

**IMPACT OF SELECTED MONETARY POLICY INSTRUMENTS ON
NIGERIAN BANKING INDUSTRY CREDIT TO THE PRIVATE
SECTOR, 1981-2015**

BY

**ENEOLI, OBINNA CALLISTUS
PG/M.Sc/09/54076**

**BEING A DISSERTATION PRESENTED TO THE FACULTY OF
BUSINESS ADMINISTRATION IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE
(M.Sc.) DEGREE IN BANKING AND FINANCE OF THE
UNIVERSITY OF NIGERIA**

SUPERVISOR: PROF. J.U.J ONWUMERE

AUGUST, 2017

APPROVAL PAGE

This dissertation has been approved for the Department of Banking and Finance,
Faculty of Business Administration, University of Nigeria, Enugu Campus by:

.....
Supervisor
Prof. J. U. J Onwumere

.....
Date

.....
Head of Department
Dr. OkoroOkoro

.....
Date

DECLARATION

I, Eneoli, Obinna Callistus, a postgraduate student in the Department of Banking and Finance, with Registration Number PG/M.Sc./09/54076 do hereby declare that the work embodied in this dissertation, “The impact of selected monetary policy instruments on Nigerian banking industry credit to private sector” is original and has not been submitted in part or full for Diploma degree of this University or other institution of higher learning.

.....
Eneoli, Obinna Callistus
PG/M.Sc/09/54076
(Student)

DEDICATION

I dedicate this work to the God Almighty and, also my father, Late Mr. Albert UdegbunamEneoli who set the pace for my academic height but could not stay to see its manifestation.

May his soul rest in peace Amen.

ACKNOWLEDGMENTS

I thank the Almighty God for His grace and divine protection during the period of the study.

I want to appreciate my supervisor, Prof. J. U. J Onwumere who made inputs of immeasurable value to this work. In fact, his inputs and guidance on this project need not be overemphasized.

Also, I thank Dr. Emmanuel Nwude, our departmental staff, my lovely wife, Mrs. Lillian Eneoli, my mother, Mrs. Evelyn Eneoli and, some of my friends, for their encouragement and intellectual support which cannot be quantified in monetary terms. To them, I owe a lot of gratitude.

Thank you,

Obinna Eneoli
(PG/M.Sc/09/54076)

TABLE OF CONTENTS

Title Page	i
Approval Page	ii
Declaration	iii
Dedication	iv
Acknowledgments	v
Table of Contents	v i
CHAPTER ONE: INTRODUCTION	
1.1 Background to the study	1
1.2 Statement of the Problem	3
1.3 Objectives of the Study	4
1.4 Research Questions	4
1.5 Research Hypotheses	5
1.6 Scope and Limitation of Study	5
1.7 Significance of the Study.	6
References	7
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
2.1 Conceptual Framework	8
2.1.1 Concept of Monetary Policy	8
2.1.2 Concept of Bank Credit to Private Sector	11
2.1.3 Private Sector Credit and Interest rate	11
2.1.4 Concept of Bank Regulation	13
2.1.5 Concept of Bank Regulation and the Concept of Financial Inclusion	14
2.1.6 Banking Industry Performance	15
2.2 Theoretical Review	16

2.2.1	The Monetarist Theory	16
2.2.2	The Keynesian Theory	16
2.2.3	Anticipated theory	17
2.2.4	Shiftability Theory	17
2.2.5	Liquidity Profitability Trade- off	18
2.2.6	Public Interest Theory	18
2.2.7	Credit Channel Theory	19
2.3	Empirical Review	19
2.4	Overview of the Nigerian Financial System Recent Development in Nigerian Banking System	23
2.5	Summary of Empirical Review	27
2.6	Knowledge Gap	32
	References	33

CHAPTER THREE: METHODOLOGY

3.1	Research Design	38
3.2	Nature and Sources of Data	38
3.3	Model Specification	38
3.4	Description of Model Variables	39
3.4.1	Capitalization (BCAP)	40
3.4.2	Evaluation on Economic Criteria	40
3.4.3	Evaluation based on Statistical Criteria	40
3.4.4	Evaluation based on Econometric Criteria	42
3.4.5	Test for Heteroskedasticity	43
	References	44

CHAPTER FOUR: ANALYSIS OF DATA

4.1	Data Presentation and Analysis	45
-----	--------------------------------	----

4.2	Descriptive Statistics	47
4.3	Evaluation based on Econometric Criteria	48
4.4	Test of Hypothesis	51
4.4.1	Result Interpretation and Evaluation	55
4.4.2	Economic Criteria	55
4.4.3	Statistical Criteria	56
4.4.4	The Student's T-test	56
4.4.5	F-Statistics	57
4.4.6	Implication of Result	57
CHAPTER FIVE: SUMMARY, FINDINGS, CONCLUSION AND		
RECOMMENDATIONS		
5.1	Summary of Findings	59
5.2	Conclusion	59
5.3	Recommendations	60
5.4	Contribution to Knowledge	61
	References	62

ABSTRACT

This study examined the impact of selected monetary policy instruments on credit to private sector in Nigeria. Regulatory policy is a very essential element in achieving desired objectives such as promoting economic growth, achieving full employment level, reduction in the level of inflation, maintenance of healthy balance of payment, sustenance of growth in the economy, increase in industrialization and economic stability. Bank Industry Performance serving as the dependent variable and is proxied using Private sector credit, and selected regulatory instrument representing the explanatory variables, proxied using minimum rediscount rate (MRR), Liquidity ratio (LR) and cash reserve ratio (CRR). The objectives of the study were to: analyze the impact of minimum rediscount rate on credit to private sector in Nigeria, examine the impact of liquidity ratio on the private sector credit in Nigeria, and assess the impact of cash reserve ratio on private sector credit in Nigeria Banking industry. The study employed Ordinary Least Square (OLS) technique for analysis of the data covering the period of 1981 to 2015. Data for the study were collected from Central Bank of Nigeria (CBN) Statistical bulletin. Results emanating from the study are in three-folds. First, liquidity ratio had a negative but statistically insignificant impact on credit to private sector. Second, loan to depositors had a negative but statistically significant impact on credit to private sector. Third, minimum rediscount rate had a negative but statistically significant impact on credit to private sector. The study recommends that government needs to benchmark best practices in monetary policy development from those economies that are more advanced in order to develop better monetary policies that can improve the performance of the banking industry, indeed, credit to private sector especially with respect to minimum rediscount rate, liquidity ratio and loan to deposit ratio.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Most countries around the globe do make frequent significant changes in the design and conduct of their regulatory policy in order to address the prevailing economic conditions. These adjustments in policies are adopted by both developed and developing countries in order to respond to the changes in economic changes in various countries or regions. Regulatory policy is a very essential element in achieving desired objectives such as promoting economic growth, achieving full employment level, reduction in the level of inflation, maintenance of healthy balance of payment, sustenance of growth in the economy, increase in industrialization and economic stability. Recent research has confirmed that regulatory policy has other important objectives such as smoothing of the business cycle, reducing chances of economic crises; stabilization of interest rates and real exchange rate stabilization (Mishra & Pradhan, 2008).

Regulatory changes largely affect the way banks operate. Ahumada and Rodrigo (2004) argue that the nature of banking activities and the position banks hold as intermediaries makes these financial institutions the most appropriate channels for adoption of the monetary policy of any country. They further assert that there are two important channels of monetary policy transmission that largely depend on the functioning of the banking sector. The first is the conventional interest rate channel and the other is the credit channel. The former channel operates when the central bank's adjustments to the nominal interest rate have an impact on the real interest rate and thus on the pattern of investment and consumption. This channel will only work, however, if banks transmit the changes in the monetary policy rate to their customers. The credit channel, in turn, assumes some capital market imperfections, such as asymmetric information, that induce a contraction of the quantity of credit when the central bank imposes a restrictive monetary policy (Ahumada & Rodrigo, 2004).

The banking industry is one of the sectors that play an important role in the allocation of capital resources and risk sharing of future flows in any given economy or country. An efficient and effective banking industry in any economy is likely to facilitate increased growth and welfare, and it will smooth business cycles. There are several functions that are performed by banks thus making them more appropriate channels of regulatory policy implementation. For instance banks provide money changing and payment processing services; transformation

of assets in terms of their maturity, quality, and denomination and more recently management and control of risks. These functions give banks a central position within the process of saving and investment allocation. However, these functions make banks vulnerable to different sources of shocks, and they have a negative effect on the economy because of banks' central role. Consequently, there is a case for strong regulations in a banking environment. Because of the type of functions banks perform there is need to have in place proper regulatory policy involving issues such as barriers to entry, market concentration, the borrower-lender relationship, deposit insurance, and the taxation of financial intermediation in order to improve the performance of the financial market (Ahumada & Rodrigo, 2004).

Put straight, financial regulation and policies have helped to facilitate capital formation and generate growth in the economy, but the consistent and persistent financial intermediation roles of Banks have been able to foster national and international development via the means of channeling resources into sectors of priority for sustainable development. The development of Nigerian financial institution system could be characterized by changes in structure, growth and emerging challenges since the era of Structural Adjustment Programme in 1986 to date (Soyinbo & Adekanye, 1992). It is believed that the financial system remained the framework within which the capital formation takes place through the intermediation of the financial institutions processes (Obadeyi, 2013 citing Akingunola). Therefore, the regulation of banks in twenty-first century involves the processes of financial innovations, globalization and deregulation in advanced- economies banking sector; but operations of other financial institutions if not checked might affect the performance of banks in any economy (John & Kent, 2008; Obadeyi, 2013, CBN, 2014). However, the authorities via Central Bank of Nigeria (CBN) should intervene in the operation of the banking system in order to correct the shortcoming of price fixing mechanisms so as to ensure that what is commercially rational for an individual bank also possesses approximate characteristics of social rationality as much as possible. Thus, the interest rate charge by bank is regulated to encourage savings mobilization and to ensure enough investment for rapid economic growth. In Nigeria, there is need for operators, regulators and policymakers in the financial sector to understand that reform does not imply 'no regulation' but entails restructuring of the financial system, allowing the forces of the demand and supply to dictate price mechanism as well as liberalizing the financial system further to foster the set objectives of the government in promoting economic transformation (Obadeyi, et al, 2013). Demetriades and Andrianova (2005) argue that financial reform is not the key factor behind the diverse result of financial

development and economic growth of countries, but institutions and political economy; which are the likely factor that are responsible for the success of some countries to succeed in developing their financial systems while others have not.

1.2 Statement of the Problem

The type of regulatory instrument that any given country adopts is a major determinant on the financial operations of most financial institutions operating in that economy. Regulatory policy has the potential to trigger or inhibit investment activities through provision of affordable and denying access to credit respectively. Commercial banks are usually considered around the globe as the most appropriate channels of implementing regulatory policy by most Central Banks in many countries. This leaves the commercial banks in a vulnerable situation that is likely to affect their financial performance due to changes occurring in the macroeconomic environment.

Nigeria has experienced unstable macro environment in the last few years which led to changes in monetary policy. These changes in regulatory instrument forced most of the commercial banks to shift the effects to their customers. Shifting these changes to customers may have an impact on the financial performance of the banks. Studies on regulatory policy and bank performance indicate different results on the existing relationship. For instance Ajayi and Atanda (2012) carried out a study on monetary policy and bank performance in Nigeria. The findings confirmed that bank rate, inflation rate and exchange rate are total credit enhancing, while liquidity ratio and cash reserves ratio exert negative effect on banks total credit. Another finding indicated that although only cash reserve ratio and exchange rate found to be significant. Fatade (2004) carried out an investigation on the impact of monetary policy on banks' performance in Nigeria. The study established that various policy measures instituted in the country over the years have directly and indirectly affected performance of the banking sector in a number of ways while includes Banks profitability, Deposit/Savings mobilization Loans & Advances and so on. The effectiveness of bank's performances depends on the instruments used in macroeconomic policies and the prevailing economic conditions.

Monetary policy is a deliberate action of the monetary authorities to influence the quantity, cost and availability of money credit in order to achieve desired macroeconomic objectives of

internal and external balances. The action is carried out through changing money supply and/or interest rates with the aim of managing the quantity of money in the economy. The importance of money in economic life has made policy makers and other relevant stakeholders to accord special recognition to the conduct of monetary policy.

Despite the studies mentioned above, limited studies have been conducted to establish the effect of monetary policy on the credit to private sector in Nigeria. Nigeria varies her policies frequently and there is need to find out the effect of these variations on the performance of commercial banks.

Theories are being constantly challenged in the light of new research, old ones are being subjected to new empirical investigations using the advantages of progress in information communications technology and computerized econometric software

The studies are few and there is need to carry out more studies to ascertain the authenticity of the previous finding. Also, the methodologies are poorly specified, therefore, there is need for more advance methodology like ordinary least square (OLS)

This is therefore a research gap the study sought to address by answering two main questions: What is the main monetary policy instruments used in Nigeria? And how does the monetary policy instruments affect credit to the private sector in Nigeria.

1.3 Objectives of the study

The main objective of this study is to assess the impact of selected monetary policy instruments on credit to the private sector in Nigeria. The specific objectives are as follows;

1. To examine the impact of liquidity ratio on the private sector credit in Nigeria
2. To assess the impact of loan to deposit ratio on private sector credit in Nigeria.
3. To analyse the impact of minimum policy rate on credit to private sector in Nigeria.

1.4 Research Questions

1. How does liquidity ratio affect private sector credit in Nigeria?
2. How far has loan to deposit ratio affect private sector credit in Nigeria?
3. To what extent does minimum policy rate affect private sector credit in Nigeria?

1.5 Research Hypotheses

Base on the objective of this study the following research hypothesis are therefore formulated;

Hypotheses one

Ho: Liquidity ratio does not have a positive and significant effect on private sector credit in Nigeria.

Hypotheses two

Ho: Loan to deposit ratio does not have a positive and significant effect on private sector credit in Nigeria.

Ho: Hypotheses three

Minimum policy rate does not have a positive and significant effect on private sector credit in Nigeria.

1.6 Scope and Limitation of Study

The study covers the operation of the regulatory authorities as it relates to the banking industry in the past thirty four years which was marked by the Nigerian general strike of May 1981 on the struggle between Nigeria military regime and organize labour. The rational for choosing 1981 as bench mark for this study is as a result of general strike carried out by the organized labor during military regime which stagnated the economic activities. The study would be limited to the period of 1981-2015. According to Muiywa (2005), this period witnessed a more intensive intervention in banking by the regulatory authorities in light of the perception of the link between finance and development and the desire to maximize the banking sector's contribution to Nigeria's economic development.

Secondly, the Nigerian banking industry before the 2004 reform was a case of a system heading to a total collapse as incidence of failure and liquidation arising from weak capitalization and operational inefficiency were common phenomenon (Ike 2006)

In view of the technicalities involved information gathered is limited to those accessed and gathered with the aid of local newspapers, magazines, journals and annual reports of the Central Bank of Nigeria (CBN), Nigeria Deposit Insurance Corporation (NDIC), and the internet. However, the effect of this limitation has been reduced to the barest minimum.

1.7 Significance of the Study

1. **Bank customers:** This study is significant in that it will help depositors of funds in financial institutions to fully understand the factors that affect the loanable funds available to the private sector.
2. **Regulators of the financial industry:** It also provides a platform for the regulatory authorities to appreciate the impact of their activities on the banking industry, and underscores areas for improvement.

It is also imperative to state that a study of this nature provides an independent platform via which the regulators can appraise fundamental tools of regulation in a bid to make reasonable adjustments where necessary.

