CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The banking system of various countries have undergone reforms aimed at enhancing economic growth and development. This is important in developing countries as a result of globalization, technological advancement and integration into international financial market. Most countries in Central and Eastern Europe such as Germany, Poland, Czech republic, Switzerland, Austria, Slovenia and Hungary have adopted structural reforms with a view to increase the size, stability and efficiency of financial systems (Andries, Apetri & Cocris, 2012). The contribution of the banking system towards the growth of an economy is primarily credited to the role it plays especially in savings mobilization and allocation of resources to deficit sectors of the economy (Nwakoby & Ananwude, 2016). Accordingly, the growth of an economy would depend on sturdiness, unassailability and stability of the financial system. The banking system not only facilitates effective and efficient payment and credit service delivery, but it is the central nervous system of a market economy and contains a number of separate, yet co-dependent, components all of which are essential to its effective and efficient functioning (Sanusi, 2012). The banking system is normally subjected to strict regulation because it is one important sector in which the bank shareholders' fund is an insignificant fraction relative to total liabilities. Macroeconomic goal of price stability, low rate of unemployment, favourable internal and external balances can be assiduously achieved through the proper functioning and

stability of a country's financial system. Banks play a crucial role in propelling the entire economy of any nation, of which there is need to reposition it for efficient financial performance through a reform process geared towards forestalling bank distress (Uduak & Ubong, 2015). The high rate of economic growth obtainable in developed countries were attributed to the reforms in the financial system done overtime. (Corporate guide 2012)

The banking industry plays an essential role in the economy in terms of resource mobilization and allocation and, is by far, the most important part of the financial system in developing economies, accounting for the bulk of financial transactions and assets. In addition, banks have recently expanded in other activities such as securities markets, fund management, insurance, among others, blurring the distinction between banks and other financial markets (Moyo et al, 2014)

In a developing country like Nigeria, banks play important and sensitive roles hence their performance directly affects the growth, efficiency and stability of the economy (Oladejo & Oladipupo, 2011). But for more than two decades after independence, the Nigeria financial system was repressed, as evidenced by ceiling on interest rates and credits expansion, selective credit policies, high reserve requirement, and restriction on entry into the banking industry. This situation inhibited the functioning of the financial system and especially constrained its ability to mobilize savings and facilitate productive investment (Syvlanus & Abayomi, 2001).

A critical look at the nation banking sector invariably portend the need for urgent attention, as situation that have made for series of reform of the sector over the year. The recent of all reform came up 2004 with a policy aimed at improving the

regulatory and supervisory environment as well as restructuring and developing the banking sector entities. Soludo (2004) expressed that the reforms agenda is a pre-emptive and proactive measure to prevent an imminent system crisis and collapse of the banking industry and permanently stop the boom and burst cycle which have characterized the history of our banking industry. More fundamentally the reforms are aimed at ensuring a sound, responsive, competitive and transparent banking system appropriately suited to the demand of the Nigeria economy and the challenges of globalization. The main trust of the reform package which is anchored on a thirteen point agenda, is to consolidate and recapitalize banks by increasing their shareholders fund to a minimum of N25 billion with effect from December 31st 2005.

The reforms according to Oluyemi (2006) had in turn prompted a regulatory induced restructuring in the form of consolidation that would engender the alignment of banks group in determined moves expected to translate into the merge of some banks and the acquisition of others. The emergence of mega banks no doubt would expose banks to new challenges, which if not properly addressed could adversely affect the operation of the payment system and its credibility. The banking sector reforms have been acclaimed to be necessary but the question is whether they yield anticipation result.

Soludo's reforms started soon after he was appointed Governor of the central bank of Nigeria in May 2004, when he moved to consolidate the country's creaking banking system. The banking sector was an obvious place to begin his reforms, Sanusi Lamido, another former CBN Governor equally made a major impact towards creating a sustainable banking system.

1.2 Statement of the Problem

Within the theoretical realm, reforms in the banking system would improve performance of deposit money banks, especially for developing countries to speed up the rate of economic growth and development. Nwakoby and Ananwude (2016) state that immediately after the banking reform of 2004/2005, deposit money banks rolled out various technology service delivery channels to attract more customers to stay in the business, improve performance and compete favourably in the industry. There are a lot of controversy on existing empirical literature on banking sector reforms and performance, particularly for emerging economies. The proponents of banking reforms believe that adequate reforms could potentially increase the profit before tax, net interest income and return on equity of deposit money banks in Nigeria through revenue and cost efficiency gains. However, the opponents argue that banking reform could increase banks exposure to risk through increases in leverage and off balance sheet operations. (Alalade, Adekunle & Oguntodu, 2016). The studies of Brissimis, Delis and Papanikolaou (2008) and Andries, Apetri and Cocris (2012) reveal that banking reforms in newly acceded European countries improved banking sector performance. In the context of Nigeria, Ifionu and Keremah (2016), Okpara (2011), Uduak and Ubong (2015), Okpanachi (2011), Okorie and Agu (2015), Andow (2015), Alalade, Adekunle and Oguntoda (2016), Agbo (2013), Oluitan, Ashamu and Ogunkenu (2013) and Olayinka and Farouk (2014) have empirically shown that the various banking reforms in Nigeria have positively affected banking sector performance. While Obadeyi (2014), Ogunsakin (2015), Alajekwu and Obialor (2014), Olokoyo (2013), Owolabi and Ogunlalu (2013) and Ilori and Ajiboye (2016)

established that improved performance of the banking sector was not as a result of reforms in Nigeria banking system. This is contradicting.

The Nigeria deposit money banks have undergone rapid changes over the years in terms of the number of institutions, ownership structure, as well as operations. These changes have been influenced by challenges posed by deregulation of the financial sector, globalization of operations, technological innovations and adoption of supervisory and prudential requirements that conform to international standard. The rate of bank failures in Nigeria has constituted a problem because it has risen sharply in recent years, confidence and credibility were gradually and steadily being eroded and the picture had never been more gloomy and the impending consequences more alarming. The fundamental problems of the unsound banks have been identified to include persistent illiquidity, poor assets quality and unprofitable operations including weak capital base. It is against this backdrops that this study evaluates the effect of banking reforms on financial performance of Nigerian deposit money banks, this time the country is witnessing obvious economic recession which the government itself acknowledged. However the country is coming out of it. Recently Kemi Adesun, the Nigerian Minister of Finance stated that the Nation is getting on the part of sustainable growth. (Corporate guide 2017)

1.3 Objectives of the Study

The broad objective of this study is to evaluate the effect of bank capitalization reforms on financial performance of Nigerian deposit money banks. However, the specific objectives were:

1. Evaluate the effect of minimum capital requirement on the profit before tax of the Nigerian deposit money banks.

2. Assess the effect of minimum capital requirement on net interest income of the Nigerian deposit money banks.

3. Determine the effect of minimum capital requirement on return on equity of Nigerian deposit money banks.

1.4 Research Questions

1. What is the relationship between minimum capital requirement and profit before tax of the Nigerian deposit money banks?

2. What extent does minimum capital requirement affect net interest income of the Nigerian deposit money banks?

3. What is the relationship between minimum capital requirement and return on equity of Nigerian deposit money banks?

1.5 Hypotheses of the study.

Subsequent to the objectives of the study, three research hypotheses were modeled and stated in null form. The research hypotheses were:

1. Minimum capital requirement has no significant effect on profit before tax of the Nigerian deposit money banks.

2. Minimum capital requirement has no significant effect on net interest income

of the Nigerian deposit money banks.

3. Minimum capital requirement has no significant effect on return on equity (ROE) of Nigerian deposit money banks.

1.6 Scope of the Study

This study is anchored on the effect of banking reforms via minimum capital requirement on financial performance of the Nigerian deposit money banks. The study covered a time frame of seventeen (17) years, i.e. 1999 to 2016. This period covered the era of universal banking, landmark consolidation of 2004/2005 and Sanusi reforms which actualized by virtue of the global financial meltdown of 2007 to 2009.

1.7 Limitations of the Study

The major limitations of this study is the construction and assumption of proxies/variables in the models to manifest reality whereas in real sense they are abstract insinuation. Also inability of the researcher to include all the variables such as profit after tax, net profit etc is a major setback. It will be highly complex to include all the variables. All the data gathered for this research are from secondary sources.

1.8 Significance of the Study

The result of this study will be of immense relevance to the following group of persons:

Policymakers: The findings of this research will provide decision makers with

appropriate postulation to current trends in the Nigerian deposit money banks into one of the most reliable and stable financial system among emerging financial systems.

Academic Community: This study will add to existing literature on linkage between banking reforms and financial performance of the banking sector in the context of developing countries. Scholars/researchers and students venturing on this subject matter/similar topic will find this work useful and of immense benefit.

To the Investing public: It will expose them to the investment opportunities in the banking industry and also help to understand the benefit of banking reforms, thereby giving them the required confidence.

To the Government: It will help the government to know the various banking reforms that has taking place and know the best strategic plan and approach to adopt towards enhancing the efficiency of the sector.

To the General Public: It will give the general public an insight to the happenings in the Nigeria banking sector and for them to be conversant with the trends in the sector.

1.9 Definition of Operational Terms

For the purpose of this research, the under listed terms are defined thus;

Reform: it is a mechanism used to derive a desired change, a shift from one normative course of action to another in a social or economic system so as to control the operations and operators of the system and enhance system performance (Alajekwu & Obialor 2014)

Economic development: This refers to the sustained, concerted actions of policy marker and communities that promote the standards of living and economic health of a specified area source; o' Sullivan/A an Sheffrin, Sim (2003)

Financial performance: it is the general financial health of a firm over a given period of time (Ifiom 2016)

Capital adequacy: It is the confidence booster towards growth and development, it is the capital strength and capacity of the banking system, (Osigwe, 2016)

Financial institution loans: Both long and short term credit extended to banking insurance compares and other finical institution (Shaw 1973)

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Reform

The word "reform" is simply viewed as alteration of defects/lapses to achieve better performance/improve an existing institution/system. Reform is a mechanism used to drive a desired change; a shift from one normative course of action to another in a social or economic system so as to control the operations and operators of the system and enhance system performance (Alajekwu & Obialor, 2014). Bank restructuring or reform is an inevitable process when the existing structure of banks cannot fulfill the desired level of economies of scale in operation. However, lack of any one or all the prerequisites would not only bring disaster for banking and financial system, it sometimes might cost the real sector severely (Islam, 2013). These sorts of banking sector problems have been epitomized by the analysts and donors as banking fragility, crisis, distress, failure, collapse, insolvency and so on, which call for "banking reforms" on the part of the concerned banking system (Rahman, 2012). The reforms of the banking industry will have an influence on the functions, as it ultimately shapes the way they handle their operations (Ilori & Ajiboye, 2016). According to Alajekwu et al (2014), banking reform can be categorized into systemic and big-bang banking reform; the systemic banking reforms refer to a reform designed to resolve a combination of banking sector or economy wide problem while the big-bang reform is targeted to achieve a particular course (for example: increase capital base of banks).

Thus, the reforms were to ensure the safety of depositors' money, position banks to play active developmental roles in the Nigerian economy, and become major players in the sub-regional, regional and global financial markets (Owolabi & Ogunlalu, 2013).

Conceptually, economic reforms are undertaken to ensure that every part of the economy functions efficiently in order to guarantee the achievement of macroeconomic goals of price stability, full employment, high economic growth and create both internal and external balances (Okpanachi, 2011). Considering the foregoing, reforms are predicated upon the need for reorientation and repositioning of an existing status quo in order to attain more effective and efficient state. They could be fundamental bottle necks that may inhibit the functioning of institutions for growth and the achievement of core objectives in the drive towards enhancing and sustaining the economic and social imperatives of human endeavour. Carried out through either government institutions or private enterprises, reforms become inevitable in the light of the global dynamic exigencies and emerging landscape. Consequently, the banking sector, as an important sector in the financial scene, needs to be reformed in order to enhance its competitiveness and capacity to play a functional role of financing investment.

Adams (2005) indicates that banking sector reforms are propelled by the need to deepen the financial sector and reposition it for growth for it to be integrated into the global financial architecture and create a banking sector that is consistent with regional integration requirements and international best practices.

