Central Bank Act (Amended) Section 12. Retrieved 29th December, 2015, from <http://www.cbn.gov.ng/out/publications/bsd/2007/cbnact.pdf>
- Central Bank of Nigeria. (2007). Guidance Notes on Regulatory Capital. Retrieved 28th November, 2015, from <http://www.cenbank.org/Out/2015/bsd?1.Revised%20Guidance%20Notes%20on%20Regulatory%20Capital.pdf>
- Cook, L. D. (2010). *Were the Nigerian Banking Reforms of 2005 A Success...And for the Poor?* National Bureau of Economics Research.
- Dell'Ariccia, G. Laeven, L. and Marquez, R. (2010). *Monetary Policy, Leverage, and Bank Risk-Taking*. International Monetary Fund.
- Dickens, E. (2011). *Keynes' Theory of Monetary Policy: An Essay In Historical Reconstruction*. Contributions to Political Economy.
- Ebiringa, O. T. Onuorah, A. C. and Obi, H. K. (2014). *Behavioral Pattern of Monetary Policy Variables and Effects on Economic Growth: An Econometric Investigation of Nigeria*. Journal of Economics and Sustainable Development. Vol. 5.
- Ecobank Transnational Inc. (2016). Overview and History of Ecobank Transnational Inc. Retrieved on the 20th of January, 2016, <https://en.m.wikipedia.org/wiki/Ecobank>
- Ekpung G. E., Udude C. C. and Uwalaka H. I. (2015). *The Impact Of Monetary Policy On The Banking Sector In Nigeria*. International Journal of Economics, Commerce and Management. Vol. III, Issue 5. Department of Economics, Faculty of Social Sciences & Humanities, Ebonyi State University, Abakiliki, Ebonyi State, Nigeria.
- First Bank of Nigeria. (2015). Overview of First Bank of Nigeria. Retrieved 13th of January, 2016, from https://en.m.wikipedia.org/wiki/First_Bank
- Fisher, S. (2015). *The Governors' Roundtable for African Central Bankers*. University of Oxford, United Kingdom.
- International Journal of Business and Management. (2011). Vol. 6, No. 6; Canadian Center of Science and Education 225.
- International Monetary Fund, (2015). *Avoiding Dark Corners: A Robust Monetary Policy Framework for the United States*.
- Jadhav, N. (2005). *Dynamics of Monetary Policy in Emerging Market Economies: A case study of India*.
http://drnarendrajadhav.info/drnjadhav_web_files/Published%20papers/Dynamics%20of%20Monetary%20Policy%20in%20EMEs%20A%20Case%20Study%20of%20India.pdf
- Johnson, H. G. (1962). *Monetary theory and policy*. American Economic Review.
- Mbutor, O. M. (2007). *Lending channel of monetary policy transmission in Nigeria: Vector Autoregressive (VAR) Verification*. Central Bank of Nigeria Economic and Financial Review.
- Mordi, C. N. O. (2004). *Institutional Framework for the Regulation and Supervision of the Financial Sector*. Central Bank of Nigeria Bullion.
- Nnanna, O. J. (2001). *The monetary policy framework in Africa: The Nigerian experience*. Paper presented at the 2001 South African Reserve Bank Conference
- Obadan, M. I. (2004). *Foreign Capital Flows and External Debt: Perspectives on Nigeria and the LDCs Group*. Lagos-Nigeria: Broadway Press Limited.

- Punita, R. and Somaiya, K. J. (2006). Monetary Policy: It's Impact on the Profitability of Banks in India. *Intermediate Business and Economics Research Journal*. Volume 5.
- Ricardo, D. (1816). Proposals for an Economical and Secure Currency. *The Economic Journal* 33.
- Sanusi, L. S. (2012). Banking Reforms and its Impact on the Nigerian Economy. *Warwick's Economic Summit*. Central Bank of Nigeria.
- Shaffer, S. (1993). A test of Competition in Canadian Banking. *Journal of Money, Credit and Banking*. Vol.25.
- Soludo, C. C. (2007). Macroeconomic, monetary and financial sector developments on financial and payment system reforms in the country. *Economic and Financial Review*.
- Soyibo, A. and Adekanye, F. (1991). Financial System Regulation, Deregulation and Savings Mobilization in Nigeria. *A Final Report AERC Research Paper*.
- Sylvanus, I. I. & Abayomi, A. A. (2001). Financial Sector Reforms, Macroeconomic Instability and the order of Economic Liberalization: The evidence from Nigeria. *AERC Research Paper 112*.
- Thornton, H. (1802). *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain*. Frank Cass & Co Ltd.
- Uchedu, O. A. (1995). Monetary Policy and the Performance of Commercial Banks in Nigeria. *CBN Economic and Financial Review*.
- United Bank of Africa. (2016). Overview and History of United Bank of Africa. Retrieved on the 30th of January 2016 from https://en.m.wikipedia.org/wiki/United_Bank_for_Africa