3. **Bankers:** The findings of this study will be of immense benefit not only to the Nigerian banking industry and its related institutions, but also to those interested in understanding the inter-relationship between the actions of the regulators on one hand and the banking institutions on the other as well as providing a platform for promoting an efficient and effective banking practice.
4. **The government/researchers:** Other researchers will find this study very useful since it will add to the existing knowledge. Such researchers and students who wish to carry out a related study will have to use it as a research material. Indeed, the government will use some of the recommendations in this work for policy direction and implementations.

REFERENCES

- Adekanye, F. (1992). *Financial systems regulation, deregulation and savings mobilization in Nigeria*. African Economic Research Consortium research paper, Final report Nairobi, Kenya.
- Andrianova, S., Demetriades, P., & Shortland, A. (2003). *State Banks, Institutions and Financial Developments*. Discussion paper in Economic, University of Leicester, 02/13
- CBN (2015) *Communique No. 102 of the MPC Meeting (With Personal Statements of Members)* of May 18 and 19, 2015 Assessed on 17 August 2015
- CBN releases guidelines for new banking model*. Vanguard Newspaper 12 November, 2010. Retrieved on 19th August, 2015
- Efina (2014) *Supply Side: Assessing the Impact of Financial Inclusion Policies on Deepening Financial Inclusion in Nigeria*. Retrieved on 17th August, 2015
- John, T. & Kent, M. (2008). *The Economics of Banking, (2nd edition)*. John Wiley & Sons Ltd, Australia
- Muyiwa O. (2005) *Consolidation through Merger and Acquisition: African Experience*. CBN Fourth Monetary Policy Conference pg 27 CBN Report –August 2004
- Obadeyi, J. (2013). *The Impact of Interest Rates on the Development of an Emerging Market: Empirical Evidence of Nigeria*. Journal of Economic and Sustainable Development. 4(10) 44– 58
- Oke, B., Obadeyi, J., & Unuafé, O. (2013). *Volatility Transfer from Developed Countries to Emerging Market: Evidence from Nigeria*. European Journal of Business and Management. 5(17) 127 -129.
- Oke, M. O. & Adeusi, S. O (2012). *Impact of Capital Market Reforms on Economic Growth: The Nigerian Experience*. Australian Journal of Business and Management Research 2 (02), 20-30.
- Sanusi S.L (2010) *Global Financial Meltdown and Reform in The Nigerian Banking Sector*. Public Lecture delivered at the Convocation Square, Abubakar Tafawa Balewa University, Bauchi, Friday, December 10, 2010. Retrieved on 14 August, 2015

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Concept of Monetary Policy

Monetary policy has to do with the Central Bank's stated guideline and instruments for managing the quantity and supply of money in an economy to achieve a desired objectives. It is a deliberate action of the monetary authorities to influence the quantity, cost and availability of money credit in order to achieve desired macroeconomic objectives of internal and external balances. The action is carried out through changing money supply and/or interest rates with the aim of managing the quantity of money in the economy. The importance of money in economic life has made policy makers and other relevant stakeholders to accord special recognition to the conduct of monetary policy. The Central Bank of Nigeria is the organ that is responsible for the conduct of monetary policy in Nigeria.

Monetary policy can either be expansionary or contractionary, depending on the overall policy thrust of the monetary authorities. Monetary policy is expansionary when the policy adopted by the central bank increases the supply of money in the system and contractionary, when the actions reduce the quantity of money supply available in the economy or constrains the growth capability of the deposit money banks to grant further credit. The primary objective of monetary policy is the realization of stable non-inflationary growth. This gives the citizens confidence in the future value of their money, so that they can make sound economic and financial decisions. Low and stable inflation also helps to prevent inflationary boom and bust cycles that could result in a recession and higher unemployment.

The Objectives of Monetary Policy in Nigeria

The objectives of monetary policy may vary according to the level of development of the economy involved, but invariably; they include the attainment of price stability, maintenance of external payments equilibrium, as well as promotion of employment and output growth, and sustainable economic development. Irrespective of the type of economy, these objectives are critical for the attainment of internal and external balance and ultimately the promotion of long-run economic growth. Adam, (2005) posit that where the stability of the financial system is threatened, these short and long term objectives could be subordinated to the overriding objective of achieving financial stability. In pursuit of the provisions of the CBN Act 2007,

the primary objective of monetary policy has remained the maintenance of monetary and price stability. Generally, the monetary policy of the CBN is anchored on four main pillars:

- (i) Inflation as a monetary phenomenon;
- (ii) The public's expectation of future inflation (this is crucial in the setting of current wages and prices). A corollary to this is that there is no long-run trade-off between unemployment and inflation; to anchor expectations;
- (iii) Proactive and rule based monetary policy (for instance, under the Taylor rule, for monetary policy to stabilize prices, the nominal interest rate must be raised by more than the level of inflation); and
- (iv) The need for monetary policy to be undertaken outside the control of the political authorities i.e. independence of the central bank to conduct monetary policy.

Price Stability and Monetary Policy

The major objective of monetary policy for most central banks is the attainment of price stability. An associated objective is stable growth with full employment (accompanied by stable long-term interest and real exchange rates). In pursuit of the objective of price stability and its accompanying objectives, central banks recognize the existence of conflicts amongst the objectives and the need for trade-offs. Nigeria's monetary policy strategy is anchored on the attainment of internal balance and external viability. This philosophy has evolved in terms of techniques and instruments.

In recent times, the CBN recognized that achieving stable prices would require a continuous reassessment and evaluation of its monetary policy implementation framework to enable it respond to the ever-changing economic and financial environment. Against the requirement for internal and external balance, the CBN announced a new monetary policy framework effective 11th December, 2006. The goal of the new implementation framework was to achieve a stable value of the domestic currency through stability in short-term interest rates around an —Operating Target - the interest rate, which is determined and operated by the CBN. The —Operating Target rate i.e. the —Monetary Policy Rate (MPR), serves as an indicative rate for transaction in the money market as well as other Deposit Money Banks' (DMBs) retail interest rate. The operating principle guiding the new policy is to control the supply of settlement balances of banks and motivate the banking system to target zero balances at the CBN, through an active interbank trading or transfer of balances.

Recently the Central Bank of Nigeria through the monetary policy committee (MPC) resolved to retain all monetary policy rates and parameters. The committee opted to retain the monetary policy rate, MPR, at 14% and, cash reserve ratio, CRR at 22.5%. MPR is the rate the CBN lends money to the commercial banks, while CRR is the monetary tools used to either excess liquidity in the system or release funds stimulate the growth of the economy as the situation demands. Besides liquidity ratio was retained at 30% with the asymmetric corridor at +200 and -500 basis point around the MPR. The resolution took into consideration the challenges the domestic economy was facing and opportunities for achieving price stability, conducive growth in 2017. Those challenges include persistent inflationary pressures, continuing output contraction, high unemployment rate, and elevated demand pressure in foreign exchange market, low credit to real sector and weaken financial system indicators.

Monetary Policy Committee

The Central Bank of Nigeria through the Monetary Policy Committee (MPC) conducts monetary policy. The MPC is statutorily charged with the responsibility for the conduct of the monetary policy of the Bank. The MPC uses the instruments of monetary policy available with the Bank to effect changes in the liquidity of the deposit money banks to affect the supply of money. Often the MPC takes monetary policy decisions through tinkering with the Monetary Policy Rate (MPR) in order to affect short-term interest rates. The CBN does this by altering the target for the overnight interest rate — the rate financial institutions charge each other for overnight loans. A change in the target rate leads to changes in other interest rates, thereby affecting everyone's spending and borrowing decisions. The target rate is set periodically and reassessed at the subsequent MPC meeting. The CBN Act, 2007 provides for the constitution of a Monetary Policy Committee (MPC).

The Committee comprises 12 members the Governor as the Chairman, four Deputy Governors, two members of the Board of Directors of the Bank, three members appointed by the President and two members appointed by the Governor. Other committees set up to facilitate the success of monetary policy are Monetary Policy Technical Committee (MPTC) which meets prior to the MPC meetings, to review and make final inputs to the Economic Report for the MPC, Monetary Policy Implementation Committee (MPIC) meets weekly to review and monitor policy implementation.

2.1.2 Concept of Bank credit to Private sector

Credit is the extension of money from the lender to the borrower. Spencer, (1977) notes that credit implies a promise by one party to pay another for money borrowed or goods and services received. Credit cannot be divorced from the banking industry as banks serve as a conduit for funds to be received in form of deposits from the surplus units of the economy and passed on to the deficit units who need funds for productive purposes. Banks are therefore debtors to the depositors of funds and creditors to the borrowers of funds. According to Nwanyanwu (2008:46), bank credit is the borrowing capacity provided to an individual, government, firm or organization by the banking system in the form of loans.

CBN Briefs (2003) defines bank credit as the amount of loans and advances given by the banking sector to the various economic agents. CBN Monetary Policy Circular (2010) identifies such bank credit facilities to include loans, advances, commercial papers, banker's acceptance, bill discounted, with banks credit risk. Bank credit is often accompanied with some collateral that helps to ensure the repayment of the loan in the event of default. Credit channels savings into productive investment thereby encouraging economic growth. Thus, availability of credit allows the role of intermediation to be carried out, which is important for the growth of the economy. The availability of credit is important to the real economy. Globally, positive change in credit availability has positive significant effect on the nation's real gross domestic product (GDP). According to Nzotta (2004), it is generally accepted that bank credits influence positively the level of economic activities in any country. It influences what is to be produced, who produces it and quantity to be produced. Bank credits affect and alter the level of money supply in an economy or country. It is the most important source of bank income and it promotes the activities of banks and non-bank financial institutions and thus influences the level of growth of the financial system. It also affects aggregate output and productivity, the pattern of production, the level of entrepreneurship, and the realization of aggregate economic performance, development and growth. It could thus be said with absolute assurance that banking industry credit is of crucial importance both to the banks, the monetary authorities, business community and the economy in general.

2.1.3 Private Sector credit and Interest Rates

Interest rate has a direct effect and negative relationship on private sector investment. When interest rates increase, private sector investment decreases because the loans will cost much more to repay therefore demand for credit by private sector falls and when interest rates

fall then demand for credit rises as the cost of financing investments reduces. While interest rates are set by the market in the case of the 91-day Treasury bill rate as the benchmark rate, the Central Bank influences the direction of the benchmark rate through the availability of liquidity in the economy. Adamopoulos and Vazakidis (2009) contend that financial liberalization in the form of an appropriate rate of return on real cash balances is a vehicle of promoting economic growth. They argue that a low or negative real interest rate discourages saving. Reduction in savings reduces the loanable funds in an economy for investment resulting in higher interest rates, low output in turn, lowering the rate of economic growth. Thus, the "McKinnon-Shaw" model posits that a more liberalized financial system will induce an increase in saving and investment and therefore, promote economic growth

The financial system connotes the conglomeration of institutions, markets, instruments, and operators that interact within an economy. It is saddled with the responsibility of managing the payments system, capital formation and enhancing the effectiveness of the monetary policy. The paramount responsibility of the financial system is, however, financial intermediation between surplus and deficit units. Over the years, the Nigerian financial system has experienced significant change in terms of ownership, structure, the depth and breadth of available instruments, the number of institutions established, and the regulatory framework within which the system operates. (Agu ,1988,Nnanna&Dogo1998).

The financial system in Nigeria has also improved following rapid growth in the number of participating institutions including the scope and services rendered. Essentially, the system comprises the regulatory authorities, banks, non-bank financial institutions and markets. The regulatory authorities, whose role is crucial for the functioning and orderly development of the financial sector, include the Federal Ministry of Finance; the Central Bank of Nigeria (CBN); the Nigeria Deposit Insurance Corporation (NDIC); Securities and Exchange Commission (SEC); National Insurance Commission (NAICOM). Except for the banking industry, the majority of operators in the nation's financial system are considerably small in size. There is a dearth of long-term funds in the industry. While banks, capital markets and investment management companies seem to be well-capitalized, the insurance industry until very recently was plagued by under-capitalization. Although competition is high across all the sub-sectors in the financial sector, it is more intense in the banking sub-sector. Also, entering barriers are high for banking, relatively moderate and low for insurance, and investment and capital market activities, respectively.

The CBN has pursued a policy of quantitative easing in the aftermath of the global financial and economic crises in order to lessen the impact of the crises on the Nigerian economy. Nonetheless, there is continuing underperformance of key monetary aggregates – a factor that had underpinned the CBN's decision to implement the quantitative easing policy. The major challenges are still negative growth in credit to the private sector, high lending rates and a widening interest-rate spread despite declining inter-bank rates and a relative surplus liquidity in the banking system.

2.1.4 Concept of Bank Regulation

Bank regulation depends on the notion of market failure – the interference with the market ideal of perfect competition that might arise. (Houthakker, & Williamson, 1996).. The reasons for this include elements of monopoly or oligopoly, the presence of externalities, lack of information in general or the existence of asymmetric information. Giddy (1984) and Sheng (1999) provide four major reasons why banks should be regulated.

The first relates to monetary policy – the ability of banks to create money. Second, as channels of credit or investments, banks are involved in credit allocation. Third, banks are regulated to ensure healthy competition and innovation by preventing the formation of cartels. The fourth is for prudential regulation reasons and to mitigate the problem of asymmetric information. This view is supported by Howells and Bain (2004) who stated that the reason for bank regulation originates from the existence of asymmetric information – the fact that customers of the institutions (banks) are less informed and thus more at a disadvantage about the affairs of the banks than the bank itself. The case for bank regulation is further strengthened by worries about the consequences of banks' poor performance and their eventual failure (CBN/NDIC, 1995), (Howells, & Bain, 2005). Further state that banks' liabilities form the means of payment (in an economy) and bank regulation therefore, aims to guarantee the integrity of the transactions' medium and to prevent it from failing.

The theory of bank regulation is also based on the role of banks as intermediaries in the financial system, which is shown on both the asset and liability sides of their balance sheets. On the asset side, Leland & Pyle (1997), Boyd & Prescott (1986) state that banks as intermediaries monitor cash flows and screen quality of investments for their customers. Without the intermediation, such monitoring would be duplicated by many investors involved in funding such projects. The effect of the intermediation is, therefore, to reduce cost. This

may not be achieved if the banks are not regulated. On the liability side, Diamond and Dybvig(1983), using the Diamond-Dybvig model show that; ‘without banks and othersuch intermediaries, all investors would be locked up in illiquid long-term investments, that yield high pay-offs only to those who consume late’. The intermediation would therefore, improve risk sharing and enhance the welfare of stakeholders in the system. Banks should, therefore, be regulated to ensure uniformity and transparency, in these important functions.

2.1.5 Bank Regulation andthe Concept of Financial Inclusion

According to Abiola, Folasade, and Alexander (2015), there is an increasing development in financial inclusion as a result of greater impact of regulation and policies in the banking sector. They argued that financial inclusion is achieved when adults have easy access to a broad range of financial products designed according to their needs and provided at affordable costs. These products include payments, savings, credit, insurance and pensions. This definition is anchored on four thrusts. The first is ease of access to financial products and services which implies that financial products must be within easy reach for all groups of people and should avoid rigorous requirements,such as challenging Know-Your-Customer procedures. Secondly, a broad range of financial products and services should be made available to the unbanked too. Financial inclusion implies access to a broad range of financial services such as payments, savings, credit, insurance and pension products. Thirdly, the products are expected to be designed according to the need of the unbanked, taking their income levels and access to distribution channels into consideration and lastly, it must be provided at an affordable cost. Formal financial services should be affordable even for low-income groups, particularly when compared to informal services, e.g. Esusu or moneylenders(CBN-NFIS, 2012).