The ability of the financial system to engender economic growth hinges largely on the health, soundness, efficiency and stability of the banking system. Banking reforms are therefore undertaken to strengthen and reposition the banking industry to enable it contribute meaningfully to the development of the real sector through its intermediation process. It involves a comprehensive process of substantially improving the regulatory and surveillance framework fostering healthy competition in operation, ensuring an efficient framework for monetary management, expansion of savings mobilization base, enforcement of capital adequacy, promotion of investment and growth through market-based interest rates.(corporate guide, 2011)

The theoretical argument linking bank reforms to growth is that a well developed financial system enhances the efficiency of intermediation by reducing information, transaction, and monitoring costs. On the one hand, it broadens the deposit base of the economy and also it promotes investment by identifying and funding good business opportunities, facilitating the exchange of goods and services and also hedging and diversifying risk. (Sanusl, 2010).

Ultimately, bank reforms are aimed at ensuring financial deepening which implies the ability of financial institutions to effectively mobilize savings for investment purposes. The growth of domestic saving provides the real structure for the creation of diversified financial claims. It also presupposes active participation of financial institutions in financial markets, which in turn entail the supply of quality financial services in financial institution (Odedokun, 1989) cited in (Okagbue & Aliko ,2004).

2.1.2 Reforms in the Nigerian Banking Sector

The Nigerian banking sector has experienced significant structural and institutional changes over the last few decades caused by restructuring and liberalization of the financial market which had significant implications on the nation's banking sector (Olokoyo, 2013). The Nigerian banking industry since its inception (in August 1891 which saw a branch of the African Banking Corporation open in Lagos) had evolved in seven stages (Adolphus, 2013)

The first stage (1891-1951) was a free banking era, characterized by unregulated/unguided and laissez- faire banking practices and hence massive bank failure. The rest of the six stage fall under reform stages which started with the banking ordinance of 1952 that dominantly prevailed till 1959.

Thus, the first phase of bank reforms in Nigeria (1952 - 1959) bordered on definition of banking business, prescription of minimum capital requirements for the expatriate and indigenous banks, maintenance of a reserved funds, adequate liquidity and inculcating of examination, supervision and control habit into the banking management in Nigeria (Okpara, 2011).

Following the Paton Report in 1948, the first banking ordinance was enacted in 1952. The ordinance defined a bank as any company carrying out banking business or using bank or banking as part of the title under which it carries on business. Banking is also defined as the business of receiving money from the public on current account which is to be repayable on demand by cheque.The ordinance was designed to prevent non-viable banks from mushrooming and to ensure orderly deposit money banks. The

banking ordinance triggered a rapid growth in the industry. Thus, the ordinance made mandatory the supervision, examination and control of banks in the country by the government but failed to provide for the liquidation of banks or bank examiner (Okpara, 2011).

The second phase of the reform (1959-1986) came with the commencement of operations of the Central Bank of Nigeria in June 1959. The CBN actually took off on July 27, 1958 with Mr. R.P. Fenton of the bank of England as the first governor. The preceding CBN Act of 1958 incorporated all the requirements in the 1952 ordinance and introduced mandatory liquidity ratio in the banking business. The CBN Act of 1958 marked the turning point in government's efforts and desire to harmonize the activities of the banks for national development and growth through the issue and regulation of currency, credit and foreign exchange control and the supervision of the financial system of the country.

Another banking act, in 1969 which has remained the pillar and base of banking laws in Nigeria to date was an addition to the* companies' act of 1968 which made it mandatory for all banks, like other business operating in Nigeria to register as Nigerian companies. The 1969 act increased minimum capital requirement for both indigenous and foreign banks, raised the maximum lending to any single borrower to 331/2 per cent of the sum of the paid-up capital and statutory reverses of bank from the former 20 per cent level in 1958; provided that no bank should own any subsidiary company and clients, and give the apex bank extensive supervisory and regulatory power over all banks (Akinmoladun, 1992). The major amendments to the 1969 Banking Act were in 1970, 1972 and 1979 to strengthen the CBN to cater for recent

developments in the banking system (Okafor,1996).

The third financial sector reforms (1987 - 1993) led to deregulation of the banking industry that hitherto was dominated by indigenized banks that had over 60 per cent Federal and State government" stakes, in addition to credit, interest in Nigeria started in the fourth quarter of 1986 with the setting up of a foreign exchange market in September 1986, the reforms pertaining to the banking industry proper did not commence until January 1987 (Asogwa, 2005). The reform took the form of deregulation of the rate of interest both on loans and on deposits. Market mechanism was left to determine the rate of interest any bank would charge. Government also brought out new rules for setting up banks and issuing licenses that favoured new entrants most. This consequently led to a sudden upsurge in the number of banks which invariably increased from 56 in 1986 to 120 in 1993 (Okpara, 2011). Banks were also accommodated in trading in the exchange rate sector as the exchange rate was partially freed from government administration and paved way for auctioning forex system. Initially, the forex was divided into official and unofficial windows. While government sourced forex in the official market at administratively controlled rates, the licensed foreign exchange dealers usually banks, bid foreign exchange at the instance of market mechanism on behalf of their clients in the unofficial window.

This trading also appeals to the interest of the banking system and coupled with the favourable licensing issues, led to increase in the number of banks. The phenomenal growth in the number of banking institutions overstretched the regulatory capacity of the CBN while the growth sophistication in the design and use of financial instruments heightened the risks of malpractices and fraud in the industry. In

particular, mismanagement such as insiders' abuse and poor credit appraisal systems, resulted in the accumulation of unpaid loans and advances which eventually contributed to the distress situation experienced in the banking system in the early 1980's and mid 1990's and the revocation of the licenses of 26 banks in 1997 (Asogwa, 2005).

To ensure the healthy platform for the system, Nigerian Deposit Insurance Corporation (NDIC) was established in 1988 and commenced operation in January 1989. In 1991 two new decrees were put in place to enhance the powers of the regulatory and supervisory authorities of the financial system to enable them manage the reform packages effectively. The first is the Central Bank of Nigeria Decree 24 of 1991 and the Banks and Other Financial Institution Decree (BOFID), 25 of 1991. The new banking sector regulatory reforms gave CBN the powers to issue banking licenses and to revoke them. It also empowered the CBN to apply any type of measures to handle ailing financial system. By 1991 some of the reform measure of 1987 were reversed, a cap was replaced on interest rates standing at 21% for lending rates and 13.5% for deposit rates.

Also a maximum interest rate spread was specified at 4%. By 1992 government divested itself from the seven banks where it had 60% equity holding in line with the new private sector driven development and privatization. In 1993 the Open Market Operations as an indirect instrument of monetary control was introduced. The first discount house took off in 1993 known as Associated Discount house. The discount house intermediate between the central bank and the other banks, offloading government treasury securities from the CBN and auctioning some to the banks.

Where the banks cannot pick - up all of the treasury securities, the discount house warehouse them (Oluyemi, 2005).

The table below shows the major events that took place during the third era of financial sector reforms in Nigeria.

Table I: Stages of Bank Reforms (1987 -1997)

S/N	Reforms/Event	Years
1	Deregulation of lending and deposit rate	1987
2	Deregulation of entry	1987
3	Partial Abrogation of Sectoral Allocation of Credit	1987
4	Determination of foreign exchange by the market forces	1987
5	Creation of deposit insurance corporation/scheme	1988
6	Change in minimum paid-up capital for banks (still on till date)	1988
7	Withdrawal of public sector deposit	1989
8	Creation of peoples banks (1989) & community banks (1990)	1989
9	Licensing of non-bank financial institutions	1990
10	Prudential Guideline	1990
11	Partial privatization of banks	1991
12	Reform of the regulatory and supervisory ftamework. i.e. CBN Degree and BOFID	1991
13	Indirect monetary control allowing discount house entr	1993
14	Capital market reform	1997

Source: Adapted from Asogwa (2005)

The adoption of the IMF led structural adjustment programme in 1986 which included a broad program of financial liberalization with interest rates and entry into the banking system liberalization did not provide any significant improvement in Nigeria's key economic indicators as gross domestic product (GDP) as at 1980 declined constantly by 14.3% i.e. from 7.5% in 1988 to 6.5% at the end of 1989 while the inflation rate increased from 34.5% in 1988 to 50.5% at the end of 1989 (Ayanwale, 2007).

The introduction of the prudential guidelines attempts to bring order and harmony in the reporting of loan provision and classified risk assets. The prudential guidelines issued by the CBN in Novemberl990 were aimed at proper loan asset classification and income recognition. Before the introduction of the prudential guidelines, banks had their individual methods of classifying accounts, rating credit and categorizing account as performing or non-performing. They treated accrued interest on non-performing accounts as income. The implications of their actions were the declaration of high level of profit that was not actually realized (Asogwa, 2005).

In line with the foregoing, the country allowed the establishment of foreign banks in 1990 to improve this situation. This resulted to an increase in the number of banks from 106 to 155 by the end of 1997. In 1997, a Central Bank of Nigeria directive lifted the restrictions on equity ownership by individuals and corporate investors in Nigerian banks. Under the new directive, it was possible for an individual or corporation to own 100% of the share capital of a bank. Prior to this directive, the maximum shareholding possible for an individual was 10%, while for companies the limit was 30%. However, due to the distress that plagued many of these banks, the number of banks declined to 89 at the end of 1998 as the federal government liquidated twenty-seven ailing banks (Ayanwale, 2007).

The fourth phase began in the late 1993; (1994 - 1998), with the re-introduction of regulations. During this period, the banking sector suffered deep financial distress which necessitated another round of reforms, designed to manage the distress. Ini993 the Nigerian banking sector recorded 33 bank distress for the first time since the establishment of the Central Bank; and in 1995, the number peaked to 60 (Okpara,

2011). In 1994 another reforms measure was introduced. Hitherto banks in Nigeria which had not been paying interest on demand deposits (current account) were granted permission to do so.

The cash reserve ratio which before the reforms had been virtually stagnant was revised to now begin to work as an indirect instrument of credit control and granting of loans on the strength of foreign exchange held in foreign accounts was prohibited. All government deposits held by the commercial and merchant banks were withdrawn so that the banks could function without undue government interference (Asogwa, 2005).

The fifth phase corresponding to our pre-consolidation era began with the advent of civilian democracy in 1999 (1999 - 2003) which saw the return to liberalization of the financial sector, accompanied with the adoption of distress resolution programmes. This era also saw the introduction of universal banking which empowered the banks to operate in all aspect of retail banking and non-bank financial markets (Balogun, 2008).

Table2: Stages of Bank Reform 1999 - 2001

S/No		Reform	Year
1		Re-entry of foreign owned banks	1999
2		Institutionalization of foreign currency deposits	2000
3		Universal Banking Scheme	2001

Source; Adapted from Asogwa (2005)

By 1999, while the inflation rate had reduced from 50.5% to 13%, the GDP growth rate had significantly declined to 2.4% and the Central Bank of Nigeria minimum rediscount rate increased to 20.7% necessitating the reforms in the table above.

The sixth phase corresponding to our consolidation era began in 2004 to date and it is informed by the Nigerian monetary authorities who asserted that the financial system was characterized by structural and operational weaknesses and that their catalytic role in promoting private sector led-growth could be further enhanced through a more pragmatic reform program (Balogun, 2008).

Table 3: Stage of Bank Reform 2004 - 2005

S/No	Reform	Year
1	Bank consolidation	2004
2	Mergers & Acquisition	2005

Source: Adapted from Asogwa, (2005)

Prior to this reform, the banking system was characterized by low capital. High non-performing loans, insolvency and illiquidity, over dependence on public sector deposits and foreign exchange trading, poor asset quality, weak corporate governance, a system with low depositors' confidence and a banking sector that could not support the real sector of the economy at 25% of GDP compared to Africa average of 78% for developed countries (Ebong, 2006).

1. Minimum capital base from 2 billion to 25 billion with a deadline of 31st December, 2005

2. Consolidation of banks through mergers and acquisitions;

3. Phased withdrawal of public sector funds from banks, beginning from July, 2004; Adoption of a risk- focused and rule-based regulatory framework;

4. Adaptation of zero tolerance for weak corporate governance, misconduct and lack of transparency;

5. The automation of the rendition process of returns by banks and other financial institutions through the electronic analysis and surveillance system (e-FASS);

6. Establishment of a hotline and confidential internet address for all Nigerians wishing to share any confidential information with the governor of the CBN.