Explaining further, Rangarajan (2008) financial inclusion is both a crucial link and a substantial first step towards achieving inclusive growth and it should include access to financial products and services like bank accounts, check in account, immediate credit, savings products, remittances and payment services, insurance, healthcare, mortgage, financial advisory services and entrepreneurial credit.

2.1.6 Banking Industry Performance in Nigeria

Financial sector (Banking Industry) is the hub of productive activity of an economy as it performs the vital role of intermediation, provider of payment services and the fulcrum of monetary policy implementation. Financial systems have long been identified as a sector that has an important role to play in the development of any economy (Adekunle, Salami and Adedipe 2013). The financial sector has been described to be a catalyst of economic growth if it is developed and healthy (Adeoye, 2007). The reforms in the financial sector has enhanced the capacity of the market to provide windows of opportunities where large scale investors can raise funds to finance long-term projects and it has also lead to increase in employment opportunities as a result of increase in number of branches of banks. Through financial intermediation functions of the financial institutions, savers are linked up. The financial sector as a prime mover of economic development, mobilizes savings from surplus to deficit economic units. This has helped in the productivity of any economy. The efficiency and effectiveness of financial intermediation is a subject of the level of the financial systems development. The financial system is dominated by banks which concentrated on short term lending as against the long-term investment.

Financial sectors reduce information and transaction costs in the economy. This facilitates more exchange of goods and services thereby allowing greater specification and productivity in the economy. The financial intermediaries can reduce information costs by acquiring and comparing information about many competing investment opportunities on behalf of all their savers, thereby ensuring that capital is efficiently allocated. Financial sectors provide risk management services and reduce risks involved in financial transactions. When financial institutions combine savings, they also ensure that each individual get his money back whenever needed. By investing in projects, they facilitate risk diversification, which increases returns and encourages more savings. The insurance sub-sector has been able to provide a safety net for entrepreneurs desirous of taking insurable risks and also help to reinforce and facilitate investment and mercantilism at both national and international levels (Uche, 2008). The development of the financial sector can also reduce poverty. The provision of bank accounts can enable the poor to accumulate funds in a secure place over time so as to finance a large, anticipated future expenditure. The bank account can also improve access to financial services like remittances or insurance. The mobilization of savings from the poor will also create funds available for tending. The availability of credit will strengthen in new and better tools, equipment, or fertilizers. The availability of credit has assisted in the

expansion of small business leading to increase in income and employment generation. This, according to Uche (2008), has made the financial sector to facilitate transactions between local and international business concerns which enhance value creation.

2.2 Theoretical Review

The performance of commercial banks is influenced by a host of many factors some of which are macro-economic, institutional, regulatory and legal. The common features of the theories indicated that in attempting to maximize profits, banks must comply with capital adequacy and liquidity considerations. However, Uchendu (1995) rightly stated that regulatory influences of monetary authorities include those on interest and exchange rates, bank reserves (indicating credit availability), labour cost or productivity.

2.2.1 The Monetarist Theory

The Monetarist Economist recognize that money is not just a close substitute for a small class of financial assets but rather a substitute for large spectrum of financial and real asset. Given an equilibrium position, an increase in money supply raises the actual proportion of money relative to the desired proportion. Symbolically, the monetarist conception of money transmission mechanism can be summarized below: $\uparrow \text{OMO} \rightarrow \uparrow \text{MS} \rightarrow \text{Spending} \rightarrow \uparrow \text{GNP}$. The monetarist argument centres on the old quantity theory of money. If velocity of money in circulation is constant, variation in money supply will directly affect prices and output or income (GNP)(Jhingan, 2005).

2.2.2 The Keynesian Theory

The Keynesian Economists think of monetary policy as working primarily through interest rate. In Keynesian transmission mechanism, an increase in the money supply leads to a fall in interest rate to include the public to hold additional money balances. Consequently, a fall in interest rate may stimulate investment. The increased investments also increase the level of income or output through the multiplier, which may stimulate economic activities. Thus, monetary policy affects economic activity indirectly through their impact on interest rates and investment. Therefore, the Keynesian transmission mechanism is characterized by a highly detailed sector building up of aggregate demand and a detailed specification of portfolio adjustment process that attaches central role to interest as an indirect link between monetary policy and fiscal demand.

In simple terms, the monetary mechanism of Keynesians emphasizes the role of money, but involves an indirect linkage of money with aggregate demand via the interest rate as symbolically shown below: $\downarrow \text{OMO} \rightarrow \downarrow R \rightarrow \uparrow \text{MS} \rightarrow \downarrow r \rightarrow I \rightarrow \uparrow \text{GNP}$ Where, OMO = Open Market Operation R = Commercial Bank Reserve MS = Stock of Money r = Interest Rate I = Investment GNP = Gross National Product On a more analytical note, if the economy is initially at equilibrium and there is open market purchase of government securities by the Central Bank of Nigeria (CBN), this open Market Operation (OMO) will increase the commercial banks reserve (R) and raise the bank reserves. The bank then operates to restore their desired ratio by extending new loans or by expanding bank credit in other ways. Such new loans create new demand deposits, thus increasing the money supply (MS). A rising money supply causes the general level of interest rate (r) to fall. The falling interest rates affects commercial bank performance and in turn stimulate investment given businessmen expected profit. The induced investment expenditure causes successive rounds of final demand spending by GNP to rise by a multiple of the initial change in investment. On the other hand, a fall in money supply causes the general level of interest rate (R) to rise or increase thereby increasing the commercial banks profitability Jhingan, (2005)

2.2.3 Anticipated Income Theory

This theory states that banks should involve themselves in a broad range of lending which may include long-term loans to business, consumer instalment loans and amortized real estate mortgage loans considering the fact that the likelihood of loan repayment which generates a cash flow that supplement bank liquidity depends on the anticipated income of the borrower and not the use made of the funds per se. This implies that a high excess reserve increases profitability of banks by increasing the availability of loanable investment funds.

2.2.4 Shiftability Theory

The central thesis of this theory holds that the liquidity of a bank depends on its ability to shift its assets to someone else at a predictable price. Better still; the theory of shiftability exposes the banks vulnerability to government security for liquidity. Whether or not a bank can quickly realize liquidity through this means depends on the marketability of the securities and their relative prices. The theory tries to broaden the list of assets demand legitimate for ownership and hence redirected the attention of bankers and the banking authorities from loan to investment as source of bank liquidity. It is hypothesized that an

increase in capital investment will lead to commercial banks profitability. However, increase in profits may also motivate further increase in capital investment, which in turn expands the scope of banking operations for increased profitability. Adequate capital investment provides for a bank to perform the intermediation function and provide related financial services. It also provides protection in conditions of near economic collapse against unanticipated adversity leading to loss in excess of normal expectations and permits banks to continue operations in periods of difficulty until a normal level of earning is restored.

2.2.5 Liquidity-Profitability Trade-Off Theory

The Liquidity-Profitability Trade-Off theory is another theory upon which this study is hosted. The theory posits that a trade-off exists between the liquidity and the profitability of a firm, and that a firm cannot pursue the two objectives of being profitable and being liquid at the same time without automatically affecting the other. The theory presupposes that the regulation of banks is necessary to maintain safety and soundness of the banking system, to the extent, which put banks in a position to meet their liabilities without difficulty. One outcome of the recent financial crises is the recognition that liquidity is as important to the bank stability, as are capital requirements. Previous studies showed that banks with higher liquidity and larger capital buffers are less vulnerable to failure during financial crisis Bagyenda *et al.* (2011) and this made it imperative for the regulatory authorities to compel greater solvency and liquidity on individual banks than making it optional. This theory is adopted because it captures the financial performance of banks and the LCR variable, which measures the short -term liquidity positions of banks in the model adopted by this study.

2.2.6 Public Interest Theory of Regulation

The Public Interest Theory of regulation (PIT) is adopted to anchor this study because it explains the ethical obligation which the financial regulatory bodies like the CBN have in rationalizing economic activity of firms in a more efficient and useful manners. The theory is an economic theory propounded by A.C. Pigou in 1939 to argue that regulatory intervention occurs in order to promote social welfare, objectives, and public interest at large against externalities and market failure. The analogy of this theory in the financial sector is that financial regulators have ethical obligation to protect and safeguard public interest of the depositors, shareholders and investors who are the owners of the capital which agents running and managing the banks use for corporate and/or private interests. In a nutshell, the theory posited that regulators represent the interest of the broad civil society rather than the

interest of a vested powerful individuals or groups, which exert pressure on regulators in order to capture rents at the expense of a more dispersed groups.

2.2.7 Credit Channel Theory

Analysis of the relationship between monetary policy and output reveals that credit plays a significant role. Kahn (2010) explains that conventionally changes in short-term interest rates brought about by the central bank, through an open-market operations change the cost of capital, that then changes the rate of fixed investment, (housing expenditures, inventories). The change in aggregate demand then leads to a change in output (GDP). Citing Bernanke and Gertler (1995), Kahn (2010) posits that empirical evidence to support the conventional view of the effects of monetary policy on GDP is weak and this led to the development of the credit channel theory, whose basic premise is that market frictions create a spread between a firms' internal and external financing sources. They argue that changes in what Bernanke and Gertler (1995) call the "external finance premium" can better explain movements in investment and, therefore, overall output, than can interest rates. According to Kahn (2010), in the context of the credit transmission channel, monetary policy affects the supply or relative pricing (the external finance premium) of loans by banks. As tighter monetary policy causes banks to lose the use of some funds which cannot be replaced with other sources of funds (such as CDs or equity), then the relative cost of funds will increase, decreasing the supply of loans to bank-dependent borrowers who are squeezed out, due to an increase in the external finance premium. In developed financial markets generally firms have access to other sources of financing, unlike in Sub Sahara Africa (SSA) where financial markets are not as well developed and only large corporates can borrow from external markets while the smaller firms have recourse only to internally generated funding and bank borrowing. In such a market the internal rate of return has a greater impact in the investment decision making than the rate of interest

2.3 Empirical Review

Various academic researchers have examined and documented the effect of policy and regulation on banking in varying dimensions. Their empirical studies are reviewed to provide different evidence. In Asian economies, Saez (2001) investigated the impact of financial regulation and policy in two countries (India and China). The study documented evidence that banking regulation and policy enabled India to overcome the problem of bad debt by encouraging free market new entrant into market while China restored its state-owned banks

by establishing asset management institutions. Asamoah (2008) examined the impact of the financial sector reforms on savings, investment, and growth of gross domestic product (GDP) of the Ghanaian economy. Regression analysis and saving-investment model were used. It was revealed that financial sector reforms stimulated savings, investment and growth of GDP and consequently economic growth by increasing the rate of capital accumulation and improving the optimum allocation of capital. Rehman (2011) conducted an empirical analysis of financial reforms in Pakistan to examine whether it affects economic growth. It explored correlation among economic growth, deposits, lending, real interest rate, savings, and inflation, taking data of thirty-six years (1973-2008). The regression analysis showed a positive impact of financial reforms on the growth of the Pakistani economy.

In Nigeria, Noy (2004) searches for empirical evidence to the hypothesis that if liberalization is accompanied by insufficient prudential supervision of the banking sector, then it will result in financial crisis. He concludes that insufficiency of the prudential regulation and supervision presents only a medium term threat to the banking sector. However, he complains about the weaknesses of supervision variables he used in regressions. He added (2004:356) that “the onset of banking crisis is a process that embodies a lot of institutional and political details that have been, until now, beyond the reach of econometric research”. On the other side, he found almost all macroeconomic and financial variables he included –inflation, M2/reserves ratio, GDP growth rate, real exchange rate and foreign interest rates- as significant contributors to the likelihood of a banking crisis.

Fadare (2010) investigated the effect of banking sector reforms on economic growth in Nigeria over the period 1999 to 2009. Using the ordinary least square regression technique, it was established that interest rate margins, parallel market premiums, total banking sector credit to private sector, inflation rate, inflation rate lagged by one year, size of banking sector capital and cash reserve ratio account for a very high proportion of the variation in economic growth. Except total banking sector capital, other exogenous variables revealed wrong signs with economic growth. Tresselt and Detragiache (2008) conducted a study to determine whether financial sector reforms lead to financial development in multiple countries. Their findings demonstrated a positive impact of banking reforms on economic growth especially in those countries where institutional environment was conducive. Iganiga (2010) examined the effectiveness and efficiency of financial reforms on Nigerian financial institutions with emphasis on the banking sub-sector.

Using the classical least squares techniques, the results showed that the performance of the financial sector has been greatly influenced over time by these reforms and regulation that began in 1986. Fries and Taci (2002) examined the impact of banking and enterprises reforms and other factors on banking development in transition economies at both aggregate level and that of individual banks. The study conducted the analysis using a new panel data set of 515 banks in 16 transition economies for the period between 1994 to 1999. From their results, it could be evidenced that progress in banking reform is essential for banking development which inevitably affects economic growth. Jegede and Mokuolu (2004) examined the effect of financial sector reforms as a panacea to capital market growth in Nigeria. Two approaches were employed in the study, the first approach involves the comparison of the capital market variables before and after the adoption of financial sector reform and the second approach is a regression analysis. Overall, the main findings indicated that the financial sector reform in Nigeria has led to a significant improvement and growth of the capital market. Balogun (2007) conducted a study to review the perspective of banking sector reforms since 1970. The study pointed these eras of banking reforms in Nigeria viz; Pre-SAP (1970-1985), Post-SAP (1986-1993), the Reforms Lethargy (1993-1998), Pre-Soludo (1999-2004) and Post-Soludo (2005-2006). Using both descriptive statistics and econometric methods, the empirical results confirm that eras of pursuits of market reforms were characterized by improved incentives. Also, growth was stifled in eras of control while the reform era was associated with rise in inflationary pressure.

Rasheed (2011) examined the relationship between money and real variables in Pakistan from 1972 to 2008 using Johansen cointegration tests and Granger causality tests. He finds among others, that private sector credit causes reserve money. Similarly, Bellalah, Ali, and Masood (2013) find, amongst others, evidence of long-run relationship between domestic credit to private sector and money supply from 1980 to 2009, using Johansen and Juselius's framework. Olweny and Chilwe (2012) explore the relationship between monetary policy and private sector investment in Kenya using quarterly data from 1996 to 2009. The results of unit roots test, cointegration test and vector error correction model show, amongst others, that monetary policy and private sector investment are positively related.

Younus and Akhta (2009) examined the significance of Statutory Liquidity Requirement (SLR) as a monetary policy instrument in Bangladesh. Using descriptive analysis techniques like trend analysis and summary statistics, they found that statutory liquidity requirement has experienced infrequent changes and past evidence has shown that reduction in SLR produced

positive impact on bank credit and investment especially prior to the 1990s. SLR and Cash Reserve Requirement (CRR) were found to be significant tools of reducing inflation and both for scheduled banks are used only in situation of drastic imbalance-resulting from major shocks.

Amidu and Wolfe (2008) examined the constrained implication of monetary policy on bank lending in Ghana between 1998 and 2004. Their study revealed that Ghanaian banks lending behaviour are affected significantly by the country's economic also support and change in money supply. Their findings also support the finding of previous studies that the central bank prime rate and inflation rate negatively affect bank lending. Prime rate was found statistically significant while inflation was insignificant.

Punita and Somaiya (2006) investigated the impact of monetary policy on the credit of banks in India between 1995 and 2000. The monetary variables are banks rate, lending rates, cash reserve ratio and statutory ratio, and each regressed on banks credit to private sectors independently. Lending rate was found to exact positive and significant influence on banks' profitability, which indicates a fall in lending rates will reduce the profitability of the banks. Also, bank rate, cash reserve ratio and statutory ratio were found to have significantly affect profitability of banks negatively. Their findings were the same when lending rate, bank rate, cash reserve ratio and statutory ratio were pooled to explain the relationship between bank profitability and monetary policy instruments in the private sector

Existing empirical studies conducted using Nigerian data largely concentrated on the relationship between credit and economic growth. Mamman and Hashim (2013) provide evidence to show statistical significant impact of the credit to the private sector and real sector growth in Nigeria. They therefore concluded that the government should increase the credit flow to the private sector because of its strategic importance in creating and generating growth of the economy.

In the same vein, Nwakanma, Nnamdi, and Omojefe (2014) evaluate the nature of long-run relationship existing between private sector credit and Nigeria economy growth as well as the directions of prevailing causality between them for the period 1981 to 2011, using the Autoregressive Distributed Lag Bound and Granger Causality techniques. Their results show evidence of long-run relationship between private sector credit and Nigeria economy growth but without significant causality in any direction. Similarly, Emenike, (2016), evaluates the nature of relationship between monetary policy and private sector credit as well as the impact

of structural break on the relationship by applying a battery of econometric tests on Nigeria data. The cointegrating regression results reveal evidence of long-run relationship between monetary policy and credit to private sector. Similarly, error correction model results show that changes in credit have positive and significant short-term effects on changes in monetary policy.

Ajayi,&Akinwande (2012) examined the effect of monetary policy instruments on banks performance to determine the existence of long-run relation between 19780 and 2008. The Engle-granger twostep cointegration approach was adopted based on the regression model that regress banks total loan and advances on minimum policy rate, cash reserves ratio, liquidity ratio, inflation and exchange rate. The empirical estimates indicated that bank rate, inflation rate and exchange rate are total credit enhancing, while liquidity ratio and cash reserves ratio exert negative effect on banks total credit. Although, it is only cash reserve ratio and exchange rate found to be significant at 5% critical value. However, the cointegration test indicated that the null hypothesis of no cointegration was accepted.

Hofmann (2001) shows that innovations in short term interest rates have a significant negative effect on bank credit, Gross Domestic Product and property prices. Standard demand factors failed to explain the development of credit over the long term. This study showed that the long term negative relationship between credit to private sector and interest rates could only be explained by including property prices in the model.

Pissarides (2001) provides evidence that one of the major challenges experienced by the private sector is the failure by the local banking sector and the under developed financial markets to respond to the demand for finance. A banking sector that is under capitalized with low liquidity often fails to support the private sector.

2.4 Overview of the Nigerian Financial System and Recent Developments in Nigerian Banking System

However, for emphasis, reform does not really mean laissez-faire - a complete absence of regulation, but a continual process of examining existing regulatory framework with a view to deregulate when appropriate and regulate when necessary to allow market forces to play greater roles in pricing system (CBN, 2013). The emphasis therefore is on the necessity for a particular regulation and appropriateness of any deregulatory measure. Reform means allowing economic agents and factors of production to respond freely to market forces (Ojo, 1991). The liberalization of the financial system has led to a great

proliferation of banks. Three years prior to the commencement of Structural Adjustment Programme (SAP) in August 1986, only eight banks were in existence (Abdullahi, 1989). Presently, there are more than 20 banks in the banking sub-sector with several branches within the country. It is obvious, that banking sub-sector will improve economic efficiency and the productivity of investment as a result of the elimination of distortions, such as subsidized interest rates and credit rationing; therefore, in the process of financial reform and market interest rates, they both play important roles in Macro-economic policy. Financial reform has influence on domestic expenditure, inflation and external payment but also ensure the equilibrium level of saving and investment inequalities by increasing the interest rate; that is, making it high enough to make the equilibrium possible.

Conversely, equilibrium in the market for saving would occur at positive interest rate which ensured an increase in supply of either domestic or foreign savings, assuming such supply is interest elastic, to guarantee some reasonable level of private sector investments. This analysis therefore suggested that the elimination of distortions in the market for financial savings would be expected to yield a vital profit in terms of achievement of a higher rate of fixed capital formation and growth of output that was hitherto impracticable. With the temporary downturn in the general level of economic activity due to restricted credit expansion, this may lead to low effective demand for goods and services, as well as other recessionary factors. However, the large growth in the number of banks competing for a limited customer-base in an environment of shrinking margins may compel the banking industry to greater commitment in terms of efficiency and customer satisfaction, which may serve as a key for survival and success factors (Lamido, 2009). The Nigerian banking system has undergone remarkable changes over the years in terms of the numbers of institutions and ownership structure.

The recent shake-up in Nigerian banks could be regarded as the continuation of ‘skeletal / partial’ financial reform in the banking sub-sector centred on ensuring full disclosure, zero tolerance to weak corporate governance and adopting strong and vibrant risk management approach (Lemo, 2011; Lamido, 2012). The core roles and responsibilities of banks in any economy are to render financial assistance to the productive sector. The recent financial reforms, which may be regarded as ‘skeletal / partial’ financial reform in banking sub-sector embarked upon by Nigeria apex banks (CBN) have removed the eight bank executives over alleged exposure to N1.143 trillion with Non-Performing Loans (NPL) in first phase. (Lamido, 2009). The principle of full disclosure, good corporate governance and a sound and

vibrant risk management practices would build the confidence of the international community in a developing economy -Nigeria inclusive.

The CBN recent actions on consolidated banks would lead to a prospect of quick recovery of the Nigerian economy in line with positive signals of recovery from the recession being experienced globally since six years ago. The recovery of crude oil prices and improved oil and gas output are to enhance and improve the fiscal and foreign exchange balances. The real Gross Domestic Product (GDP) growth is projected at 3.86% and GDP for non-oil growth is expected to remain robust and active at 7.4%. Inflation rate has reduced from 12.22% at the end of 2012 to 8.48% at the end of 2014, but as at May, 2015; inflation remains at 9.59% (CBN, 2015). Also the level of external reserves has remained high and net outflow significantly moderated. As a clearing and settlement financial institutions, banks constitute useful channel in the payment system and the medium through which the effect of monetary policy are transmitted to the rest of the economy. The ability of financial institutions (banks) to perform those roles efficiently is dependent on the health and the sophistication of the banking system as well as on the level of development of financial system (Ajifs& Hamid, 1992; Soludo, 2004; Lamido 2009). In any organization where the business is not flourishing and there are indications of failure, one of the options available to the owners is to reorganize the business to close gaps and streamline avenues for improvement. However, the bank recapitalization was embarked upon by the monetary authority, CBN on July 6, 2004 to ensure a diversified, strong and reliable banking sector that will play active developmental roles in the Nigeria economy and be competent and competitive players in the African and global financial system as a means to address the menace of bank failures that characterized the industries in the recent years (Soludo, 2004). No doubt, bank recapitalization from the financial regulation has been adopted by most of the developed countries and presently the emerging markets by carrying out the different recapitalization policies in order to downsize inefficient and ineffective banking sector.

Gbodume, (2004) argues that financial regulation(bank recapitalization)does not necessarily mean an automatic improvement in the banking sector, but emphasized that policiesalone cannot solve the present crisis in the Nigerian banking system as well as in the economy because it is just one of the techniques that could be employed to promote efficiency in the banking sector; and it has to becomplimented by several other policies so as to achieve an ultimate overall change in the sector. Theconsolidated banks in Nigeria involve in the lax credit administration process and non-adherence to credit riskmanagement policies thereby

leading to lack of doctrines of sound credit management system, inability of application of ethical credit monitoring and recovery tools as it occurred globally (Ajakaiye & Omole, 1994; CBN, 2009). The provision of adequate information enhances the integrity of banks and reduces the reputational risks that could lead to loss of confidence and patronage. The recent reduction in the market uncertainty and restriction in the risk of unwanted contagion have helped to encourage, stimulate, enhance and promote market discipline (Lamido, 2009). The monetary policies are expected to improve growth without jeopardising both price and financial stability. To manage liquidity both effectively and efficiently, there is need to ascertain credit, which is determined by interest rate and the trends are monitored in prices. The CBN has persistently assured Nigerians that none of the 22 post-consolidated banks would be permitted to be distressed / failed going forward. The number of banks is now twenty-one including the Islamic bank- Jaiz bank as at the of this research exercise. Despite the CBN's promise, the Nigerian banking industry continues to display phobic reactions to these measures particularly the swirling rumours on some customers, who might become apprehensive of the possible loss of their deposits. It must be called that during the economic reform in the banking sub-sector in 2005, the CBN reiterated its effort to bring monetary policy in line with current economic exigencies, thawing liquidity frozen at the inter-bank exchange market (Nwude, 2005).

Obviously, the banking sector shake-up is the effort of the Central Bank of Nigeria (CBN) that resolves to stick to the common year-end accounting system, in order to allow banks make full disclosure, provide and guide against non-performing loans comprising margin facilities and loans extended to other sectors of the economy, majorly oil and gas sector. The affected banks were unable to meet obligations to creditors and were in a grave situation; while management of affected banks acted in a manner detrimental to interest of depositors and creditors. The Central Bank of Nigeria (CBN) injected the sum of N420 billion naira in the first phase and in the second phase N200 billion was injected, totalling N620 billion (Six hundred and twenty billion naira) to salvage the affected eight banks as a bail-out fund to cushion the effect of the liquidity problems or from going under (Lamido, 2009). The injection of the fund into the banking system will go a long way to address the illiquidity that had been rocking the capital market. The injected funds into the banking sub-sector were essential in building a sound financial sector, which is capable of promoting long term and consistent development with the goals being set at per with vision FSS2020 (i.e. Financial System Strategy, 2020).

2.5 Summary of Empirical review

Name of Author	Title& Objective	Methodology	Result
Saez (2001)	The impact of financial regulation and policy in two countries (India and China)	Ordinary Least Square(OLS)	Banking regulation and policy enabled India to overcome the problem of bad debt by encouraging free market new entrant into market while China restored its state-owned banks by establishing asset management institutions.
Asamoah (2008)	The impact of the financial sector reforms on savings, investment, and growth of gross domestic product (GDP) of the Ghanaian economy	Regression analysis and saving-investment model	Financial sector reforms stimulated savings, investment and growth of GDP and consequently economic growth by increasing the rate of capital accumulation and improving the optimum allocation of capital.
Rehman (2011)	An empirical analysis of financial reforms in Pakistan (1973-2003)	OLS-regression analysis	A positive impact of financial reforms on the growth of the financial performance.
Noy (2004)	Macroeconomic variables,	OLS	Insufficiency of the prudential

	regulation and its impact on financial system.		regulation and supervision presents only a medium term threat to the banking sector
Fadare (2010)	The effect of banking sector reforms on economic growth in Nigeria over the period 1999 to 2009	Ordinary Least Square	Interest rate margins, parallel market premiums, total banking sector credit to private sector, inflation rate, inflation rate lagged by one year, size of banking sector capital and cash reserve ratio account for a very high proportion of the variation in economic growth
Tressel and Detragiache (2008)	Financial sector reforms and financial development in multiple countries	OLS	A positive impact of banking reforms on financial growth especially in those countries where institutional environment was conducive
Iganiga (2010)	The effectiveness and efficiency of financial reforms on Nigerian financial institutions	Ordinary Least Square	The performance of the financial sector has been greatly influenced over time by these reforms and regulation that began in 1986.
Fries and Taci (2002)	The impact of banking and enterprises reforms and other	Panel Data Analysis	Evidenced that progress in banking reform is essential for banking

	factors on banking .development in transition economies.(1994-1999)		development (credit to private sector)
Jegade and Mokuolu (2004)	The effect of financial sector reforms as a panacea to capital market growth in Nigeria.	OLS-regression analysis	The financial sector reform in Nigeria has led to a significant improvement and growth of the capital market.
Balogun (2007)	A study to review the perspective of banking sector reforms since 1970.	descriptive statistics and econometric methods	That eras of pursuits of market reforms were characterized by improved incentives.
Rasheed (2011)	The relationship between money and real variables in Pakistan from 1972 to 2008	Johansen cointegration tests and Granger causality tests	That reserve money causes private sector credit
Bellalah, Ali, and Masood (2013)	Long-run relationship between domestic credit to private sector and money supply from 1980 to 2009.	Johansen and Juselius's framework	Evidence of long-run relationship between domestic credit to private sector and money supply.
Younus and Akhta (2009)	The significance of Statutory Liquidity Requirement (SLR) as a monetary policy instrument in Bangladesh	Descriptive analysis techniques and summary statistics	SLR and Cash Reserve Requirement (CRR) were found to be significant tools of reducing inflation and both for scheduled banks are used only in situation of drastic imbalance-

			resulting from major shocks.
Amidu and Wolfe (2008)	The implication of monetary policy on bank lending in Ghana between 1998 and 2004.	Classical Ordinary Least Square	That bank prime rate and inflation rate negatively affect bank lending. Prime rate was found statistically significant while inflation was insignificant
Punita and Somaiya (2006)	The impact of monetary policy on the credit of banks in India between 1995 and 2000.	Classical Ordinary Least Square	Lending rate was found to exact positive and significant influence on banks' profitability. bank rate, cash reserve ratio and statutory ratio were found to have significantly affect profitability of banks negatively.
Mamman and Hashim (2013)	Impact of private sector credit on the real sector of Nigeria.	OLS	Evidence to show statistical significant impact of the credit to the private sector and real sector growth in Nigeria
Nwakanma, Nnamdi, and Omojefe (2014)	Bank credits to the private sector: Potency and relevance in Nigeria's economic growth process	Autoregressive Distributed Lag Bound and Granger Causality techniques	Evidence of long-run relationship between private sector credit and regulation but without significant causality in any direction

Emenike, (2016)	How does monetary policy and private sector credit interact in a developing economy	Johansen cointegration tests	The results reveal evidence of long-run relationship between monetary policy and credit to private sector.
Ajayi, &Akinwande (2012)	The effect of monetary policy instruments on banks performance to determine the existence of long-run relation between 19780 and 2008.	Engle-granger twostep cointegration approach	The empirical estimates indicated that bank rate, inflation rate and exchange rate are total credit enhancing, while liquidity ratio and cash reserves ratio exert negative effect on banks total credit
Hofmann (2001)	Determinants of private sector credit in industrialized countries: Do property prices matter? Bank for International Settlements	Johansen cointegration tests	the long term negative relationship between credit to private sector and interest rates could only be explained by including property prices in the model
Pissarides (2001)	Financial structures to promote private sector development in south eastern Europe, European bank for reconstruction and development, UK	Descriptive Statistics	A banking sector that is under capitalized with low liquidity often fails to support the private sector.

2.6 Knowledge Gap

The main purpose of any regulatory monetary policy instrument is to ensure stability in prices, interest rates and enhancing economic growth and development. The regulatory policy in place within any given economy largely determines the availability of credit to customers as well as the ability of households to save and make investments. These regulatory instruments also affect the operations of financial institutions more especially when there is volatility of interest rates. Commercial banks are the main channels of these policy implementation and are likely to be affected by frequent changes or variations in monetary policy. From the studies reviewed, it is evident that very few of them have tried to establish the effect of monetary policy on performance of commercial banks. One of such studies by Fatade (2004) on the effect of monetary policy on performance of banks in Nigeria indicates that banks' profitability is actually affected by the type of monetary policy in place. The studies are few and there is need to carry out more studies in order to ascertain the authenticity of the findings.