7. Strict enforcement of the contingency planning framework for system banking distress amongst others.

The seventh stage also called the post-consolidation period (2008-2011) witnessed interplay between the adverse effects of the 2007-2009 Global Financial Crisis and heavy risk concentrations in the previously consolidated banks. The CBN developed a blueprint under Sanusi for reforming the Nigerian banking industry built around four pillars chronicled as "The Project Alpha Initiative" for reforming the Nigerian financial system in general and the banking sector in particular. The reforms aimed at removing the inherent weaknesses and fragmentation of the financial system, integrating the various ad-hoc and piecemeal reforms and unleashing of the huge potential of the economy to include (a) enhancing the quality of banks, (b) establishing financial stability, (c) enabling healthy financial sector evolution, and (d) ensuring the financial sector contributes to the real economy. There was also greater emphasis on requisite disclosure, transparency and risk-based supervision (RBS) to restore sanity in the banking system (Adolphus, 2013).

2.1.3 Different Component of Bank Reforms in Nigeria

a) Banking Structure Reforms.

At a macroeconomic level, banking structure refers to the mix and interrelationships among institutions authorized to undertake banking business by the extant banking legislation(s) of a country. At independence, Nigeria inherited a banking structure which exhibited two dualities. The first duality was the distinction between expatriate (foreign) banks and indigenous banks. The expatriate banks were local subsidiaries of multinational banks incorporated oversees while the indigenous banks were banks incorporated in Nigeria. The second duality reflected the dichotomy between commercial and merchant banks. While the former are retail bankers, the latter tend to concentrate on wholesale banking, and are therefore known as investment banks (Okafor 2012). The Nigeria Banking system has undergone a lot of banking reforms which have resulted in the current state of Nigeria banking system. The reforms in the Nigeria banking system, for the purpose of this study are grouped into seven (7) distinct stages. The first stage of banking reform in Nigeria banking system was the promulgation of the 1952 banking ordinance to tackle the banking failure witnessed within the free banking era: 1892 to 1952. Okaro (2009) reports that the ordinance prohibited banks from paying dividends before writing off capitalized expenditure and from banking loans" against security of its shares, it imposed a ceiling on unsecured loans to directors and to companies in which directors had interest. Furthermore, the ordinance was generally reported as a giant effort at developing a sound banking system in Nigeria, since banks are the dominance sector of the financial service industry. The second stage is the era of banking legislation which

opened with the operation of Central Bank of Nigeria on 1st July, 1959. The enabling act of Nigeria money and capital market was all put in motion by the 1959 banking ordinance. The third stage; indigenization era of 1970 to 1976 resulted in the government of Nigeria (both state and federal) acquiring stakes in foreign banks under the indigenous enterprises promotion decree of 1972. In addition, Nigeria Agricultural and Corporative Bank and Nigeria Bank for Commerce and Industry was established to pick up the pace of economic growth and development. The fourth stage, 1977 - 1986 which is the post Okigbo era, general reassess 3rd the focal point of the Nigeria banking system by introducing banking services in the rural areas of the country.

The sixth stage termed the era of deregulation or universal banking saw the introduction of the Structural Adjustment Programme (SAP) 1986 - 2005 where banks were permitted to engage in other activities aside core banking practices. However, this was grossly abused by banks operating in the country leading to the then Governor of CBN Professor Charles Soludo banking reform of 2004 known as "era of banking consolidation/recapitalization" in Nigeria. This resulted in the closure of some banks as operating license revoked, and existing banks were forced to merge while some acquired by other banks to meet up with minimum capital requirement and stay in the business of banking. The several/final phase is the banking reform of Sanusi Lamido termed "Sanusi Era", who was appointed on 3rd June 2009 for a five year term but was suspended from office by Goodluck Jonathan on 20th February 2014 after claiming that a $20billion fraud was committed in the NNPC. He was a successful banker and formal Governor of Central Bank of Nigeria. The reform came

as a result of the global financial meltdown that bedeviled Nigeria and exposed the weak corporate governance and risk management structure of banks top executives. This resulted in the sack of some banks' executive directors and merger and acquisition of some banks. For instance, during this 'era, Eco Bank transnational corporation and Access Bank acquired Oceanic Bank and Intercontinental Bank, Enterprise Bank Ltd acquired Spring Bank, Keystone Bank Ltd Acquired Platinum - Habib Bank, First City Movement Bank acquired First Inland Bank, Sterling Bank Pic acquired Equatorial Trust Bank, Mainstream Bank Ltd acquired Afri Bank Pic. (NDIC report 2015).

(b) Banking Supervision Reforms.

In the case of the banking supervision, the reform has somehow been very slow over the years, The CBN has retained exclusive authority over the regulation and supervision of main-line banking, within a short period however, the authority to regulate and supervise some specialized banks was vested in other regulators which are now defunct and can be seen as:

Community Banking: it was introduced in the Nigerian banking landscape in 1990,although the enabling act the community banks act no 46 was formally enacted in 1992 with retrospective effect in 1990.

The federal mortgage bank act, which established the federal mortgage bank of Nigeria (FMB) vested the bank with primary responsibility of regulating and supervising the primary mortgage institutions (PMI"s) (corporate guide 2015).

(c) **Capitalization and Capital Adequacy Reforms**

Capital adequacy is a widely acknowledged key factor in bank performance measurement and evaluation as acknowledge by hardy and Bonaccorsi di patti (2001) they exposed that it is the first of the five CAMEL parameter which cannot be overemphasized in the issue of Bank performance; Soludo (2004) ;Akhtar (2007) and Nandy (2010). It is the first of the five camel factors (capital, assets, management, earnings and liquidity) recognized and adopted by the Basel system of bank performance assessment of the Bank for international settlement (BIS) the importance of adequate capitalization for long term solvency management of banks should be easy to appreciate.

Capitalization to a large extent constitute a major determinant of the credit delivery capacity of a bank. Edward C. (1921) posits that the lending capacity of banks depends on equity capital and deposits. He discovered that Bank will be weak to lend when there is low percentage in equity capital and customers deposits. The ability and capacity to lend is hinged on this two factors. He also says that equity capital constitutes the backbone of a bank long term funds for lending.

(d) Credit Operations Reforms

Banks perform two key functions namely deposit mobilization and credit delivery. They mobilize deposits from surplus units and channel this deposit the deficit unit of the economy. The credit delivery service of deposits money banks can take various forms like overdraft facilities, loans and advances, lease financing, credit delivery constitutes the primary platform through which banks promote the social and

economic endeavors of their customers. Therefore credit policy reforms constitute a key instrument relied upon by banks regulators to promote national economic growth and balance development.

(e) Liquidity Management Reforms

Liquidity constitutes the primary line of defense of banks against both anticipated and unanticipated funds withdrawal demands of customers. The maintenance of adequate level of liquidity therefore represent a banking virtue which banks aspire to cultivate and which banking regulators endevour to instill on the banking system.

There is a short as well as a long dimension to the liquidity concerns of banks. Short term liquidity depends on the maintenance of adequate levels of cash and liquid assets relative to customers withdrawal needs in the long

term, liquidity is a measure of the solvency position of a bank, that is a bank's ability to redeem its obligations out of the realizable value of its asset Illiquidity jeopardizes ability to service customers withdrawal demands while excess liquidity erodes the income and profit performance of banks (Corporate guide 2015).

2.1.3. Factors Responsible for the Failure of Banking Sector Reforms

According to Sanusi (2010) as quoted by Alade (2012), the Nigerian economy was hit by the second round effect of the financial meltdown between 2008 and 2009 and many Nigerian banks sustained huge losses, particularly as a result of their exposure to the capital market and downstream oil and gas sectors. He further added that a holistic view on what went wrong in Nigeria leading up to the banking crisis in 2008

found eight interrelated factors responsible. These were macroeconomic instability, major failures in corporate governance at banks, lack of investor and consumer sophistication, inadequate disclosure and transparency about the financial position of banks, critical gaps in the regulatory framework and regulations, uneven supervision and enforcement, unstructured governance/management processes at the CBN and weaknesses in the business environment. These factors brought the entire Nigerian financial system to the brink of collapse. Therefore, the CBN had to rescue eight (8) banks that were in serious liquidity problems through capital and liquidity injections, retirement of their top executives and prosecution of those who breached standard practices. These actions became necessary to restore confidence and sanity in the banking system. (Corporate guide 2015).

Inadequacy of capital.

CBN (1997) posit that banks are expected to maintain adequate capital to meet their financial obligations, operate profitably and contribute to promoting a sound financial system. It is for these reasons that the CBN prescribes minimum capital requirements. This minimum ratio of capital adequacy has been increased from 6 per cent in 1992 to 8 per cent in 1996. It is further stipulated that at least 50 per cent of the component of a bank's capital shall comprise paid-up capital and reserves, while every bank shall maintain a ratio of not less than one to ten (1:10) between its adjusted capital funds and its total credit. When a bank's capital falls below the prescribed ratio, it is an indication that the bank may be heading for distress.

Bank examination reports showed that a good number of banks operating in Nigeria

were grossly un-recapitalized. This situation has been attributed to the low level of initial capital, the effect of inflation, the adverse operating results mainly due to their inability to make appreciable recoveries from their non-performing assets and the large portfolio of non-performing loans maintained by some banks. These factors have combined to erode the capital base of many banks. With the introduction of Prudential Guidelines, banks were required to suspend interest due, but unpaid, on classified assets and to make provisions for non-performing credit facilities, a good proportion of which was subject to losses.

In describing capital inadequacy, Ogundina (1999) argues that capital in any business whether bank or company serves as a mean by which losses may be absorbed. It provides a cushion to withstand abnormal losses not covered by current earnings pattern. Unfortunately, a good number of banks are grossly undercapitalized. This situation could partly be attributed to the fact that many of the banks were established with very little capital. This problem of inadequate capital has been further worsened by the huge amount of non-performing loans which have eroded the capital base of some of these banks. Available statistics on banks' capitalization reveal that as at the end of 1992, 120 operating banks in the country required the aggregate additional capital to the tune of N5.6 billion to meet the statutory minimum capital funds set by bank regulators in 1992. Ogubunka (2003) contends that when a bank is undercapitalized, it ought not to continue with its magnitude of operations prior to the depletion of capital (Corporate guide 2015).

Lack of Disclosure and Transparency

Sanusi (2002) posits that disclosure and transparency are key pillars of a corporate governance framework, because they provide all the stakeholders with the information necessary to judge whether or not their interest are being served. He sees transparency and disclosure as an important adjunct to the supervisory process as they facilitate banking sector market discipline. For transparency to be meaningful, information should be accessible, timely, relevant and qualitative. Ajayi (2005) argues that transparency and disclosure of information are key attributes of good corporate governance which banks must cultivate with new zeal so as to provide stakeholders with the necessary information to judge whether their interest are being taken care of. Sanusi (2010) opines that lack of transparency undermines the ethics of good corporate governance and the prospect for effective contingency plan for managing systemic distress.

Akpan (2007) observes that lack of transparency has obscured the way many financial and economic activities are conducted and has contributed to the alarming proportion of economic/financial crimes in the financial industry. 'Trust' and the fiduciary principle, which was the cornerstone of banking, has been completely jettisoned as banks now engage in all forms of sharp practices. Some of these sharp practices involve the deliberate manipulation or distortion of records to conceal the correct and true state of affairs. These records which form the bed rock of supervisory oversight by the regulatory authorities in monitoring the soundness of the system has thus been undermined. Such distortions therefore, would necessarily result in wrong information being sent to the regulatory authorities, which should have been in a position to take

adequate measures to prevent further deterioration of the bank's position.

Imala (2004) contends that the issue of transparency has to be taken seriously in the new dispensation. Transparency has been a recurring problem in the financial industry in Nigeria, and unless improved upon, it has the potential of making nonsense of the efforts of the supervisors in implementing the New Accord.