Finally, theories are being constantly challenged in the light of new research, old ones are being subjected to new empirical investigations using the advantages of progress in information communications technology and computerized econometric software. The studies are few and there is need to carry out more studies to ascertain the authenticity of the previous finding. Also, the methodologies are poorly specified, therefore, there is need for more advanced methodology like ordinary least square (OLS) to cover the knowledge gap. The research study covered 1981 to 2015 so as to revalidate or disprove assertions so far established on this area of study by other researchers in time past.

REFERENCES

- Abiola A. B, Folasade B. A, Alexander E. O(2015) Financial inclusion and economic growth in Nigeria. *International Journal of Economics and Financial Issues*, 2015, 5(3), 629-637.
- Adam, J. A. (2005). Bank regulation, risk assets and income of banks in Nigeria. NDIC Quarterly. Retrieved 19 August, 2015 <http://www.ndic-ng.com/pdf/adam.pdf>
- Adamopoulos, A & Vazakidis, A. (2009). Financial development and economic growth: An empirical analysis for Greece, *American Journal of Applied Sciences*, 2(3).
- Adbullahi, I. (1989). General impact of deregulation on bank performance, Capitalization and Competition. FITC. 121-128
- Adekanye, F. (1991). African economic research .Consortium Research Paper, Final Report Nairobi, Kenya.
- Adekunle O. A, Salami, G. O. and Adedipe O. (2013). Impact of financial sector development on the Nigerian economic growth. *American Journal of Business and Management*, 2, 4, 347-356 Online/ World Scholars <http://www.worldscholars.org>.
- Adeoye B.W (2007). Financial sector development and economic growth: The Nigerian experience: A paper presented at the 50th annual conference of the Nigerian economic society
- Agu, C. C. (1988). Nigerian Banking Structure and Performance: The Banking systems controls in economic development. Africa Publishers, Onitsha.
- Ajakaiye, D. & Omole, A. (1994). Impact of commercial bank lending rates on inflation in Nigeria. *African Economic Research Consortium*, KENYA.
- Ajifs, S. & Hamid, J. (1992), Corporation Financial Structures in Developing Countries, Technical Paper Number 1 International Finance Corporation, World Bank Washington, DC.
- Akanbi T.A & F.A Ajagbe (2012) Analysis of Monetary Policy on Commercial Banks in Nigeria. *African Journal of Business Management*, 6(51), 41-57.
- Amidu, M. & Wolfe, S. (2008). The Impact of Monetary Policy on Banks' Credit in Ghana. IAABD 2008 Proceeding, Track 1
- Andrianova, S., Demetriades, P., & Shortland, A. (2003). State banks, institutions and financial developments. Discussion paper in economic, University of Leicester.
- Asamoah, G.N. (2008), The Impact of the financial sector reforms on savings, investment and gross domestic product (GDP) in Ghana. *International Business and Economic Research Journal*, Vol. 7(10), 73-84

- Bellalah, M., Ali, S. A., & Masood, O. (2013). Sensitivity analysis of domestic credit to private sector in Pakistan: A variable replacement approach application with cointegration. Université de CergyPontoise France Thema Working Paper No 2013-17 March.
- Balogun, E.D. (2007), Banking Sector Reforms and the Nigerian Economy: Performance, Pitfalls and Future Policy Options, MPRA Paper No. 3804
- Barth, J.R., Caprio, G., & Levine, R. (2004). Bank regulation and supervision: what works best? *Journal of Financial Intermediation*, 13, 205-248
- Boyd, J and Prescott, E. C. 1986. Financial Intermediary Coalitions, *Journal of Econometric Theory*, 38, 211 – 32.
- CBN (2013). Central Bank Monetary Policy Committee; CBN Communique No. 89 of the Monetary Policy Committee (MPC) Meeting, held on Monday, May 20th and Tuesday, 21st, Abuja, Nigeria.
- CBN releases guidelines for new banking model. Vanguard Newspaper 12 November, 2010. Retrieved on 19th August, 2015
- Central Bank of Nigeria – National Financial Inclusion Strategy (CBNNFIS). (2012), *Summary Report on Financial Inclusion in Nigeria*. Abuja, 20th January, 2012. regulation. Available from: [http://www.cenbank.org/Deloitte on Africa Banking regulatory environment and supervision in Africa](http://www.cenbank.org/Deloitte%20on%20Africa%20Banking%20regulatory%20environment%20and%20supervision%20in%20Africa). Retrieved on 29 August 2015. <http://www2.deloitte.com/content/>
- Diamond, D.W., and Dybvig, P.H. (1986). Banking theory, deposit insurance, and bank The Journal of Business, 59, 1, 55-68. Retrieved on 18 August 2015. <http://www.jstor.org/stable/2352687>
- Emenike, K. (2016). How does monetary policy and private sector credit interact in a developing economy? *Journal of International Economics*, 2(6)
- Freixas, X., and Rochet, J.C. (2008). *Microeconomics of Banking (2nd ed.)*. Cambridge: Massachusetts Institute of Technology.
- Fries, S. and Taci, A. (2002), *Banking Reform and Development in Transition Economies*. EBRD European Bank for Reconstruction and Development, London
- Giddy, I. H. (1984). *The Principles and Practices of Bank Supervision: Main Features and Evaluation and Possible Alternatives*, Mimeo, IMF Central Banking Seminar, New York
- Hofmann B (2001), Determinants of private sector credit in industrialized countries: Do property prices matter? Bank for International Settlements, working paper No.8.
- Houthakker, H. S. and Williamson, P. J. (1996). *The Economics of Financial Markets*. Oxford University Press.

- Howells, P and Bain, K (2005). *The Economics of Money, Banking and Finance, 3rd Edition*. Pearson Education Ltd, Edinburgh Gate, Harlow, Essex CM20 2JE, England.
- Iganiga, B.O. (2010), *Evaluation of the Nigerian Financial Sector Reforms Using Behavioural Models*, Journal of Economics, 1(2), 65-75
- Iyade A.I.(2006) *The Impact of Regulation and Supervision in The Activities of Banks in Nigeria: An Assessment of the of CBN/NDIC*.A research Project at St Clement University.
- Jegade, C.A. and Mokuolu, J.O. (2004), *Financial Sector Reform: A Panacea to Capital Market Growth*. Proceedings of the Annual Conference of the Nigerian Society for Financial Research on Financial Liberalization and Growth in Developing Countries: A Reassessment, University of Lagos, November 10-12, 102-107
- John, T. & Kent, M. (2008). *The Economics of Banking, (2nd edition)*. John Wiley & Sons Ltd, Australia
- Kremmling, M.D. (2011). *The influence of financial sector regulation on bank performance: a study of bank performance during the world financial crisis*. Thesis Dissertation.
- Lamido, S. (2009). *We Are Making the Banks Safer*. Publication of the Federal Ministry of Information and Communications on Open Government.1 (1). 8 – 9, August.
- Lamido.S. &Yaradua, M. (2009) *In the Nick of Time*. Publication of the Federal Ministry of Information and Communications on open Government.1(1).6 -7, August.
- Lemo, T. (2005). *Regulatory Oversight and Stakeholder Protection*. A paper presented at the BGL Mergers and Acquisitions Interactive Seminar, Eko Hotels & Suits, Victoria Island.
- Loveday, R. (1980). *Statistics – A First Course (2nd Ed.)*. Cambridge: Cambridge
- Mamman, A., &Hashim, Y. A. (2013). Impact of private sector credit on the real sector of Nigeria. *International Journal of Business and Social Research*, 3(5), 105–116.
- Nwakanma, P. C., Nnamdi, I. S., &Omojefe, G. O. (2014). Bank credits to the private sector: Potency and relevance in Nigeria's economic growth process. *Accounting and Finance Research*, 3(2), 23–35.
- Nnanna, O. J. and M. Dogo (1998). *Structural reform, Monetary Policy and Financial Deepening: The Nigerian Experience*. CBN EFR, June. Vol 36, no 2.
- Noy I. (2004). *Financial Liberalization, Prudential Supervision and the Onset of Banking Crises*. Emerging Markets Review, No:5, pp. 341-359.
- Nwude, C. (2005). *Bank Recapitalization: the Imperatives, implication, Options and Strategies for Banks*. Nigerian Bankers Journal.17 –23.
- Obadeyi, J. (2013). *The Impact of Interest Rates on the Development of an Emerging Market: Empirical Evidence of Nigeria*. Journal of Economic and Sustainable Development.4(10) 44– 58.

- Olweny, T., & Chiluwe, M. (2012). The effect of monetary policy on private sector investment in Kenya. *Journal of Applied Finance & Banking*, 2(2), 239–287.
- Ojo O.M & B.A Azeez (2012) *A Time Analysis on The effect of Banking Reforms on Nigeria's Economic Growth*. Research Paper at Ekiti State University
- Ojo, M. (1991). *Deregulation in the Nigerian Banking Industry: A review and Appraisal- Deregulation in the Banking Industry*. FITC. Pp. 104 – 112
- Oke, B., Obadeyi, J., & Unuafe, O. (2013). *Volatility Transfer from Developed Countries to Emerging Market: Evidence from Nigeria*. *European Journal of Business and Management*. 5(17) 127 -129.
- Oke, M. O. & Adeusi, S. O (2012). *Impact of Capital Market Reforms on Economic Growth: The Nigerian Experience*. *Australian Journal of Business and Management Research* 2 (02), 20-30.
- Okezie, A.C., Tella, S., & Akingunola, R. (2011). *Relationship between regulation and performance of Nigerian commercial banks*. *European Journal of Economics, Finance and Administrative Sciences*, 1450-2275, 33. <http://www.eurojournals.com>
- Ozili P.K. (2015) *Determinants of Bank Profitability and Basel Capital Regulation: Empirical Evidence from Nigeria*.
- Pissarides F (2001), Financial structures to promote private sector development in south eastern Europe, European bank for reconstruction and development, UK, Working paper No 64.
- Posner, R.A. (1971): *Taxation by Regulation*. *Bell Journal of Economics and Management Science* 2(22), 22-50
- Punita.R. & K.J. Somaiya (2006). Monetary Policy: Its Impact on the Profitability of Banks in India. *Intermediate Business and Economics Research Journal*, 5(3), 15- 19.
- Rasheed, M. A. (2011). The relationship between money supply and real variables: Pakistan's experience (1972-2008). *Pakistan Business Review*, 715–746.
- Saez, L. (2001), *Banking Reform in India and China*, *International Journal of Finance and Economics*, Vol.6, Issue 3, 235-24
- Salami F.O (2015) *Banking Regulation in Nigeria (A Review)*. Retrieved on 14 August, 2015.
- Sanusi S.L (2010) *Global Financial Meltdown and Reform in The Nigerian Banking Sector*. Public Lecture delivered at the Convocation Square, Abubakar Tafawa Balewa University, Bauchi, Friday, December 10, 2010. Retrieved on 14 August, 2015.
- Soludo, C. (2004). *Consolidating Nigerian Banking Industry to meet the Development Challenges of the 21st Century*. Being a paper Delivered to the special meeting of the Bankers' Committee held on July 6, 2004 at CBN Headquarters, Abuja. 3 – 8.

- Soludo, C. (2004). *Towards Repositioning of Banks in Nigeria for the 21st Century*. Keynote Address Delivered at the Annual Dinner Muson, Centre, Onikan, Lagos.
- Stigler, G.J. (1971): *The Theory of Economic Regulation*. Bell Journal of Economics and Management Science 2(1), 3-21
- Stigler, G.J. (1971): *The Theory of Economic Regulation*. Bell Journal of Economics and Management Science 2(1), 3-21
- Stokewell B (2008)*Introduction to Correlation and Regression Analyses* Baltimore ELST.
- Uche R.U (2008). *The role of banks, insurance and microfinance institutions in national development*, the Nigerian Accountant, 41(4).
- Tressel, T. and Detragiache, E. (2008), *Do Financial Sector Reforms Lead to Financial Development? Evidence from a New Dataset*, IMF Working Paper No. 08/265, International Monetary Fund, Washington D.C. University Press.
- YounusSayera&MahfuzaAkhtar (2009).The SLR as a Monetary Policy Instrument in Bangladesh. IMF Occasional Paper No. 234, Washington, International Monetary Fund.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

A research design is a kind of blueprint that guides the researcher in his or her investigation and analyses (Onwumere, 2005). The research design adopted for this research is the *ex-post facto* research design. The inability of the researcher to manipulate these variables is a basic feature of *ex-post facto* research design thus, it perfectly suits this research. Also, as described by Kerlinger (1970), the *ex-post facto* research design is also called causal comparative research is used when the researcher intends to determine cause-effect relationship between the independent and dependent variables with a view to establishing a causal link between them, also led to the adoption of this research design. Hence, this study is intended to review and evaluate the impact of the policies and regulation on banks in Nigeria with the view to ascertaining their effectiveness in meeting desired objectives, and making possible recommendations for improvement to make the Nigerian banking industry to be globally competitive and relevant. Therefore, this research follows the empirical studies of Emori, et al (2014)

3.2 Sources and Natures of Data

To carry out this empirical analysis, the study employed secondary data. The relevant data for this study have been obtained from the Central Bank of Nigeria (CBN) Annual report and statements of accounts and Central Bank of Nigeria (CBN) statistical bulletin covering the period between 1981 to 2015. The study was based on time series data collected on annual basis from the period. The data set was tailored to the need of the empirical framework and it contained information on economic variables such as credit to private sector (CPS), which captures bank performance from the perspective banking development in Nigeria. The regulatory instrument are; Monetary policy rate (MPR), Liquidity ratio (LQR), Cash reserve ratio. This study adopts ordinary least square (OLS) analysis to examine the effects of selected monetary policy instruments on Nigeria banking industry credit to the private sector.

3.3 Model Formulation and Specification

Koutsyannis (2001) articulated that model specification is the formulation of a maintained hypothesis. This involves expressing the model to explore the economic phenomenon empirically. The linkage between capital market and economic growth has

occupied a central position in the development literature..To determine the relationship between the explained and the explanatory variables of this study, the model for the study is specified and the function capturing them is initially stated as:

$$\text{Bank Industrial Performance} = (\text{Selected Regulatory Instrument})$$

$$BIP = (SRI) \quad (1)$$

Where: BIP = Bank Industry Performance serving as the dependent variable and is proxied using Private sector credit, and SRI = Selected regulatory instrument representing the explanatory variables proxied using monetary policy rate (MPR), Liquidity ratio (LR) and cash reserve ratio(CRR) . Based on the variables specified, the final regression model for testing the hypotheses and ascertaining the empirical results of the study are stated as:

$$BIP_{it} = \alpha_0 + \alpha_1 MRR_{it} + \alpha_2 LR_{it} + \alpha_3 LTD_{it} + \varepsilon_{it} \quad (2)$$

Where: α_0 represents the constant or the intercept of the model; α_1 - α_3 : represents the coefficients of the explanatory variables to be estimated in the model; i : denotes the individual sampled bank; t : is time-period; while ε_{it} is the stochastic error term or disturbance for bank i at time t .

3.4 Technique of Data Analysis

In order to ascertain the degree of relationship that exist among variables, we specify a linear equation model and apply the econometric ordinary least square (OLS) technique to ascertain the level of economic relationship which exist between the dependent variable and the independent variables. The OLS techniques are used extensively in regression analysis primarily because it is intuitively appealing and mathematically much simpler than other estimators.