Huge non-performing loans

A major revelation during an audit exercise shortly after Sanusi took over as CBN governor showed that many owners and directors abused or misused their privileged positions or breached their fiduciary duties by engaging in self-serving activities. The abuses included granting of unsecured credit facilities to owners, directors and related companies which in some cases were in excess of their banks' statutory lending limits, in violation of the provisions of the law (Oluyemi, 2005). A critical review of the nation's banking system over the years has shown that one of the problems confronting the sector had been that of poor corporate governance. From the closing reports of banks liquidated between 1994 and 2002, there were evidences that clearly established that poor corporate governance led to their failures. Ogundina (1999) observes that the Nigerian financial system over the years have been under severe stress as a result of large amounts of non- performing loans. The classified loans and advances of the whole banking industry in 1990 amounted to N11.9 billion, representing 44.1 percent of the total loans and advances. The problem of bad debts is usually exacerbated by the negligence on the part of the lending officers. Some of these loans were granted without regard to the basic tenets of lending, nor do they

comply with any rational lending criteria. This makes it extremely difficult or impossible to recover a substantial part of the loans (Sanusi, 2010).

Also, the devaluation of the naira in the wake of Structural Adjustment Programme had its effect on the ability of borrowers to pay off. A devaluation by more than 700% ever since the introduction of SAP shore up foreign manufacturing input prices, leading to greater domestic capacity underutilization and reduced inability of business borrowers to repay their bank loans and advances(Balogun, 2007). According to CBN (1997), several of the distressed banks suffer from poor asset and liability management. The portfolios of assets of the majority of these banks were concentrated on loans and advances that became non-performing. Other assets such as treasury securities, investments and cash accounted for a small proportion of their asset portfolio. The profile of poor asset and liability management exposed the banks to liquidity risk which weakened the confidence that the public had in the banking sector.

Political factors

These are politically induced issues, which turn out to have adverse consequences on the effective management of banks. 'For instance, Imala (2004) posits that political instability and indeed uncertainty associated with the annulled June 12, 1993 Presidential Elections, engendered fear in the populace which led to unanticipated massive withdrawal of funds from banks. Another example is political interference on the management of banks. In this instance, most government owned banks were politically influenced to grant loans and overdraft which soon after became hard core and remained unpaid.

Regulatory and Supervisory Factor

It is the responsibility of regulatory/supervisory agencies to husband the financial services sector to ensure its safety, soundness and stability. Some of the actions and inactions of these agencies encouraged distress in the system. For instance, the use of stabilization securities on both liquid and less liquid banks, for the purpose of excess liquidity control, exacerbated the problems of less liquid banks. Again, the withdrawal of government deposits from conventional banks to control banking system liquidity, created deep holes in the deposit profile of some banks and thus led to high loan/deposit ratios, indicating overtrading (Nnanna, 2004).

2.1.4. Financial Performance

The term performance is not as simple as it sounds; people often mean very different things when they talk about performance.

No performance review is beyond' dispute, for instance, reported profit is a matter of opinion. If income is to be measured in terms of the increase or decrease in the wealth of an enterprise, obviously some definitions of that stock of wealth is required. Three basic measures of wealth are evident from the literature (Akinsulire, 2008 and Pandy, 2003) as follows:

Financial capital - the equity stake in an enterprise in money terms;

Real financial capital - the equity stake in an enterprise in real terms (the proprietary concept);

Operating capacity capital - the ability of the enterprise to maintain its ability to

provide goods and services (the entity concept).

Hunger and Wheelan (1997) define performance as the end result of activity and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated and the objectives to be achieved through that evaluation. Performance measurement is therefore the process whereby an organization establishes the parameters within which programmes, investments, outputs and acquisitions are reaching the desired results.

Information about the return (or profit) a firm earns on its past investments to the point of the calculation enables shareholders to access the performance of the company's management; Users will want to know how well companies are doing and also if it can be improved in the foreseeable future (Ifionu & Keremah, 2016). Financial performance appraises firm's ability to generate revenue through the utilization of assets. It encompasses the general financial health of a firm over a given period of time which will be vital for various stakeholders. Economists and monetary authorities recognize that the ability of banks to achieve the desired results and to continue to play the role earmarked for them not only on the existence of an enabling (regulatory) environment but more importantly on financial performance. The financial performance is necessary for banks to effectively perform its' function of financial intermediation, resources mobilization and distribution which ultimately results in economic growth and development. Andries, Apetri and Cocris (2012) note that efficiency and profitableness of banks constitutes a very important element in the analysis of financial systems, especially of the developing countries, at the level of which the banking system represents the main component of the financial system and

which has known in the past years, major mutations at the level of the structure of shareholding as a result of privatization, of the entry of foreign banks and of the increase of competition determined by the liberalization of the market and legislative changes.

2.1.5. Bank Performance

Bank performance is the adoption of set of indicators which are indicative of the bank's current status and the extent of its ability to achieve the desired objectives. An efficient banking system facilitates linkage between mobilization and use of resources, which accelerates the process of economic growth. It is a widely accepted belief that a banking system which relies on a wide range of banking products, is able to carry out this function because it increases the efficiency of a banking systems to a large extent by offering a broader and flexible array of services to the benefits of both borrowers and investors. The determinants of key performance indicators (KPIs) of private sector banks as captioned by Abduraheem, Yahaya, and Aliu (2011) include Accid test ratio, Opportunity Succession Rate, Cash Flow, Return on Capital Employed (ROCE), Liquidity, Customer Satisfaction Rate, Bank capital, Asset quality, Bank deposit Overall Equipment Effectiveness, Return on Investment (ROI), and Internal Promotion.

Considering performance in terms of bank capacity to generate sustainable profitability, European Central Bank (2010) argue that Profitability is a bank's first line of defence against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. It is worthy

of note that an institution that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk. Moreover, since the ultimate purpose of any profit-seeking organization is to preserve and create wealth for its owners, the bank's return on equity (ROE) needs to be greater than its cost of equity in order to create shareholders value. Although banking institutions have become increasingly complex, the key drivers of their performance remain earnings, efficiency, risk-taking and leverage. In detail, while it is clear that a bank must be able to generate "earnings", it is also important to take account of the composition and volatility of those earnings. (ECB,2010).

Bank performance or efficiency refers to the bank's ability to generate revenue from a given amount of assets and to make profit from a given source of income. "Risk-taking" is reflected in the necessary adjustments to earnings for the undertaken risks to generate them (e.g. credit-risk cost over the cycle). "Leverage" might improve results in the upswing in the way it functions as a multiplier but, conversely, it can also make it more likely for a bank to fail, due to rare, unexpected losses (Abduraheem, Yahaya & Aliu, 2011).

For Mohammed (2005), the reasons for non-performance of the banking sector is the personalization in ownership and management structure which makes the banks incapable to finance large scale and long term projects due to limited liquidity at their disposal. The banking sector with import financing rather than encouraging domestic growth in the economy will bring loss of public confidence due to fear of liquidation, customer dissatisfaction on banking services as well as some obnoxious, unprofessional and other sharp practices within the industry. All these can cause great

distortion in the financial system resulting to financial inefficiency, which will make investors not to get constant and high dividends as a result of inefficiency in terms of gross earnings, profit after tax and net assets. (Mohammed,2005).

Umoh (2004) opined that bank reforms through mergers and acquisitions are expected to address the problem of distress among insolvent banks without an initial resort to liquidation and ensure banking sector efficiency.

Performance Measurement Models In Banks

Many researchers and writers have offered a variety of models for measuring performance in banks. However, little or no consensus is reached as to what model or approach could be described as most valid set of performance criteria (Cameron, 1981; Lewin and Minton, 1986). For instance, Cameron (1986) suggests that studies on corporate performance should include multimedia criteria analysis. Weiner and Mahoney (1981) have indicated that there are numerous measures of corporate performance that could serve as dependent variables. However, more important than the specific measure chosen is the use made of multiple measures because different criteria of performance are likely to be differently affected by the various independent variables (Lieberson & O'Connor, 1972). The performance of firms can be measured in terms of their productive (cost and output) efficiency and allocative efficiency (market power). To measure efficiency, input and output have to be compared with each other and researchers of banking markets face the problems of how to define the inputs and output process. This explains why no techniques have been accepted and thus has brought considerable differences in the measurement of efficiency.

Profit as a Measure of Banks' Performance

Information about the return (or profit) a firm earns on its past investments to the point of the calculation enables shareholders to assess the performance of the company's management; Users will want to know how well companies are doing and also to know if it can be improved in the foreseeable future. This is the reason why the use and interpretation of a firm's financial results must be done with utmost care and desirable professional expertise. Besides, it obviously provides a basis for assessing the internal and external performances of the firm (Lucey, 2003)

Enyi (2007) maintains that a firm's internal performance determines its external position in the stock exchange bearing the economic forces of demand and supply of its stocks, which invariably is influenced by the firm's performance. Performance indication can only be meaningful to the user if it bears a true reflection of the relationship that it was intended to test. The return on capital employed (ROCE)/shareholders funds is a measure of efficiency of management in the application or use of the organization's available funds or resources in a given financial period. For this purpose, capital employed is taken as shareholders fund which is made up of equity and all reserves. It is measured by comparing the profits made by the company with the capital used in making the profit and set as a percentage or fraction (Egungwu, 2005).

Agu (1985) states that in measuring profits and profitability of the Nigerian Banks System using return on assets (ROA), return on equity (ROE) and the average consumer price index finds that the financial health of banks and consequently their

performance are dependent on profits declared and that the ability of banks to control and reduce operating cost will greatly determine the amounts of profits to be declared. He however could not statistically determine the relationship between profits and. operating cost.

2.1.6. Measurement of Bank Performance

Bank performance is traditionally measured using the CAMELS rating system. The Uniform Financial Institution rating system referred to the acronym CAMELS, rating was adopted by the Federal Institution Examination Council in Nov 13, 1979. CAMELS has now become concise and indispensable tool for examiners and regulators to measure bank performance (Ilori & Ajiboye, 2016). CAMELS is an acronym for Capital

Adequacy, Asset Quality, Management Quality, Earning Ability, Liquidity and sensitivity. The essence of the CAMELS rating system is to ensure soundness and stability of the banking sector. However, for the purpose of this study, earning ability/financial performance aspect if the CAMELS is precisely discussed. The CAMELS earning ability of the banking sector entails that ability of the banks to earn income from their licensed business operations. This rating reflects not only the quality and trend in earning but also the factors that may affect the sustainability of earnings (Ilori & Ajiboye, 2016). The appropriate choice of measures of earnings largely determine the degree of proper representative of multidimensional behaviour of the specific performance area (Islam 2013). The widely used gauge for assessing the earnings of banks are return on assets, return on equity, profit before tax net

interest margin. Others are dividend per share, earnings per share, net assets per share, yield on earning assets and net interest income among others.

2.1.7. Adequacy of Bank Capital and Financial Performance

Capital adequacy is relevant for the stability of any banking system as it serves as financial system confidence booster and helps in mobilization of savings for growth and development. The capital requirement for operation of banks are subject to regulation by a country's apex banks, and such results in competition in the banking sector in an attempt to meet up with requirement. In Nigeria, the latest issue in capital requirement was increasing the minimum capital of banks from N2 billion to N25 billion in 2004 reflecting about 1, 150% upsurge in banks minimum capital requirement in Nigeria. This saw a reduction in the number of deposit money banks to twenty five (25) from eighty nine (89) as a result of mergers and acquisition coupled with revocation of licence of some banks that failed to comply with the capital base adjustment. Since banks' capital accounts for over 30% and 44% of the banks' total assets and deposits respectively, determining capital adequacy of banks in isolation (without considering its performance) might be misleading (Osigwe, 2016).

2.2 Theoretical Framework

Economists and financial analysts have postulated theories and models in an effort to establish the linkage between the development of the financial system and growth and development of the economy. However, this study was anchored on the Supply leading theory of finance which envisages that financial development is necessary for the survival of the financial system; its participants as well as development and

growth of the economy.

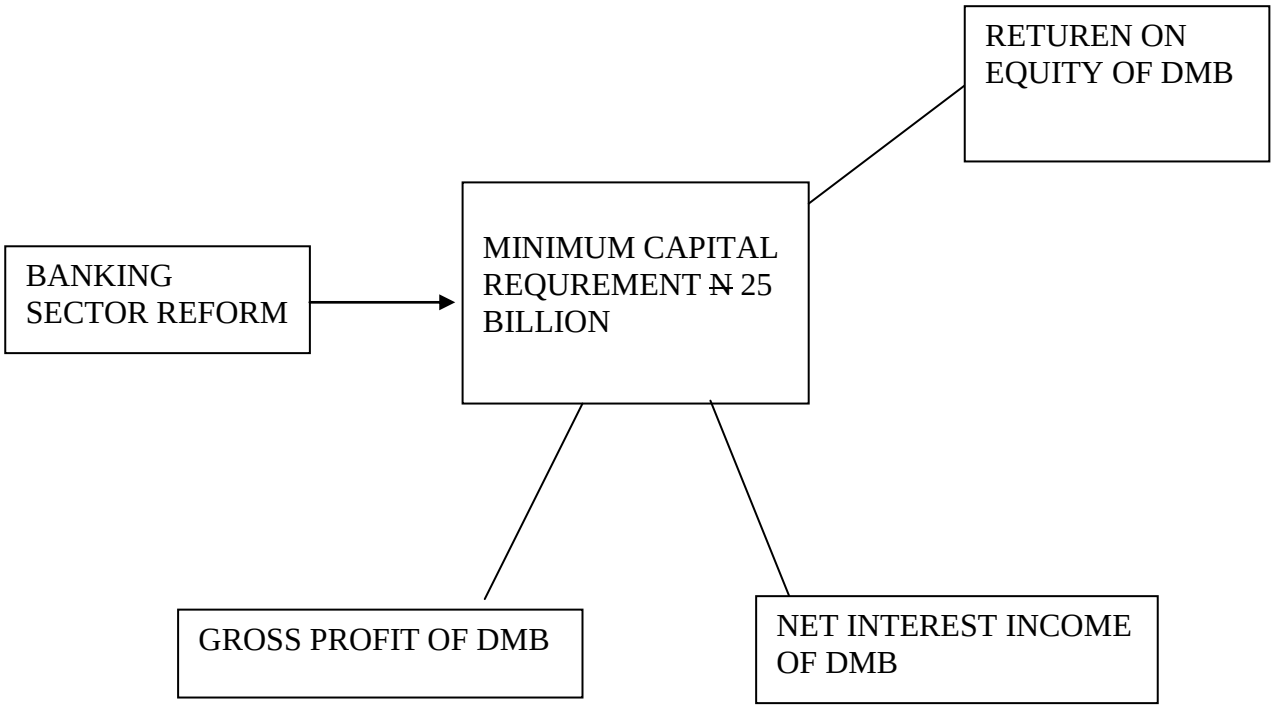
Supply Leading Theory of Finance

The supply leading theory of finance view finance as a process of channeling funds in the form of credit, loans on invested capital to those economic entities that most need them or can put them to the most productive use. Thus, finance facilitates investment and for growth to take place financial institutions must pool savings and direct them to viable investments (Copeland, 1980). Savings is postulated as an important determinant of finance and in turn savings arc affected by the rate of financial intermediation. For instance, where only a handful of institutions provide the service, especially where the environment is not competitive, the amount of saving is likely to be low (Fry, 1980). In order words, underdeveloped financial sector, poor monetary policies including administrative credit allocation and interest rate constrain the amount of savings. The debt intermediation hypothesis suggests expanded financial intermediation between savers and investors resulting from financial liberalization (higher interest rate) as an incentive to save and invest. This stimulates investment due to an increase in supply of credit and raises the average efficiency to invest. According to this hypothesis, policies leading to repression of financial markets reduce the incentive to save, thus stressing the importance of free entry into and competition within the financial markets as pre-requisite for successful financial intermediation and its consequent trickle-down effects on economic growth (Shaw, 1973). Credit is the link through which resources are transferred for capital formation. Evidence supports the hypothesis that credit flows have a positive and statistically significant effect on private investment. Interest rate ceiling is an important tool of

monetary policy for many developing countries, and so the quality rather than the price of credit wag considered a relevant variable for investment decision. Tighter monetary policy or a change in the composition of credit that favours the public sector.

The importance of supply leading theory of finance towards this research work cannot be overemphasized because deposit money banks can't exist and operate efficiently without finance and adequate capital. Banking sector reforms should be a reform that will fulfil this primary purpose. (Business review 2015)

Figure 2.1 Conceptual Framework



Source: Researchers own Conceptualization, 2018

The framework helps in conceptualizing banking reforms which serve as a proxy to

minimum Capital requirement to the gross profit, net interest income and return on equity of deposit money banks in Nigeria.

The basic framework is predicted on the assumption that minimum capital requirement of deposit money bank has a great impact on its gross profit, the higher capital base will boost the gross profit of deposit money bank because this stipulate that there is enough capital for every day operations and the reverse is the case. Minimum capital requirement equally has great impact on return on equity because for investors to invest in an institution, their confidence is based on the capital base of the institution. Minimum capital requirement has also impact on the net interest income of deposit money bank based on the fact that interest paid to depositors will be sustain if there is solid capital base. (Andries Apetri and Coais 2012).

2.3 Empirical Literature

Brissimis, Delis and Papanikolanu (2008) examined the relationship between banking sector reform and bank performance - measured in terms of efficiency, total factor productivity growth and net interest margin - accounting for the effects through competition and bank risk-taking. The model applied banks panel data from ten newly acceded EU countries. The results indicated that both banking sector reform and competition exert a positive impact on bank efficiency, while the effect of reform on total factor productivity growth is significant only toward the end of the reform process.

Andries, Apetri and Cocris (2012) analysed the impact of the banking system reform on the bank performances at the level of five (5) states in Central and Eastern Europe,

focusing on determining the impact of the liberalization of the financial system and of the banking system in the Romanian banking system on the performances registered by banks. The results of the performed analysis show ed that, during the analysed period, both the financial reform index, and the banking reform index have a positive impact on the bank performance indexes (the cost of intermediation, operational performance and profitableness of assets) at the level of banks in Bulgaria, Romania, Poland, Hungary and Slovakia during 2001 to 2008.

Ilori and Ajiboye (2016) assessed the impact of the bank reforms on banking sector performance in Nigeria during 1986 - 2013. Co-integration, error correction modelling approaches and Pair-wise G 'anger Causality test were used to determine the long-run dynamics equilibrium relationship among the variables employed in the study. Empirical investigations showed that the Number of banks (branches) shows a long-run positive relationship with Credit to Private sector (CPS) while other independent variables Bank Asset(BA), Non-Performing Loan To Total Loans (NPLTTL) and Liquidity Ratio (LR) indicates negative impact on CPS which is attributed to the apex bank to extend credit to the growth enhancing sector of the economy.

Alalade, Adekunle and Oguntodu (2016) determined the effect of recapitalization on the composition of banks in Nigeria, the varying level of bank; profitability since 2008. The dependent variable used was bank profitability while the independent variables were Return on assets (ROA), Return on Equity (ROE), Non-performing loans (NPL), At the end of the research it was discovered that since the onset of recapitalization bank profitability has been on a persistent increase and

recapitalization had caused greater good than harm in the banking sector.

Alajekwu and Obialor (2014) investigated the impact of bank recapitalisation on bank performance. The Ordinary Least Square (OLS) regression analysis was used for the analysis. The results showed that bank capitalization has no significant effect on bank profitability and asset quality, whereas liquidity and financial deepening were significantly influenced by the recapitalization. The study posits that profits maximization drives of Nigerian banks have had counterproductive effect on bank capitalization.

Agbo (2013) evaluated the impact of universal banking on the performance of the banking sector in Nigeria within the period 2001-2010. The paper employed survey research technique and regression analysis to ascertain the impact of universal banking on the performance of the banking sector in Nigeria within the study period. The study population was made up of the 24 banks in used to test the hypothesis using the statistical package for social sciences (SPSS). The study shows that the recapitalization and consolidation process has had significant effect on the manufacturing sector of the economy and thus on the Nigerian economy at large. The study further reveals that despite the reforms, post consolidation challenges like challenges of increased return on investment still exist.

Okpara (2011) appraised the impact of banking sector reforms on the performance of the banking system in Nigeria. The researcher adopted a one sample t- statistics using the population average as the test value. The findings revealed that apart from the reform period of financial liberalization which affected significantly virtually all the

banking sector performance indicators and the financial deepening, the rest of the reforms made no significant impact on the performance variables. However, with the exception of the recapitalization reform exercise that started in 2004 which deteriorated financial deepening and made insignificant impact in all but return on equity which is drastically reduced, all other reforms exerted significantly financial deepening.

Owolabi and Ogunlalu (2013) analysed financial performances of pre and post consolidation program in order to determine whether there is significant difference between the two periods. The study employed the use of secondary data gathered from the audited financial reports of selected banks. Descriptive analysis was employed through the use of tables and charts; then the regression is used to determine the relationships while t-test statistics is used to find out whether there is statistical difference between the means of consolidation variables and financial performance variables. It was discovered that it is not all the time that consolidation transforms into good financial performance of banks and it is not only capital that makes for good performance of banks.

Uduak and Ubong (2015) assessed the performance of Commercial Banks in Nigeria after Banking Sector Reforms. The relationship was analysed using Error Correction Mechanism and Chow test over the period 1970-2012. The Variables used were obtained from the banking system. The study found out that the reforms brought about some important changes in Commercial Banks Performance in Nigeria. Specifically, the level of profit (measured by net interest margin) continues to improve above single digit of 9.17 in 1996 to 16.18 in 2004 and a peak of 20.96 in

2011. This translates into a mean profit of 2.40 recorded in the deregulated period as against 1.54 recorded in the regulated period. The study also shows that much of the benefits to commercial banks in credit creation in the economy will be derived at a price of time.

Okpanachi (2011) made a comparative analysis of the impact of mergers and acquisitions on financial efficiency of banks in Nigeria. The paper used gross earnings, profit after tax and net assets of the selected banks as indices to determine financial efficiency by comparing the pre-mergers and acquisitions" indices with the post mergers and acquisitions indices for the period under review. Three Nigerian banks were selected using convenience and judgmental sample selection methods. Data were collected from the published annual reports and accounts of the selected banks' and were subsequently analysed applying t-test statistics through statistical package for social sciences. It was found that the post mergers and acquisitions' period was more financially efficient than the pre-mergers and acquisitions period.

Okorie and Agu "(2015) evaluated the impact of Nigerian banking sector reforms on Nigerian banks' performance and efficiency in two time periods - pre -consolidation period and post consolidation period. The researchers adopted a non-parametric (Data Envelopment Analysis) approach, and the factors that determine efficiency were examined. The finding of the study revealed varying levels of efficiency in both periods. Although some banks still remained inefficient, there was a general improvement in efficiency in the post-consolidation period. This improvement was not entirely attributed to the consolidation policy as two immediate years after the consolidation exercise still recorded poor levels of efficiency among many banks.

Further investigation reveals some effects of the recent financial crisis on the overall efficiency of Nigerian banking sector.

Olokoyo (2012) assessed the areas that have been deregulated in the banking sector and how it has affected bank performance. The study analysed secondary data' collected from CBN statistical bulletin by employing the Ordinary Least Square (OLS) technique. This study found out that the deregulation of the banking sector has positive and significant effect on bank performance.

Obadeyi (2014) investigated effect of financial reforms on- banking performance in emerging market. The study covered between 1992 and 2011, because the last reform in banking sub-sector was in 2005 during Prof. Charles Soludo as CBN governor (Pre-Lamido era). Automated Statistical Package Technique (ASPT) was used to analyse the model and Ordinary Least Square method was adopted to analyse existing relationship of variables and there behaviours. The study revealed that the effect of financial reform on banking performance is mixed. It was discovered that financial reform is not a causal factor for effective banking performance aid development; but there is need for strong capital account policy to regulate shortterm capital flow and exchange rate volatility.

Ikpefan and Kazeem (2013) ascertained the impacts of merger on deposit money banks performance in Nigeria between 2000 and 2009. The period was characterized *by* financial deregulation, the Global economic crisis, and bank restructuring programs. The panel data ordinary least squares approach is the methodology employed to investigate if there is any significant effect on the performance of banks

from the pre to the post-merger periods, in order to detect whether bank mergers produce any performance gains in the Nigerian banking industry. The evidence shows that merger created synergy as indicated by the statistically significant increasing post-merger financial performances although banks should not jump at any merging opportunity that offers itself because the exercise is not an opportunistic one.