The OLS technique is used because its estimator possesses BLUE characteristics in that, in it is the best linear unbiased estimators (BLUE) in the class of all other estimators. This makes it desirable for this study. Moreover the OLS is relatively simple and software for use is readily available such as eviews. Beside data requirement is also minimal and researcher on other field easily understand it. Co-efficient of determination, F-Statistics, t-statistics, statistic error test, unit root test, Durbin Watson test are used to evaluate the significance of the estimated parameters of the regression model.

3.4.1 Technique for Evaluation of Results

Three criteria were used to evaluate results obtained from the regression analysis.

They are:

- a. Evaluation based on economic criteria
- b. Evaluation based on statistical criteria
- c. Evaluation based on econometric criteria

3.4.2 Evaluation on Economic Criteria

A PRIORI EXPECTATION

The following linear equation is obtained from the specified model.

$$CPS = B_0 + B_1MRR + B_2LIQ + B_3LTD + et.$$

B₀, B₁, B₂, B₃ and B₄ are the parameter which was estimated while et is the error term. It is expected that increase/higher MRR, LIQ and LTD resulted in inverse relationship with bank performance captured with credit to private sector within the period under review.

Thus, the apriori expectation becomes

$$B_1 < 0 \quad B_2 < 0 \quad B_3 < 0$$

Based on apriori therefore, the sign of b₀, b₁, b₂ and b₃ are expected to be negative sign. This is because credit to private sector is expected to increase as the explanatory variables decreases vice versa.

3.4.3 Evaluation base on Statistical Criteria (FIRST ORDER TEST)

CORRELATION COEFFICIENT (R)

Ogwuru(2014) hypothesized that correlation co-efficient denoted by R, is defined as the measure of the degree of or extent of linear relationship between two co-efficient takes value ranging from -1 to +1. Point chosen to -1 means absence of correlation between the variables, while point tending towards +1 show the presence of correlation between the variables,

Again, Ogwuru (2014) emphasized that the R is calculated as:

$$\frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

Where:

X= derivation of x from its mean

Y = derivation of y from its mean

COEFFICIENT OF DETERMINATION (R^2)

Agugua(2014) emphasized that in order to determine how our model provides a good fit for the data, we calculate the coefficient to determination R^2 , which measure the percentage of the variation in Y accounted for by the change in x.

$$R^2 = \frac{B_1 \Sigma x_1 Y + B_2 \Sigma x_2 Y}{\Sigma Y^2}$$

ADJUSTED COEFFICIENT OF DETERMINATION $\bar{R}^2$

This is used to confirm the validity of the goodness of fit with respect to the sample observation x and y.

TEST OF SIGNIFICANCE OF PARAMETER ESTIMATES

In order to confirm the validity of the result obtained using the formulated methods of analysis discussed so far, the result was subjected to the following tests on significance.

- i. The standard error test
- ii. The student t-test
- iii. The f-test

STANDARD ERROR TEST

Koutsoyannis (1977) emphasized that this test enables us to determine whether or not of the parameter estimates of the economic model is significantly different from zero, whether the sample from which they are estimated might have come from a population whose parameters are zero (such that $b_0=0$, $b_1=0$).

Decision Rule: If the standard error of the parameter estimates is smaller than the numerical value of the parameter estimate (ic) if $S(b_1) < b_1 \frac{1}{2}$ it is statistically significant.

STUDENT T-TEST

Ogwuru (2014) also explained that T-test is a test for significance. It is the basis for accepting or rejecting hypothesis. This test is carried out to know the significance of individual explanatory or independent variable in the model. That is to test whether the variable have strong impact in determining the economic development. In this case, if the value of the t-statistics obtained from the regression result for a particular variable is 2 or above; using 2-t rule of thumb, it means that the variable is statistically significant and has a very strong effect on the dependent variable statistically.

Conversely, if the value of the t-statistics is less than 2, it means that the variable is in significant and does not have any statistical impact on the dependent variable.

HYPOTHESIS

H0: $B_1=0$ (The estimated parameters are statistically insignificant)

Decision Rule

Reject H0 if $(t_{cal}) > (t_{tab})$, do not reject otherwise

THE F-TEST

This test is employed to ascertain the overall significance of the model. If the value of the f-statistics from the regression result exceed the calculated f-value from the f-distribution table, then the model is statistically significant and if otherwise, it is statistically insignificant.

HYPOTHESIS

H0= $B_1=B_2=B_3=0$ (The model is insignificant)

Decision Rule

Reject H0 if $/f_{cal}/ > /f_{tab}/$, otherwise do not reject H0.

3.4.4 Evaluation Based on Econometric

AUTO CORRELATION TEST

The essence of this test is to see whether the errors corresponding to different observations are inter-correlated or not. Uncorrelated errors are desirable symbolically that is denoted as $E(U_1) = 0$. Durbin Watson (Δ test) would be used for this analysis.

NORMALITY TEST

This test was carried out to check whether the error term follows the normal distribution. The normality test adopted is the **JARQUE-BERA(JB)TEST OF NORMALITY**. The JB test of normality is an asymptotic, or large-sample, test and it is based on the OLS residuals. This test computes the skewness and Kurtosis measures of OLS residuals and uses the chi-square distribution (Gujarati, 2004)

Hypothesis: Test

Ho: $\sum i = 0$ (the error term follows a normal distribution)

Against:

H1: $\sum i \neq 0$ (the error term does not follow a normal distribution)

3.4.5 Test for Heteroskedasticity

This test basically focused on the variance of the error term. The test helps to ascertain whether the variance of the error term is constant.

H_0 : Homoskedasticity

H_1 : Heteroskedasticity

Decision Rule: Reject H_0 if $\chi^2 > \chi^2_{0.05}$ and accept if otherwise.

REFERENCES

- CBN (2015) Communique No. 102 of the MPC Meeting (With personal statements of members) of May 18 and 19, 2015 Assessed on 17 August 2015.
- CBN releases guidelines for new banking model. Vanguard Newspaper 12 November, 2010. Retrieved on 19th August, 2015.
- CBN(2013). Central Bank Monetary Policy Committee; *CBN Communique No. 89 of the Monetary Policy Committee (MPC) Meeting*, held on Monday, May 20th and Tuesday, 21st, Abuja, Nigeria.
- Central Bank of Nigeria – National Financial Inclusion Strategy (CBNNFIS).(2012), Summary Report on Financial Inclusion in Nigeria. Abuja, 20th January, 2012. Available from: <http://www.cenbank.org/>
- Onwumere .J.U. J, (2005).Business and economic research methods. Lagos: Don Vinton Limited.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter covers the presentation of data, analysis and result interpretation. Therefore, the objective of this research work is to assess and evaluate the impact of selected monetary policy instruments on credit to private sector in banking industry in Nigeria. The researcher has decided to present the data, carry out a descriptive analysis of the variables employed to test the hypothesis stated earlier in chapter one and interpret the results obtained from the analysis.

The table (1) below shows that time series data for credit to private sector, minimum rediscount liquidity ratio and loan to deposit ratio.

TABLE 1 Time Series data for CPS, MRR & LTD

Note: CPS(Credit to private sector), MRR(Minimum rediscount rate),and LTD(Loan to deposit ratio). The table below shows the time series data for CPS, MRR and LTD

DATE	CPS	MRR	LIQ	LTD
1981	9.086	6.000	38.500	74.500
1982	10.562	8.000	40.500	84.600
1983	10.601	8.000	54.700	83.800
1984	10.719	10.000	65.100	81.900
1985	9.712	10.000	65.000	66.900
1986	11.328	10.000	36.400	83.200
1987	10.917	12.750	46.500	72.900
1988	10.379	12.750	45.000	66.900
1989	7.954	18.500	40.300	80.400
1990	7.098	18.500	44.300	66.500
1991	7.578	14.500	38.600	59.800
1992	6.640	17.500	29.100	55.200
1993	11.666	26.000	42.200	42.900
1994	10.247	13.500	48.500	60.900

1995	6.191	13.500	33.100	73.300
1996	5.917	13.500	43.100	72.900
1997	7.548	13.500	40.200	76.600
1998	8.822	14.308	46.800	74.400
1999	9.215	18.000	61.000	54.600
2000	7.900	13.500	64.100	51.000
2001	11.094	14.308	52.900	65.625
2002	11.936	19.000	52.450	62.775
2003	11.061	15.750	50.900	61.850
2004	12.459	15.000	50.475	68.625
2005	12.582	13.000	50.175	70.800
2006	12.339	12.250	55.700	63.600
2007	17.815	8.750	48.750	70.775
2008	28.570	9.813	44.254	80.928
2009	36.893	7.438	30.700	85.661
2010	18.598	6.125	30.425	74.200
2011	16.926	9.188	42.000	44.774
2012	20.427	12.000	48.300	45.400
2013	19.667	12.000	63.300	38.000
2014	19.237	12.500	38.100	61.900
2015	19.102	12.300	38.200	60.700

Source: CBN statistical bulletin (2014) various issues

NB: CPS (Credit to private sector), MRR (Minimum rediscount rate), and LTD(Loan to deposit ratio).

4.2 Descriptive Statistics

TABLE 2: DESCRIPTIVE STATISTICS

	LCPS	LLIQ	LLTD	LMRR
Mean	2.439762	3.817316	4.185208	2.507933
Median	2.381144	3.823057	4.215928	2.555240
Maximum	3.608030	4.175925	4.450403	3.258097
Minimum	1.777852	3.370738	3.637586	1.791759
Std. Dev.	0.422905	0.216484	0.207284	0.329408
Skewness	0.816190	-0.182143	-0.947571	-0.262222
Kurtosis	3.441633	2.499702	3.262143	2.943738
Jarque-Bera	4.051244	0.542587	5.185401	0.394126
Probability	0.131912	0.762393	0.074818	0.821139
Sum	82.95191	129.7887	142.2971	85.26973
Sum Sq. Dev.	5.902011	1.546550	1.417899	3.580822
Observations	34	34	34	34

Source: eviews calculation

Table 2 above provides the summary statistics, namely, sample means, maximums, minimums, medians, standard deviations, skewness, kurtosis and the Jarque-Bera tests with their p-values for the return series. The proxies for monetary policy rate LIQ, LTD and MRR over the period of 1981 to 2014. The first two statistics that is the mean and median are the measure of central tendency for all the variables. Here, loan to deposit ratio (LTD) has the highest mean value of 4.185 while banking performance proxy by credit to private sector performance is 2.439. this depicts that CPS has the lowest minimum and maximum value (1.777 and 3.608 respectively) while loan to deposit ratio retains the highest minimum and maximum value (3.637 and 4.450 respectively).

The standard deviation shows the level of volatility in the variable. From the table 2, CPS is the most volatile with 0.422% followed by MRR with 0.3294% while the less volatile is LTD with 0.207%.

Skewness measures the asymmetric nature of the data. A normal distribution is symmetrical at point 0. If value is greater than zero, its positively skewed, but if it less than zero, it is negatively skewed (Wooldridge,2010). From the table 2, CPS is positively skewed with 0.8161 while LIQ, LTD and MRR are negatively skewed with -0.1821, -0.947 and -0.2622 respectively.

Kurtosis measures the sharpness of the peak of normal distribution curve. It is a measure of tailedness of the probability distribution of a real random variable. It evidence that CPS and

LTD are mesokurtic with 3.44 and 3.26 respectively and MRR is leptokurtic with 2.94, LIQ is platykurtic with 2.499.

Lastly, the Jarque-Bera (JB) statistic tests whether the series are normally distributed. As can be seen from the Table 2, the JB indicates that the hypothesis of normality is not rejected for all series except for LTD. This normality is also evident from the fatter tails of the kurtosis and negative and positive skewness

4.3 Evaluation Based on Econometrics Criteria

TEST FOR AUTOCORRELATION

One of the underlying assumptions of the ordinary least squares regression is that the succession values of the random variables are temporarily independent. In the context of the series analysis, this means that an error $\{U_t\}$ is not correlated with one or more of previous errors (U_{t-1}). The problem is usually dictated with Durbin-Watson (DW) statistics.

The Durbin Watson's test compares the empirical d^* and d_u in $d-u$ tables to their transforms ($4-dL$) and ($4-dU$).

Decision rule

If $d^* < DL$ then we reject the null hypothesis of no correlation and accept that there is positive autocorrelation of first order.

If $d^* > \{4-dL\}$ we reject the null hypothesis and accept that there is a negative autocorrelation of the first order.

If $dU < d^* \{4-dU\}$, we accept the null hypothesis of no autocorrelation.

If $dL < d^* < dU$ or if $\{4-dU\} < \{4-dL\}$, that is inconclusive

Where: dL = Lower limit

dU = Upper limit

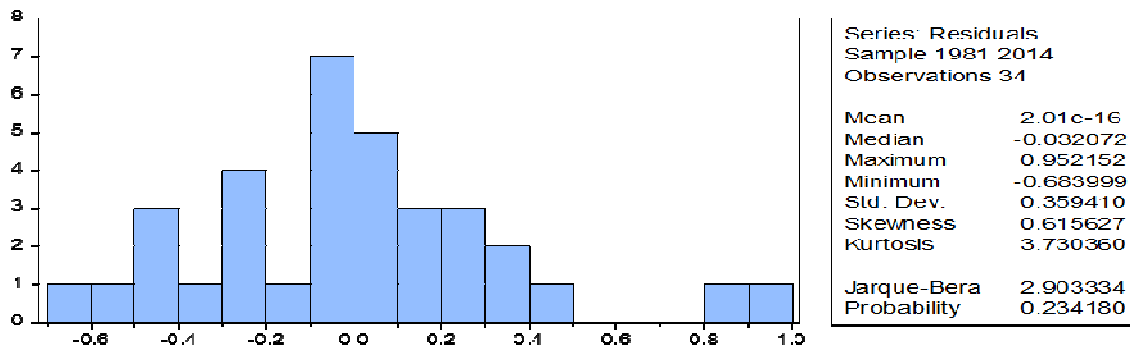
d^* = Durbin Watson.

From our regression result in table 2, we have; $d^* = \text{Durbin Watson} = 1.839$.

Conclusion: we accept the null hypothesis of no autocorrelation.

NORMALITY TEST FOR RESIDUAL

Figure 1: Normality test



Source: eviews

The Jarque-Bera test for normality is an asymptotic, or large-sample, test. It is also based on the ordinary least square residuals. This test first computes the skewness and kurtosis measures of the ordinary least square residuals and uses the chi-square distribution {Gujarati, 2004}. The hypothesis is: $H_0 : X_1 = 0$ normally distributed $H_0 : X_1 \neq 0$ not normally distributed At 5% significance level with 2 degree of freedom.

JB=2.90933

Critical value =5.9914

Conclusion: Since $2.9093 < 5.99147$ at 5% level of significance, we accept the null hypothesis and conclude that the error term follow a normal distribution.

TEST FOR HETEROSCEDASTICITY:

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.664776	Prob. F(3,30)	0.4657
Obs*R-squared	7.153887	Prob. Chi-Square(3)	0.5672
Scaled explained SS	7.603554	Prob. Chi-Square(3)	0.1550

Sources: eviews

Heteroscedasticity has never been a reason to throw out an otherwise good model, but it should not be ignored either. This test is carried out using Breuch-Pagan-Godfrey general heteroscedasticity test. The test asymptotically follows a chi-square distribution with degree of freedom equal to the number of regressors {excluding the constant term}.