Oluitan, Ashamu and Ogunkenu (2015) examined the effect of mergers and acquisitions on bank recapitalization in Nigeria with emphasis on the impact of the strategy on economy development. The study makes use of data from the foremost eight banks in Nigeria that account for over 60% of the banking transaction in the country. The research work was evaluated through regression analysis of secondary data covering ten years (2002-2011) from the sample banks. The result suggests that the effect of the latest recapitalization policy was positive on the operational capability of the Nigeria banking system.

Kanu and Isu (2013) analysed the effects of recapitalization of banks on the performance of commercial banks in Nigeria, (1970 -2010). The choice of the period, 1970 - 2010 is meant to capture the important changes that took place in the banking sector immediately after the cessation of civil hostilities brought about by the civil war in Nigeria, 1967 to January 15th 1970, The study captures the performance indicators of banks and employed time series of bank data obtained from the Statistical Bulletin of Central Bank of Nigeria (CBN) and Fact books. The formulated models were estimated using ordinary least square regression methods. The study identified long run positive relationship between capitalization and profitability.

Olayinka and Farouk (2014) assessed the impact of consolidation on the performance of banks in Nigeria. The study used a period of 12 years from 2000 to 2011 comprising six years pre and post consolidation era. The population of the study is (22) banks in which four (4) banks are drawn using stratified sampling technique. The study utilizes secondary data obtained through annual reports and CBN banking supervision. T-test was employed to test the hypothesis formulated. The findings of the study show that consolidation has significant positive impact on the performance of banks in Nigeria.

Olajide, Asaolu and Ayodele (2011) evaluated the impact of financial reforms on banks' organizational performance in Nigeria between 1995 and 2004. It specifically determined the effects of policies of interest rates deregulation, exchange rate reforms and bank recapitalization on banks performance, and analysed how banks internal characteristics and industry structure affect the performance of Nigerian banks. The study utilized panel data econometrics in a pooled regression, where time-series and cross-sectional observations were combined and estimated. The result of econometric panel regression analysis confirmed that the effects of government' policy reforms, bank specific characteristics and industry structure has mixed effects on banks profitability level and net interest margin of Nigerian banks. Bank specific characteristics appear to have significant positive influence on bank's profitability and efficiency level, while industry structure variables appeared not to have contributed meaningfully to the profitability and efficiency performance of banks in Nigeria.

Table 2.3: Empirical Review

S/N	AUTHOR (S) AND YEAR	COUNTRY/ PERIOD	TOPIC OF STUDY .	MODEL SPECIFICATION / METHOD OF ANALYSIS	MAJOR FINDINGS
1	Huang W. (2010)	China 2000-2008	Banking Sector Reforms and Commercial Bank Performance in China	PER-PD+C D+FD+LD+C S+S IZE+ OBA+BC+PCGDP+ GDP+fNF Ordinary Least Square, Panel Analysis	Lower financial leverage, higher off-balance sheet activities, and larger size of the bank are associated with belter performance. At macroeconomic level, higher per capiia GDP and lower unemployment has been significantly related to better bank performance.
2	Brissimis S.N,, Delis M.D.& Papanikolaou N. I. (200S)	EU Countries 1994-2005	Exploring the Nexus between Banking Sector Reform and Performance: Evidence from newly acceded EU Countries	PER=REF+CLC+MC Descriptive Stalislic, OLS. Panel Analysis	The results indicate that both banking sector reform and competition exert a positive impact on bank efficiency, while the effect of reform on total factor productivity growth is significant only toward the end of the reform process.
3	Andries A.M., Apeiri A.N.& Cocris V. (2011)	Bulgaria, Romania, Poland, Hungary and Slovakia 2001-2008	The impact of the banking system reform on banks performance	P-RF+B+SB+M Descriptive Statistic, OLS, Panel Analysis, Granger causality	The results of the performed analysis showed that, during the analyzed period, both the financial reform index, and the banking reform index have a positive impact on the bank performance indexes.

4	ilori I.S.& AjiboyeM.O. (2016)	Nigeria 1986 - 2013	Bank Reforms and Banking Sector Performance: Evidence from Nigeria	CPS= fTNB, RA, NPLTTL, LR) Unit root, ECM, Granger causality, OLS, Johansen Co-integration	Empirical investigations showed that the Number of banks (branches) shows a long-run positive relationship with Credit to Private sector(CPS) while other independent variables(Bank Asset(BA),Non-Pcrforming Loan To Total Loans(NPLTTL) and Liquidity Ratio(LR) indicates negative impact on Cl'S which is attributed to the Apex bank to extend credit to the growth enhancing sector of the economy.
5	Ifionu E.P.& Keremah S.C. (2016)	Nigeria 1995 - 2012	Bank Reforms and Deposit Money Banks Performance: Evidence from Nigeria	ROA1 = ROA2 or ROA1 - ROA2 ROE2 = ROE2 or ROE! - ROE2 PB Y = PB Y2 or PB Y 1 - PB Y2 Analysis of Variance	The study reveals that Return on Equity arid banks profitability have a significant difference in the pre and post bank reform era while Return on Assets shows that there is no significant difference in the pre mid posl banking refoim era in Nigeria. Thus, the study reached a consensus that the improved level of Deposit Money Bank profitability is associated to the various bank reforms in Niaeria.
6	Oloku: ^ P.O. ,,20! 3)	Nigeria 2004 - 2012	Bank Reforms and Performance of Banks in Nigeria	Questionnaires, Analysis; of Variance - (AN[1] OVA)	The study shows that the recapitalization and consolidation process has had significant effect on ihe manufacturing seclor of the economy and thus on the Nigerian economy at large.

7	OkparaGC.(20ll)	Nigeria 1970 to 2008 and 2004 - 2008	Bank Reforms and the Performance of the Nigerian Banking Sector: An Empirical Analysis	PER=NPLTL+CRR+ CBLDR+CPS +NDC+M1 One Sample T-test	The paper examined the effectiveness of banking reforms on the performance of the seclor and found that of all reforms adopted so far since 1959, only the financial liberalization (of 1987-1993) impacted much on most of the banking sector variables and the financial deepening
8	Owolabi S.A.& Ogunlalu A.E. (2013)	Nigeria 2001 - 2010	Banking Industry Consolidation and Financial Performance of Selected Quoled Banks in Nigeria	PER=SHF+TA Descriptive Research Design	It was discovered that it is not all the time that consolidation transforms into good financial performance of banks and it is not only capital that makes for good performance of banks.
9	Owolabi S.A.& Ogunlalu A.E. (2013)	Nigeria 2001 - 2010	Banking Industry Consolidation and Financial Performance of Selected Quoled Banks in Nigeria	PER=SHF+TA Descriptive Research Design	It was discovered that it is not all the time that consolidation transforms into good financial performance of banks and it is not only capital that makes for good performance of banks.
10	Uduak M.E.& Ubong E.U.(2015)	Nigeria 1970-2012	Banking Sector Reforms and the Performance of Commercial Banks in Nigeria	P-tfNPL, PR, CR, RGDP) Co-integration analysis, ADF. OLS. ECM, Chow test	The study found out that the reforms brought about some important changes in Commercial Banks Performance in Nigeria. Specifically, the level of profit (measured by NIM) continues to improve above single digit of 9.17 in 1996 to 16. 1 8 in 2004 and a peak of 20.96 in 201 1 .

11	Okpanachi J. (201 0) ;	Nigeria 2002-2008	Comparative analysis of the impact of mergers and acquisitions on financial efficiency of banks in Niaeria	One Sample T-lesl	It was found that the post mergers and acquisitions' period was more financially efficient than the pre-mergers and acquisitions period.
12	Okorie M.C.&AguD.O. (2015)	Nigeria 2002-2010	Does banking sector reform buy efficiency of banking sector operations? - evidence from recent -Nigeria's banking sector reforms	Non-parametric (Data Envelopment Analysis) approach	The findings of this study reveal varying levels of efficiency in both periods. Although some banks still remained inefficient, there was a general improvement in efficiency in the post-consolidation period. This improvement was not entirely attributed lo the consolidation policy as two immediate years after the consolidation exercise still recorded poor levels of efficiency among many banks
13	Alalade, Y.S.A, Adekunle, O.A.& Oguntodu J.A. (2016)	Nigena 2008-2012	Empirical Investigation of Impact of Recapitalization of	Y = po + plxl + [32x2 +3 [3 x3 +4 p x4+n OLS F-test, ECM	At the end of the research :: "if *L* ;;; ---*i*-*i* ~^z since the onset of recapiralcaacM hMfc
14	Alalade, Y.S.A, Adekunle, O.A.& Oguntodu J.A. (2016)	Nigena 2008-2012	Empirical Investigation of Impact of Recapitalization of BANK Performance: A Case of Nigeria	Y = po + plxl + [32x2 +3 [3 x3 +4 p x4+n OLS F-test, ECM	At the end of the research it was discovered that since the onset of recapitalization bank profitability has been on a persistent increase and recapitalization had caused greater good than harm in the banking sector

15	Adolphus J.T.& Daerego S.T.(2013)	Nigeria 1960-2008	Modeling the Effects of Banking Sector Reforms on Bank Management Practices in Nigeria	BLR = SR +PLR + MLR CRR =MRR+TBR+TCR LTDR= SR+TBR+TCR multiple correlation coefficient (R), t-test, F-ratio and coefficient of determination (R2)	Both prudential and policy incentives made ; banks to expand funding to all sectors irrespective of their risk class. Marginal increases in the treasury certificate rate (TCR) and minimum rediscount rate (MRR) brought abom a significant reduction in the cash reserve ratio (CRR), hence facilitating banking intermediation
16	AlajekwuU.B.&Obialor M.C.(2UI4)	Nigeria 2000-2012	Nigerian Bank Recapitalisation Reforms: Effect on the Banks and the Economy (2000 - 2012)	LnCAP = oO + alROE + a2ROA + 0.3YEA + n LnCAP = aO + <xl NPL/TL + a2 NPI./SHF + U. OLS includes r2, t-test, F-test and auto-correlation analysis.	'Ihe results showed that bank capitalization has no significant effect on bank profitability and asset quality, whereas liquidity and financial deepening were significantly influenced by the
17	Olokoyo P.O. (2012)	Nigeria I9S6 - 2010	The Effect of Bank Deregulation on Bank Performance in Nigeria	IAR-f(M2R, MLR,LR,LDR, MPR, U) Multiple Regression	This study found out that the deregulation of the banking sector has positive and significant effect on bank performance.
18	Obadeyi J. A. (2012)	Nigeria 1992 and 20 11 4	The Effect of Financial Reforms on Banking Performance in an Emerging Market: Nigerian Experience	Logfdi = po + (51LogR+nl Multiple Regression	It was discovered that financial reform is not a causal factor for effective banking performance and development; but there is need for stroT&— capital account policy to regulate short- term capital flow and exchange rate votatilitv

19	Oluitan R.O.. Ashamu S.O.. OgunkenuO.S.(2014)	Nigeria 2002-2011	The Effect of Recapitalization on Bank Performance in Nigeria	TC = f(BSIZE.BFC, BMS. UBDEP, MBEP, TBSDEP) Multiple Regression	The result suggests that the effect of the latest recapitalization policy was positive on the operational capability of the Nigeria banking system. There are lot of economies of scale derived from the exercise.
20	Kanu C.& Isu H.O (2013)	Nigeria 1970-2010	The Impact of Capitalization on Bank Performance in Nigeria 1970-2010: An Assessment	PBT=f(SHF) Johansen Cointegration, ADF, OLS, Granger causality, Parsimonious Error Correciion	The study identified long run positive relationship between capitalization and profitability The result of Granger Causality indicates that the significant relationship between capitalization nud psoliuiti"2ilj is Ly=dir?e4icsrs! implying that increase in capita! leads to increase in profitability ami vice versa of Commercial banks in Nigeria.
21	Olayinka T.T.& Farouk M.A.(2014)	Nigeria 2000-2011	The Impact of Consolidation on the Performance of Banks in Nigeria	T- Test, stratified sampling technique	The findings of the study show that consolidation has significant positive impact on the performance of banks in Nigeria.
22	OlajideO.T, AsaoluT. & Jegede(20Sl)	Niaeria 1995-2004	The Impact Of Financial Sector Reforms On Banks Performance In Nigeria	It = p o + P 1 NBANKt + p 2R1RI+ P 3EXRt+ p 4 CAPt+ p 5BLOAN t+ p 6LNSIZEI + P 7 RSIZE t + p 8 MCAP+p9SBS + st Panel Unit Root, Cointegration Results	The result of econometric panel regression analysis confirmed that the effects of government policy reforms, bank specific characteristics and industry structure has mixed effects on banks profitability level and net interest margin of Nigerian banks

23	OlajideO.T, AsaoluT. & Jegede(20Sl)	Niaeria 1995-2004	The Impact Of Financial Sector Reforms On Banks Performance In Nigeria	It = p o + P 1 NBANKt + p 2R1RI+ P 3EXRt+ p 4 CAPt+ p 5BLOAN t+ p 6LNSIZEI + P 7 RSIZE t + p 8 MCAP+p9SBS + st Panel Unit Root,	The result of econometric panel regression analysis confirmed that the effects of government policy reforms, bank specific characteristics and industry structure has mixed effects on banks profitability level and net

2.4 Gap in Literature

The empirical literature reviewed showed that return on assets, return on equity, profit after tax and net interest margin were the indicators of financial performance adopted by researchers' such as Alalade, Adekunle and Oguntodu (2016), Ilori and Ajiboye (2016); Alajekwu and Obialor (2014), Agbo (2013), Ifionu and Keremah (2016) among others. This study bridged the lacuna noticed by employing yield on earning assets in addition to profit after tax as measures of financial performance of banks. Furthermore, as banks' total assets plus off balance sheet engagement and ratio of non-performing loans to total loans were included as control variables in the model capable of affecting performance.