The auxiliary model can be stated thus: $U_t = \beta_0 + \beta_1 \text{LMPR} + \beta_2 \text{LIQ} + \beta_3 \text{LTD} + v_i$ Where V_i = pure noise error.

This model is run and an auxiliary R2 from it is obtained.

The hypothesis to the test is stated thus:

$H_0: \beta_1 = \beta_2 = \beta_3 = 0$ {Homoscedasticity}

$H_0: \beta_1 \neq \beta_2 \neq \beta_3 = 0$ {Heteroscedasticity}

Note: the sample size $\{n\}$ multiplies by the R^2 obtained from the auxiliary regression asymptotically follows the chi-square distribution with degree of freedom equal to the number of regressors (excluding constant term) in the auxiliary regression.

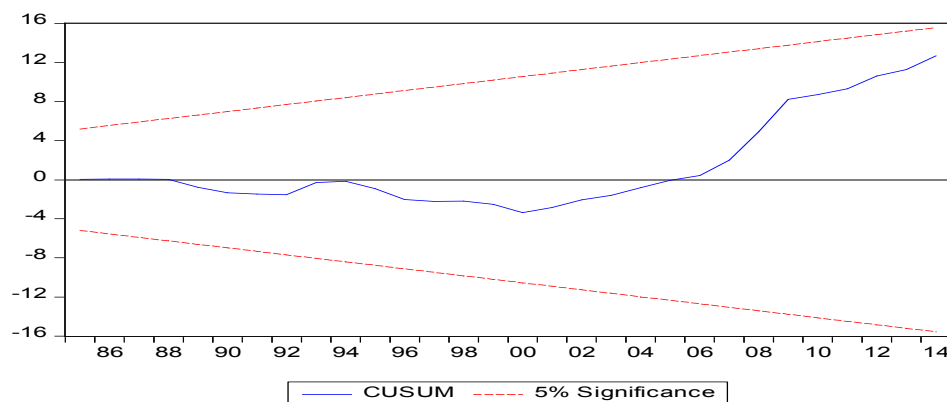
Decision Rule:

Reject the null hypothesis if $X^2_{cal} > X^2_{tab}$ at 5% level of significance. If otherwise, accept the null hypothesis, from the obtained results, $X^2_{cal} = 7.15388 < X^2_{tab}$ at 0.05 significance level $\{8\} = 15.5$, we therefore reject the alternative hypothesis of heteroscedasticity showing that the error terms have a constant variance and accept the null hypothesis showing that the error terms does not have a constant variance.

STABILITY TEST

The cumulative sum of recursive residuals (CUSUM) and the CUSUM of square (CUSUMSQ) tests are applied to assess parameter stability (Pesaran and Pesaran, 1997). Figs. 2 plot the results for CUSUM and CUSUMSQ tests. The results indicate the absence of any instability of the coefficients because the plot of the CUSUM and CUSUMSQ statistic fall inside the critical bands of the 5% confidence interval of parameter stability.

FIGURE 2



Source: eviews

4.4 Test of Hypotheses

Test of hypothesis based on simple regression

Hypothesis 1

Ho: $B_1 = 0$: Liquidity ratio does not have a positive and significant effect on private sector credit in Nigeria.

Ho: $B_1 \neq 0$: Liquidity ratio has a positive and significant effect on private sector credit in Nigeria.

The hypothesis were tested at 5% level of significant.

Decision Rule

Accept null hypothesis, if the coefficient of t-statistic is negatively signed and the probability value of t-statistic is greater than 0.05 ,otherwise accept the alternate hypothesis.

The following tables are relevant to this study.

TABLE 3: LIQUIDITY RATIO AND CREDIT TO PRIVATE SECTOR

Dependent Variable: LCPS
Method: Least Squares
Date: 07/14/17 Time: 11:13
Sample: 1981 2015
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LLIQ	-0.138361	0.343151	-0.403206	0.6894
C	2.981811	1.310230	2.275792	0.0295
R-squared	0.614902	Mean dependent var		2.454335
Adjusted R-squared	0.525252	S.D. dependent var		0.425466
S.E. of regression	0.430805	Akaike info criterion		1.209121
Sum squared resid	6.124554	Schwarz criterion		1.297998
Log likelihood	-19.15961	Hannan-Quinn criter.		1.239801
F-statistic	0.162575	Durbin-Watson stat		0.327272
Prob(F-statistic)	0.089397			

Source: eview9

Table 3 shows that t-statistic reveals that the estimated parameter liquidity (LLIQ) is statistically insignificant because the t-calculated (-0.403206) is less than the t-tabulated (-2.042). Therefore, we accept the Ho for the liquidity variable. This implies that the variable has insignificant effect on the credit to private sector. The coefficient of **liquidity** is – **0.1383**, it implies that a change in the liquidity ratio by 1 % will result by the same margin to a fall or a rise in the level of credit to private sector that would be extended. This goes to

agree with theoretical expectation that an increased liquidity ratio reduces the amount of credit vice versa.

Hypothesis 2

Ho: $B_1 = 0$: Loan to deposit ratio does not have a positive and significant effect on private sector credit in Nigeria.

Ho: $B_1 \neq 0$: Loan to deposit ratio has a positive and significant effect on private sector credit in Nigeria.

The hypothesis were tested at 5% level of significant.

Decision Rule

Accept null hypothesis, if the coefficient of t-statistic is negatively signed and the probability value of t-statistic is greater than 0.05 ,otherwise accept the alternate hypothesis.

TABLE 4: LOAN TO DEPOSITE RATIO AND CREDIT TO PRIVATE SECTOR

Dependent Variable: LCPS
Method: Least Squares
Date: 07/14/17 Time: 11:16
Sample: 1981 2015
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LLTD	-0.187567	0.360427	-2.520402	0.0063
C	3.238916	1.509397	2.145834	0.0393
R-squared	0.878140	Mean dependent var		2.454335
Adjusted R-squared	0.721917	S.D. dependent var		0.425466
S.E. of regression	0.430103	Akaike info criterion		1.205862
Sum squared resid	6.104628	Schwarz criterion		1.294739
Log likelihood	-19.10258	Hannan-Quinn criter.		1.236542
F-statistic	0.070818	Durbin-Watson stat		0.334291
Prob(F-statistic)	0.606258			

Source : eview9

Table 4 shows that t-statistic reveals that the estimated parameter loan-to-deposit ratio (LLTD) is statistically significant because the t-calculated (-2.5204) is greater than the t-tabulated (-2.042). Therefore, we reject the Ho for the loan to deposit ratio variable. The coefficient of loan to deposit ratios – **0.1875**, it implies that a change in the loan to deposit ratio by 1 % will result by the same margin to a fall or a rise in the level of credit to private sector that would be extended. This goes to agree with theoretical expectation that an increased loan to deposit ratio reduces the amount of credit vice versa

Hypothesis 3

Ho: $B_1 = 0$: Monetary policy rate does not have a positive and significant effect on private sector credit in Nigeria.

Ho: $B_1 \neq 0$: Monetary policy rate has a positive and significant effect on private sector credit in Nigeria.

The hypothesis were tested at 5% level of significant.

Decision Rule

Accept null hypothesis, if the coefficient of t-statistic is negatively signed and the probability value of t-statistic is greater than 0.05 ,otherwise accept the alternate hypothesis.

TABLE 5: MONETARY POLICY RATE AND CREDIT TO PRIVATE SECTOR

Dependent Variable: LCPS
Method: Least Squares
Date: 07/14/17 Time: 11:18
Sample: 1981 2015
Included observations: 35

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LMRR	-0.565725	0.205880	-2.747842	0.0096
C	3.873164	0.520525	7.440875	0.0000
R-squared	0.686203	Mean dependent var		2.454335
Adjusted R-squared	0.561542	S.D. dependent var		0.425466
S.E. of regression	0.389588	Akaike info criterion		1.007991
Sum squared resid	5.008700	Schwarz criterion		1.096868
Log likelihood	-15.63985	Hannan-Quinn criter.		1.038672
F-statistic	7.550633	Durbin-Watson stat		0.574156
Prob(F-statistic)	0.009647			

Source: eview9

Table 5 shows that t-statistic reveals that the estimated parameter Minimum rediscount rate is (LMRR) statistically significant because the t-calculated (-2.74784 is greater than the t-tabulated (-2.042). Therefore, we reject the Ho for the minimum rediscount rate variable. The coefficient of Monetary policy rate is – **0.565725**, it implies that a change in the MPR ratio by 1 % will result by the same margin to a fall or a rise in the level of credit to private sector that would be extended. This goes to agree with theoretical expectation that an increased minimum rediscount ratio reduces the amount of credit vice versa

Re-Statement of hypothesis

Ho: Liquidity ratio does not have a positive and significant effect on private sector credit in Nigeria.

Hypotheses two

Ho: Loan to deposit ratio does not have a positive and significant effect on private sector credit in Nigeria.

Ho: Hypotheses three

Monetary policy rate does not have a positive and significant effect on private sector credit in Nigeria.

TABLE 6: Model: OLS regression result
Summary of the estimated results
Dependent variable : Bank performance (CPS)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.269182	2.304467	3.154388	0.0036
LLIQ	-0.062432	0.315336	-0.197984	0.8444
LLTD	-0.659119	0.356434	-1.849203	0.0743
LMRR	-0.730701	0.219402	-3.330426	0.0023
R-squared	0.277738	Mean dependent var	2.439762	
Adjusted R-squared	0.205511	S.D. dependent var	0.422905	
S.E. of regression	0.376953	Akaike info criterion	0.996737	
Sum squared resid	4.262801	Schwarz criterion	1.176309	
Log likelihood	-12.94453	Hannan-Quinn criter.	1.057976	
F-statistic	3.845383	Durbin-Watson stat	1.839970	
Prob(F-statistic)	0.019284			

Source: evIEWS calculation

Hypothesis 1

Table 6 above indicated that liquidity ratio had a negative and non-significant impact on credit to private sector since the coefficient and probability value of t-statistics are -0.0624 and 0.8444 respectively. The result shows that liquidity ratio inversely relates to the amount or volume of private sector credit. The regression result showed that (the liquidity ratio) is inversely, and- insignificantly related to the volume of credit supplied to private sector.

Hypothesis 2

The null hypothesis which stated that Loan to deposit ratio does not have a positive and significant effect on private sector credit in Nigeria is confirmed on the contrary based on the outcome of this empirical study. The regression result showed that loan to deposit ratio has a significant impact on the credit to private sector.

Hypothesis 3

The null hypothesis which stated that monetary policy rate does not have a positive and significant effect on private sector credit in Nigeria is not true. From the regression result, the expectation that discount rate be negative and significant at 5 % level of significance.

4.4.1 Result Interpretation and Evaluation

From the above, the interpretation of the result as regards the coefficient of various regressors is stated as follows: The value of the intercept is 7.2691; it shows that bank performance (CPS) will experience a 7.26% increase when all other variables are held constant. The estimate coefficients which are -0.0624 {LIQ} shows that a unit increase in Liquidity ratio will cause a -0.0624% decrease in bank performance (CSP), -0.65911% {LTD} shows that a unit decrease in loan to deposit will cause a -0.65911% decrease in bank performance (CSP), -0.7307 {MRR} shows that a unit change in minimum rediscount rate will cause a -0.7307% % decrease in bank performance (CSP).

4.4.2 Economic Criteria

The test is aimed at determining whether the signs and sizes of the result are in line with what economic theory postulates. Thus, economic theory tells us that the coefficients are negatively related to the dependent variables, if an increase in any of the explanatory variables leads to a decrease in the dependent variable. Therefore, the variable under consideration and their parameter exhibition of apriori signs have been summarized in the table below.

This table will be guarded by these criteria

When <0 = conform

When >0 = not conform

TABLE 7: Aprior Sign

Variables	Expected sign	Estimate	Remark
MPR	-	$B < 0$	Conform
LIQ	-	$B < 0$	Conform
LTD	-	$B < 0$	Conform

From the above table, it is observed that all selected regulatory instrument actually conforms to the economic theories. A negative relationship which exists between MPR, LIQ, LTD and banking performance indicates that an increase in MPR, LIQ, LTD will result in a negative change in the banking performance in Nigeria. This conforms to the apriori criteria because an decrease in the selected regulatory policies over the years will increase banking performance in the economy.

4.4.3 Statistical Criteria (FIRST ORDER TEST)

4.4.1 COEFFICIENT OF MULTIPLE DETERMINANTS (R²)

The R² (R square) which measures the overall goodness of fit of the entire regression, shows he value as 0.2777 is approximately 27.77%. This indicates that the independent variables accounts for about 27.77% of the variation in the dependent variable.

Adjusted coefficient of Determination ($\bar{R}$)

Adjusted R-square is 20% shows that the model was correlated by the explanatory variables.

4.4.4 The Student's T-test

The test is carried out to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

Decision Rule:

If t-calculated > t-tabulated, we reject the null hypothesis {H₀} and accept the alternative hypothesis {H₁}, and if otherwise, we select the null hypothesis {H₀} and reject the alternative hypothesis {H₁}. Level of significance = at 10% = 0.05 Degree of freedom: n-k

When n: Sample size K: Number of parameter

The t-test is summarized in the table below:

Table 5: Hypothesis

Variables(t-value)	t-tabulated	Remark
LIQ(-0.19798)	±1.697	Insignificant
CRR(-1.8492)	±1.697	Significant
MRR(-3.3304)	±1.697	Significant

The t-statistics is used to test for individual significance of the estimated parameters { β_1 , β_2 , and β_3 }. From the table above, we can deduce that the LIQ {0.19798} is less than 1.697,

which represents the t-tabulated implying that LIQ is statistically insignificant. On the other hand, the LTD{-1.8492},MPR {-3.3304} are greater than the t-tabulated $\{\pm 1.697\}$ signifying that LTD and MPR are statistically significant.

4.4.5 F-Statistics

The F-statistics is used to test for simultaneous significance of all the estimated parameters.

The hypothesis is stated; $H_0: \beta_1 = \beta_2 = \beta_3$

$H_0: \beta_1 \neq \beta_2 \neq \beta_3$ Level of significance = at 5%

Degree of freedom: $V_1 = K - 1$ $V_2 = N - k$

Decision rule: If the f-calculated is greater than the f-tabulated $\{f\text{-cal} > f\text{-tab}\}$ reject the null hypothesis (H_0) that the overall estimate is not significant and conclude that the overall estimate is statistically significant. From the result, f-calculated $\{3.8453\}$ is greater than f-tabulated $\{2.92\}$, that is, $f\text{-cal} > f\text{-tab}$. Hence, we reject the null hypothesis $\{H_0\}$ that the overall estimate has a good fit which implies that our independent variables are simultaneously significant.

4.4.6 Implication of Result

From the result, the algebraic signs and magnitudes of the estimated parameters to determine the extent and directions of the influences of the several independent variables on the dependent variable is given thus;

(a). Since the coefficient of **liquidity** is -0.0624 , it implies that a change in the liquidity ratio by 1 % will result by the same margin to a fall or a rise in the level of credit to private sector that would be extended. This goes to agree with theoretical expectation that an increased liquidity ratio reduces the amount of credit vice versa. The marginal effect of the liquidity ratio is less than unit, that is -0.0624 . The implication of this is that a change in the liquidity ratio by 1 % will result by the same margin to a fall or rise in the level of credit that would be extended. This goes to agree with theoretical expectation that an increased liquidity ratio reduces the amount of credit vice versa.

(ii) The commercial banks due to their economic inclinations are usually sensitive and respond most positively to any changes in lending rates. Since the coefficient of **loan to depositor's ratio** is -0.659 , a 1 % change in the variable will result in a rise than 1 % change in credit to private sector. This conforms to theoretical expectation that loan to deposit rate of commercial banks vary with the endogenous variable (credit to private sector) directly or

negatively. This implies that less credit would be extended to private sectors if the rate of lending is raised and more if the lending rate is brought downwards. This is in agreement with the assertion that a lower lending interest rate will increase the willingness of the banks to extend credit.

(iii) A reduction in the minimum rediscount rate means more credit to be channeled to borrowers. This would be made possible as the banks would have more liquidity to be extended as credit. Conversely, a higher ratio or increase in the rediscount rate would imply that banks will have to hold a larger proportion of loanable funds in cash assets. This would reduce banks' ability to extend required credit. The marginal effect or elasticity of the minimum rediscount rate is less than unity (-0.730), and negatively related to the credit to private sector. The implication is that more credit would be extended to the private sector or economic sectors if the discount rate is less and more if the rate is reduced. Expectantly, banks respond more or less negatively to discount rate. This is due to the fact that the amount of liquidity the banks would have and willingness to extend loan or credit would be reduced because of the high interest rate that will result.

CHAPTER FIVE

5.0 SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

Our empirical findings support that selected monetary instruments are a significant component of the banking performance in Nigeria. This finding can be identified in the T-test (T-statistics). The findings emanating from this study are as follows:

1. Liquidity ratio had a negative and statistically insignificant impact credits to the private sector (CPS) in Nigeria.
2. Loan to depositors had a negative and statistically significant impact on credits to private (CPS) in Nigeria.
3. Minimum rediscount rate had a negative statistically significant impact on credit to private sector (CPS) in Nigeria.

5.2 Conclusion

Policy implications and recommendations have to be made based on the findings of this investigation. From the research findings, significant effect on the credit to private sector in Nigeria is made by instruments of monetary policy. To get or obtain the desired level of credit to private sector, effective combination of the regulatory instrument (monetary policy) variables is vital.

All the explanatory variables in this study have elasticity less than unity ($E_s < 1$). This implies that a proportionate change in any of the independent (X's) variables will result in opposite proportionate change in credit to private sector.

With the findings resulting from this study, the following conclusions are drawn viz

- (i) Since the coefficient of **liquidity** is **-0.0624**, it implies that a change in the liquidity ratio by 1 % will result by the same margin to a fall or a rise in the level of credit to private sector that would be extended. This goes to agree with theoretical expectation that an increased liquidity ratio reduces the amount of credit vice versa.
- (ii) The commercial banks due to their economic inclinations are usually sensitive and respond most positively to any changes in lending rates. Since the coefficient of **loan to depositor's ratio** is -0.659, a 1 % change in the variable will result in a rise than 1 % change in credit to private sector. This implies that less credit would be extended to private sectors if the rate of lending is raised and more if the lending rate is brought downwards. This is in agreement with the assertion that a lower lending interest rate will increase the willingness of the banks to extend credit.

- (iii) A reduction in the minimum rediscount rate means more credit to be channeled to borrowers. This would be made possible as the banks would have more liquidity to be extended as credit. Conversely, a higher ratio or increase in the rediscount rate would imply that banks will have to hold a larger proportion of loanable funds in cash assets. This would reduce banks' ability to extend required credit.
- (iv) Much as the banks respond positively to increased changes in lending interest rate, their response to discount rate is more or less negative. This is due to the fact that the amount of liquidity the banks would have and the willingness to extend loan or credit would be reduced because of the resultant high lending rate that will ensue.

5.3 Recommendations

The study has also revealed that the monetary policy generally has a significant effect on the credit to private sector. It will be important if the government will enact sound monetary policies in order to enhance growth in the banking industry. The government will also need to benchmark for best practices in monetary policy development from those economies that are more advanced in order to develop better monetary policies that can improve the performance of the banking industry indeed credit to private sector.

That the liquidity ratio maintained by the commercial banks be essentially adjusted from time to time by the monetary authorities. This can be achieved as commercial banks' liquidity ratio is increased or raised to a reasonable amount to enable them respond to their primary obligations (that is, servicing their demand and time deposit liabilities). And, any eventual surplus or statutory reserve should be channeled to private sectors and this should be enforced as a matter of policy.

As discount rate has effective influence on the cost and availability of credit, it should be taken as a significant instrument of monetary policy in the Nigerian financial market. This is because all interest rate structure is dependent on the discount rates as managed by the Central bank of Nigeria.

An increase in the Cash reserve ratio will decrease the money multiplier which resultantly affects credit supply. Conversely, a decrease will have a reverse effect on the multiplier thereby increasing creation of credit. A low reserve ratio would enable commercial banks' capacity to create more credit.

The Central Bank should intensify its efforts on the instruments of monetary and Credit policy as a means of channeling credit to the real sectors of the economy. The suggestion is made because of the encouraging compliance of the commercial banks' to guidelines of the monetary and credit policies as issued by the monetary authorities.

5.4 Contribution to Knowledge

The findings of this study have added to the on-going research on monetary policy instruments and credit to private sector in Nigeria. It contributed in the area of methodology as a result of various preliminary tests carried out to avoid spurious results and misleading assertions. This study has added to the literature in the area of period covered (1981-2015) and updated the scope of the relevant research study.

REFERENCES

- Abiola A. B, Folasade B. A, Alexander E. O(2015) Financial inclusion and economic growth in Nigeria. *International Journal of Economics and Financial Issues*, 2015, 5(3), 629-637.
- Akhalumeh P.B. (2011). Bank Capitalization and Economic Crisis: What lessons can Nigeria learn? *Research Journal of Finance and Accounting*, 2(6), 13 – 22.
- Adam, J. A. (2005). Bank regulation, risk assets and income of banks in Nigeria. NDIC Quarterly. Retrieved 19 August, 2015 <http://www.ndic-ng.com/pdf/adam.pdf>
- Adbullahi, I. (1989). General impact of deregulation on bank performance, Capitalization and Competition. FITC. 121-128
- Adekanye, F. (1991). Financial Systems Regulation, Deregulation and Savings Mobilization in Nigeria. African Economic Research Consortium Research Paper, Final Report Nairobi, Kenya.
- Ajakaiye, D. & Omole, A. (1994). Impact of commercial bank lending rates on inflations in Nigeria. African Economic Research Consortium, Kenya.
- Ajayi F.O & A.A Atanda (2012) Monetary policy and bank performance in Nigeria: A Two- Stop Cointegration Approach. *African Journal of Scientific Research*. ISSN 2220-9433
- Ajifs, S. & Hamid, J. (1992), Corporation financial structures in developing countries. Technical Paper Number 1 International Finance Corporation, World Bank Washington, DC.
- Akanbi T.A & F.A Ajagbe(2012) Analysis of monetary policy on commercial banks in Nigeria. *African Journal of Business Management Vol.6(51)*
- Andrianova, S., Demetriades, P., & Shortland, A. (2003). State banks, institutions and financial developments. Discussion paper in economic, university of Leicester.
- Asamoah, G.N. (2008), The Impact of the financial sector reforms on savings, investment and gross domestic product (GDP) in Ghana, international business and economic *Research Journal*, Vol. 7(10), 73-84
- Balogun, E.D. (2007), Banking sector reforms and the Nigerian economy: Performance, *Pitfalls and Future Policy Options*, MPRA Paper No. 3804
- Barth, J.R., Caprio, G., & Levine, R. (2004). Bank regulation and supervision: what works best? *Journal of Financial Intermediation*, 13, 205-248
- Boyd, J and Prescott, E. C. 1986. Financial Intermediary Coalitions”, *Journal of Econometric Theory*, 38, 211 – 32.

- CBN (2015) Communique No. 102 of the MPC Meeting (With Personal Statements of Members) of May 18 and 19, 2015 Assessed on 17 August 2015
- CBN releases guidelines for new banking model. Vanguard Newspaper 12 November, 2010. Retrieved on 19th August, 2015
- CBN(2013). Central Bank Monetary Policy Committee; CBN Communique No. 89 of the Monetary Policy Committee (MPC) meeting, held on Monday, May 20th and Tuesday, 21st, Abuja, Nigeria.
- Central Bank of Nigeria – National financial inclusion strategy (CBNNFIS).(2012), Summary report on financial inclusion in Nigeria. Abuja, 20th January, 2012. Available from: [http://www.cenbank.org/Deloitte on Africa Banking regulatory environment and supervision in Africa](http://www.cenbank.org/Deloitte%20on%20Africa%20Banking%20regulatory%20environment%20and%20supervision%20in%20Africa). Retrieved on 29 August 2015.<http://www.deloitte.com/content/>
- Den Hertog, J. (1999). General theories of regulation. Retrieved on 19th August, 2015. <http://encyclo.findlaw.com/5000book.pdf>
- Diamond, D.W., and Dybvig, P.H. (1986). *Banking theory, deposit insurance, and bank regulation*. The Journal of Business, 59, 1, 55-68. Retrieved on 18 August 2015. <http://www.jstor.org/stable/2352687>
- Efina (2014) Supply Side: *Assessing The Impact of Financial Inclusion Policies on Deepening Financial Inclusion in Nigeria*. Retrieved on 17th August, 2015
- Emori C.M., Ojong 1, A. Ekpuk A. Ogar & E.G. (2014) *Banking Sector Reform In Nigeria: A Regulatory Imperative For A Sustainable Banking Industry* Research Journal of Finance and Accounting Vol.5, No.13, 2014
- Evaluation and Possible Alternatives”, Mimeo, IMF Central Banking Seminar, New York
- Fadare, S.O. (2010), Recent banking sector reforms and economic growth in Nigeria middle eastern finance and economics, ISSN 1450-2889, Issue 8, 146- 160
- Freixas, X., and Rochet, J.C. (2008). *Microeconomics of Banking* (2nd ed.). Cambridge: Massachusetts Institute of Technology.
- Fries, S. and Taci, A. (2002), *Banking reform and development in transition economies*. EBRD European Bank for Reconstruction and Development, London
- Giddy, I. H. (1984). *The Principles and Practices of Bank Supervision: Main Features*.
- Houthakker, H. S. and Williamson, P. J. (1996). *The Economics of Financial Markets*. Oxford University Press.
- Howells, P and Bain, K (2005). *The Economics of money, banking and finance*, 3rd Edition, Pearson education Ltd, Edinburgh Gate, Harlow, Essex CM20 2JE, England.

- Ike C.N.N (2009) The Political economy of bank reform. Seminar paper presented at UNN *Journal of Economics*, 1(2), 65-75
- Iganiga, B.O. (2010), Evaluation of the Nigerian Financial Sector Reforms Using Behavioural Models.
- Iyade A.I.(2006) The Impact of regulation and supervision in the activities of banks in Nigeria: An Assessment of the of CBN/NDIC. A research project at St Clement University.
- Jegede, C.A. and Mokuolu, J.O. (2004), Financial Sector Reform: A Panacea to Capital Market Growth. Proceedings of the Annual Conference of the Nigerian Society for Financial Research on Financial Liberalization and Growth in Developing Countries: A Reassessment, University of Lagos, November 10-12, 102-107
- John, T. & Kent, M. (2008).The Economics of Banking, (2nd edition). John Wiley & Sons Ltd, Australia
- Koutsoyiannis, A. (2003) Theory of Econometrics (Second Edition).New York: Palgrave.
- Kremmling, M.D. (2011). The influence of financial sector regulation on bank performance:a study of bank performance during the world financial crisis. Thesis Dissertation.
- Lamido, S. (2009).We Are Making the Banks Safer.Publication of the Federal Ministry of Information and Communications on Open Government.1 (1). 8 – 9, August.
- Lamido.S. &Yaradua, M. (2009) In the Nick of Time.Publication of the Federal Ministry of Information and Communications on open Government.1(1).6 -7, August.
- Lemo, T. (2005).Regulatory Oversight and Stakeholder Protection. A paper presented at the BGL Mergers and Acquisitions Interactive Seminar, Eko Hotels & Suits, Victoria Island.
- Loveday, R. (1980) Statistics – A First Course (2nd Ed.). Cambridge: Cambridge University Press.
- Noy I. (2004).Financial Liberalization, Prudential Supervision and the Onset of Banking Crises.Emerging Markets Review, No:5, pp. 341-359.
- Nwude, C. (2005). Bank Recapitalization: the Imperatives, implication, Options and Strategies for Banks.*Nigerian bankers Journal*.17 –23.
- Obadeyi, J. (2013). The Impact of interest rates on the development of an emerging market: Empirical evidence of Nigeria. *Journal of Economic and Sustainable Development*.4(10) 44– 58.
- Ojo, M. (1991).Deregulation in the Nigerian Banking Industry: *A review and appraisal- deregulation in the banking industry*.FITC. Pp. 104 – 112
- Ojo, O.M & B.A Azeez (2012).A Time analysis on the effect of banking reforms on Nigeria's economic growth. *Research Paper atEkiti State University*

- Oke, B., Obadeyi, J., & Unuafé, O. (2013). Volatility transfer from developed countries to emerging market: Evidence from Nigeria. *European Journal of Business and Management*. 5(17) 127 -129.
- Oke, M. O. & Adeusi, S. O (2012). Impact of Capital Market Reforms on Economic Growth: The Nigerian experience. *Australian Journal of Business and Management Research* 2 (02), 20-30.
- Okezie, A.C., Tella, S., & Akingunola, R. (2011). Relationship between regulation and performance of Nigerian commercial banks. *European Journal of Economics, Finance and Administrative Sciences*, 1450-2275, 33. <http://www.eurojournals.com>
- Ogwuru, H.O.R. (2014). Lecture material on econometrics, Abia State University, Uturu.
- Onwumere .J.U. J, (2005). Business and economic research methods. Lagos: Don Vinton Limited
- Ozili P.K. (2015) Determinants of Bank Profitability and Basel Capital Regulation: *Empirical Evidence from Nigeria*.
- Posner, R.A. (1971): Taxation by regulation. *Bell Journal of Economics and Management Science* 2(22), 22-50
- Rehman, W. (2011), Banking reforms and economic growth: *A Case Study of Pakistan*. International conference on Financial Management and Economics, Vol. 11, 405-409
- Saez, L. (2001), Banking Reform in India and China. *International Journal of Finance and Economics*, Vol.6, Issue 3, 235-24
- Salami F.O(2015) Banking regulation in Nigeria(A Review). Retrieved on 14 August, 2015.
- Sanusi S.L (2010) Global financial meltdown and reform in the Nigerian banking sector. Public lecture delivered at the convocation square, Abubakar Tafawa Balewa University, Bauchi, Friday, December 10, 2010. Retrieved on 14 August, 2015.
- Soludo, C. (2004). Towards repositioning of banks in Nigeria for the 21st century. Keynote address delivered at the annual dinner Muson, Centre, Onikan, Lagos.
- Soludo, C. (2004). Consolidating Nigerian banking industry to meet the development challenges of the 21st century. Being a paper delivered to the special meeting of the Bankers' Committee held on July 6, 2004 at CBN Headquarters, Abuja. 3 – 8.
- Stigler, G.J. (1971): The Theory of economic regulation. *Bell Journal of Economics and Management Science* 2(1), 3-21
- Stokewell B (2008). Introduction to Correlation and Regression Analyses Baltimore ELST.
- Tresselt, T. and Detragiache, E. (2008), Do financial sector reforms lead to financial development? Evidence from a New Dataset. IMF Working Paper No. 08/265, International Monetary Fund, Washington D.C