2.5 Summary of Review Literature

Traditionally, adequate capital would enhance confidence in the financial system and improve financial performance of banks. Over the years, Nigerian banking system has undergone reforms aimed at protecting depositors' fund, effective functioning and stability of the financial system. The bulk of the literature reviewed indicate that banking reforms have positive impact on financial performance of the banking sector. And the researchers used secondary data that gives the correct result.

2.6 Critique of Literature

Alalade, Adekunle and Oguntodu (2016) determined the effect of recapitalization on the composition of banks in Nigeria, the varying level of bank profitability since 2008. At the end of the research it was discovered that since the onset of recapitalization bank profitability has been on a persistent increase and recapitalization had caused greater good than harm in the banking sector. The scholars regressed the minimum capital base of N25 billion on return on assets and return on equity. However, the study did not control the effect of factors such as banks' total assets plus off balance-sheet engagement and ratio of non-performing loans to total loans which might affect banks performance Olokoyo (2013) examined the effects of the reforms on the performance of banks in Nigeria. The data required for this study was gathered through the instrument of questionnaire. One hundred (100) copies of questionnaires were administered out of which eighty (80) copies were collated for the analysis. The study shows that the recapitalization and consolidation process has had significant effect on the manufacturing sector of the economy and thus on the Nigerian economy at large. The study makes use of questionnaire which shows the perception of respondents as against financial data contained in annual reports and accounts is source of criticism.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

Onwumere (2009) defines research design as a kind of blue print that guides the researcher in his or her investigation and analysis. It is a format which the researcher employs in order to systematically apply the scientific method in the investigation of the research problems. According to Ibenta (2012), research design is like a compass directing the researcher on the route to take. It could occur in three forms, viz-a-vis; survey, experiment and ex post facto design. The present study adopts the ex-post facto research design. According to Asika (2006), ex-post facto research is a systematic empirical study in which the researcher does not in any way control or manipulates the independent variables because the situation for the study already exists or has taken place. This study collates historical data for the period 1999-2016. By implication, the study is a time series analysis and uses historical data to evaluates the minimum capital requirement on gross profit, net interest income and return on equity of deposit money banks in Nigeria.

3.2 Nature and Sources of Data

Being an ex-post facto research, data were obtained through Secondary sources. Secondary sourced data are data already collated, processed and stored in forms retrievable for further research. The data were sourced and collected for the period of 1999 to 2016 from Central Bank of Nigeria (CBN) banking supervision reports and

Nigerian Deposit Insurance Corporation (NDIC) report of various issues. All the data were on an annual basis as prepared by Central Bank of Nigeria (CBN) and Nigerian Deposit Insurance Corporation (NDIC) been the regulator of the banking system.

3.3 Variables of the Model

Profit before Tax (PBT), net interest income (NIl) and return on equity (ROE) are the dependent variables. The independent variables is minimum capital requirement (MCR). Total Assets plus Off Balance Sheet Engagement (TAOBSH) and Non-Performing Loans to Total Credit Ratio (NPLTCR) were included in the models as control variables capable of influencing banks'financial performance, furthermore,

Gujarati (2004) states that the inclusion of control variables in a model helps to avoid simultaneous bias in regression.

3.4 Model Specification and Description of Variables

The specification of the model is a mathematical representation of dependent and independent variables incorporated in a model, This research adopted the model of Kanu and Isu (2013) for a study in Nigeria with slight modifications. In their model, the researchers expressed banking sector performance -banking reform model as:

PBT=f(SHF) 3.1

In evaluating the effect of banking reforms on financial performance, the following multivariate models were estimated:

PBT = f(MCR + TAOBSE +NPLTCR)……3.2

NII = f(MCR + TAOBSE +NPLTCR)…….3.3

ROE=f(MCR + TAOBSE + NPLTCR)……..3.4

To obtain the coefficients of the elasticity of the variables, while reducing the possible impact that any outlier may have, the models were represented in a log-linear econometric format. Thus:

Model 1

$LogPBT_t = a_0 + ailogMCR_t + a_2LogTAOBSE_t + a_3LogNPLTCR, + Ut, $ …..3.4

Model 2

$LogNII_t = a_0 + aiLogMCR_t + a_2LogTAOBSE_t + a_3LogNPLTCR, + Ut$….....3.5

Model 3

$LogROEt = ao + aiLogMCR + a_2LogTAOBSE, + a_3LogNPLTCR, + Ut,$…..3.6

Where:

PBT is profit after tax; NIl is net interest income; ROE is return on equity; MCR is minimum capital requirement; TAOBSE is total assets plus off balance sheet engagement and NPLTCR is non-performing loan to total credit ratio: aO is a constant term, U is a random error/disturbance term and t is the time trend; these are normally included in standard time-series specifications to account for the omitted variables as wed as unexplained random effects within the model.

3.5 Techniques for Data Analysis

The data for this research were presented and analyzed based on the research questions and hypotheses earlier established for the study. The method of analysis used in this study was the Ordinary-Least Square (OLS) method. It was chosen because the alternative econometric techniques such as Two Stage Least Squares (2SLS) give limited information. The computer software application E-Views 3.0 was used for the analysis.

Unit Root

In an attempt to estimate the effect of banking reforms on banking sector performance in Nigeria, the first task was to test for the presence of unit root. This is necessary in order to ensure that the parameters are estimated using stationary time series data. Thus, this study seeks to avert the occurrence of spurious results. To do this, both the Augmented Dicky- Fuller (ADF) and Phillips-perron tests are used. The essence of the ADF tests is the null hypothesis of non stationarity. To reject this, the ADF statistics must be more negative than the critical value and significant. On the other hand, the Phillips-Perron test differs because it is a robust test for serial correlation and time dependent heteroskedasticities.

Johansen co-integration test

This step seeks to identify the number of co-integrating relationships that exist among these variables. This paper uses the methodology developed by Johansen (1991), popularly known as the Johansen co-integration test. This test identifies the number

of stationary long-run relationships that exist among the set of integrated variables. It offers two tests, the trace test and the eigenvalue lest, with a view to identifying the number of co- integrating relationships.

3.6 Estimation of the Model

The Ordinary Least Square (OLS) regression method was applied to estimate the parameter of the equations specified in the research. The OLS estimator is consistent when the regressor's are exogenous and there is no perfect multi-collinearity, an optimal in the class of linear unbiased estimators when the errors are homoscedastic and serially uncorrelated. Under these conditions, the method of OLS provides minimum-variance mean-unbiased estimation when the errors have finite variances. Under the additional assumption that the errors be normally distributed, OLS is the maximum likelihood estimator.

Interpretation of Result

The criteria for judging interpretation of result and discussion of findings for this research were all based on three global statistics criteria namely, Adjusted R-Squared, F-Statistic and Durbin Watson test of autocorrelation. A model should satisfy these three global statistics as well as relative use of model without which the model is baseless and cannot be relied upon in econometric assumptions. Coefficient of Determination (R^2): It measures the proportion of the total variation in the dependent variable that is jointly explained by the linear influence of the explanatory variable. The value of R2 lies between zero and one, i.e., $0<R^2<1$ with values close to 1 indicating a good degree of fit.

F* Statistics: The F-statistics is used to test whether or not there is a significant relationship between the dependent and independent variable in the regression equation. If the probability at which the F- values significant is less than the chosen level of significance, then we accept that there is a significant relationship between the dependent and independent variables in the regression equation.

Durbin Watson Statistics: The Durbin-Watson test for autocorrelation compare the calculated d* value from the regression residuals with the dL and du in the Durbin Watson tables and with their transforms (4-dL) and (4-du). The result of the serial, correlation LM test overrides the Durbin Watson test of autocorrelation. The serial correlation LM test serves as a correction of Durbin Watson defects in any stated model.

3.7 A Priori Expectation

This refers to the supposed relationship between and or among the dependent or independent variables of the model on the premises of the supply leading hypothesis. The result or parameter estimates of the models was interpreted on the basis of the supposed signs of the parameters as established by supply leading hypothesis. Table 3.1 shows the expected signs of the independent variables in the model.

Table 3.1: A Priori Expectation

Symbol	Variable	Expected Signs
MCR	Minimum Capital requirement	+
TAOBSE	Total Assets + Off Balance Sheet Engagement	+
NPLTCR	Non-Performing Loan to total Credit Ratio	-

Source: Supply Leading Theory

Minimum capital requirement shows that the expected signs of this variable is positive in the supply leading theory, the same is seen in total assets plus off balance sheet engagement which is equally positive. Non-performing loan to total credit ratio appears to be negative in this theory.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Presentation of Data

The data used in analyzing the models are presented in the section. The data were sourced from Central Bank of Nigeria (CBN) banking supervision report and Nigeria Deposit Insurance Corporation (NDIC) annual reports. The data for minimum capital requirement, Profit before tax, Net interest income, Return on equity, Total assets plus off balance sheet engagement and non – performing loan to total credit ratio from 1999 to 2016 are summarized in table 4.1.

Table 4.1: Minimum Capital Requirement, Profit before Tax, Net Interest Income, Return on Equity, Total Assets plus off Balance Sheet Engagement and Non-Performing Loan Credit Ratio from 1999-2016.

Year	Minimum Capital Requirement ₦'Million	Profit before Tax ₦' Million	Net Interest Income ₦' Million	Return on Equity (%)	Total Assets off Balance Sheet Engagement ₦' Million	Non-Performing Loan Total Credit Ratio(%)
1999	2,000.00	24,520.00	22,054.00	28.00	1,372,606.00	21.00
2000	2,000.00	44,330.00	32,778.00	37.50	2,017,184.00	17.00
2001	2,000.00	96,000.00	165,032.00	55.81	2,406,695.00	16.00
2002	2,000.00	86,000.00	218,000.00	36.60	2,983,013.00	19.72
2003	2,000.00	74,000.00	195,000.00	25.52	3,393,201.00	20.45
2004	2,000.00	96,000.00	224,000.00	27.35	4,056,678.00	21.60
2005	2,000.00	62,000.00	193,000.00	12.97	5,248,453.00	24.10
2006	25,000.00	105,000.00	204,000.00	10.60	8,118,000.00	8.77
2007	25,000.00	407,000.00	616,000.00	23.84	13,050,000.00	8.44
2008	25,000.00	607,000.00	979,000.00	22.01	19,261,000.00	6.26
2009	25,000.00	1,377,330.00	961,870.00	-60.07	17,484,440.00	33.03
2010	25,000.00	607,340.00	824,620.00	57.65	18,684,930.00	15.49
2011	25,000.00	-6,710.00	1,107,680.00	-0.27	21,891,560.00	4.95
2012	25,000.00	458,780.00	1,216,330.00	21.50	24,600,460.00	3.47
2013	25,000.00	539,970.00	1,298,590.00	18.97	28,789,120.00	3.23
2014	25,000.00	601,020.00	1,296,920.00	14.70	32,202,320.00	2.88
2015	25,000.00	588,860.00	1,248,693.00	13.74	32,640,272.00	4.87
2016	25,000.00	-40,350.00	662,077.00	-0.46	30,192,000.00	11.38

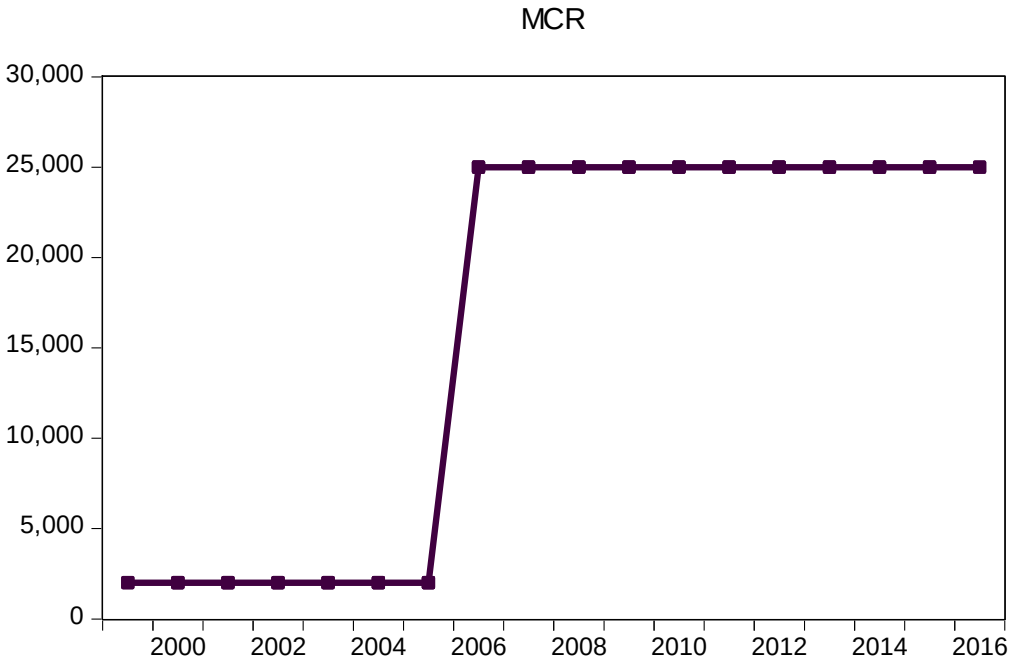
Source: Central Bank of Nigeria (CBN) Supervision Reports

Minimum Capital Requirement

The minimum capital requirement in the era of the universal banking was perked N2.0 billion .However, with the banking reform of 2004, it was increased to 25 billion for international banking operation, reflecting a 1,150% upsurge in required minimum shareholders fund. This changes in minimum capital requirement from 1999 to 2016 is shown in Table 4.1 and Fig.4.1.

The six variables chosen were the variables related to the research topic and have a lot of impact towards the growth of the banking sector.

Fig. 4.1: Trend in Minimum Capital Requirement 1999 to 2016



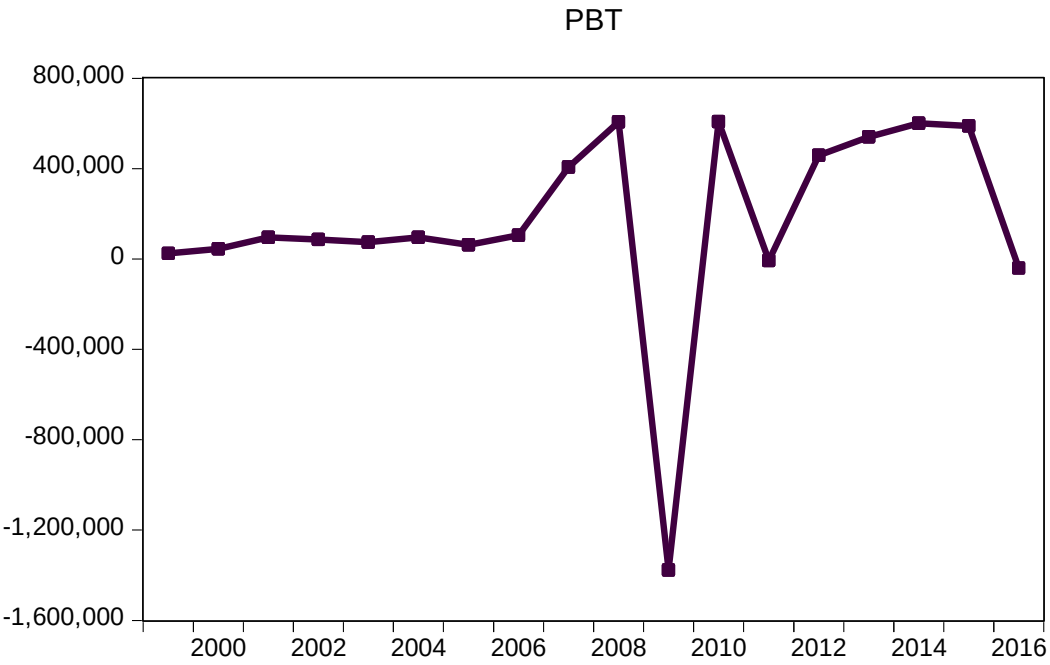
Source: Central Bank of Nigeria (CBN) Supervision Reports

Profit before Tax

The banking sector recorded a huge loss in 2009 as the profit before tax was ₦ -1,377,330 million compared to ₦ 607,000 million of 2008.This may be due to the global financial crisis of that year. In 2012, profit before tax increased by 1,000% to ₦

458,780 million. As can be seen from Table 4.1 and Fig. 4.2, the banking sector continued to record success in profit before tax from 2012 to 2015.In 2016 the banking sector again recorded a loss as the profit before tax was ₦ -40,350.00 this may be as a result of recession in the country.

Fig. 4.2: Trend in Profit before Tax 1999 to 2016

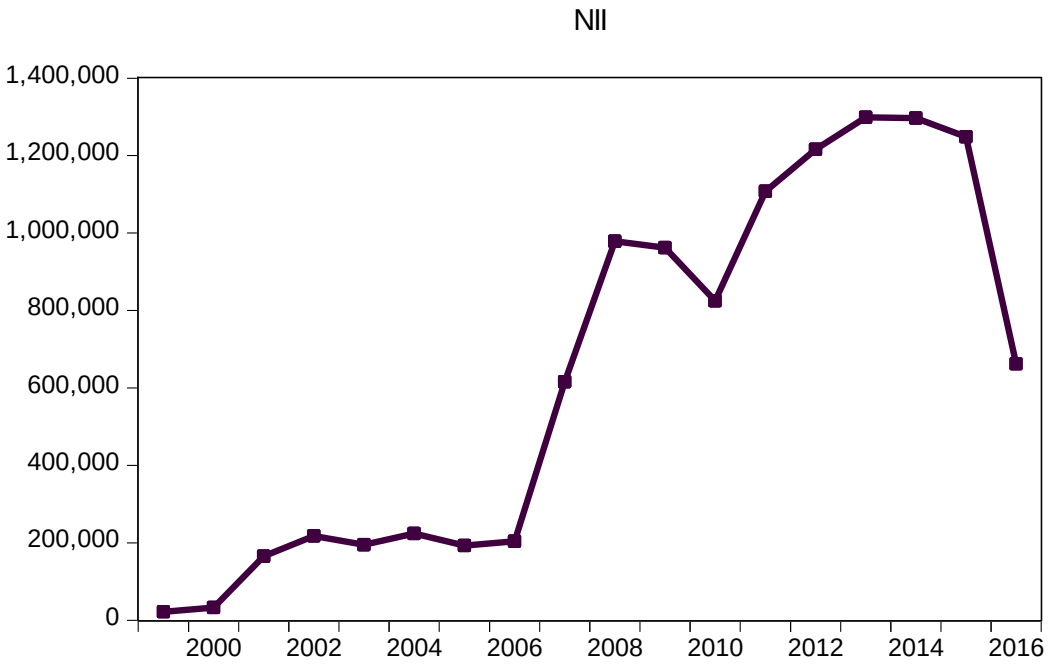


Source: Central Bank of Nigeria (CBN) Supervision Reports

Net Interest Income

The net interest income has been continuously on the rise from 1999 to 2015 except in 2016.The net interest income was ₦ 22,054 million in 1999, which had risen by 1,500% at the end of 2015 to settle at ₦ 1,248,693 million and then declined to ₦ 662,077. From 1999 to 2016, as shown in Table 4.1 and Fig.4.3, it is clear that the Nigeria banking sector has been performing well in terms of net interest income over the period covered except in 2016.

Fig. 4.3: Trend in Net Interest Income 1999 to 2016



Source: Central Bank of Nigeria (CBN) Supervision Reports

Return on Equity

Table 4.1 and Fig. 4.4 show that the trend in return on equity from 1999 to 2016 fluctuated considerably, changing from 28% in 1999 to -0.46 in 2016. Return on assets at the end of 2001 reached a peak of 55.81% as against 2000 when it was just 37.50%. Table 4.1 and Fig.4.4 depict this fluctuation.

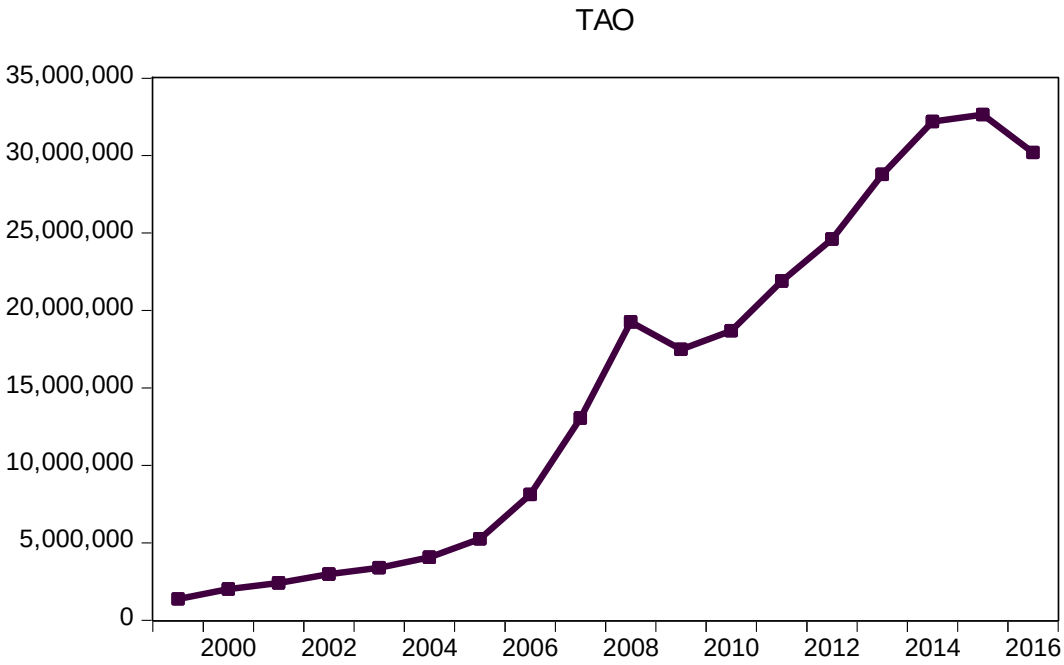
Fig. 4.4: Trend in Return on Equity 1999 to 2016

Source: Central Bank of Nigeria (CBN) Supervision Reports

Total Assets plus off Balance Sheet Engagement

The banking sector total assets plus off balance sheet engagements has increased tremendously over the years. From ₦ 1,372,606 million in 1999, it rose to reach ₦ 18,684,930 million at the end of 2010 then continue to appreciate closing at ₦ 21,891,560 million in 2011.Between 2013 and 2016 total assets plus off balance sheet engagements rose from ₦ 28,789,120 million to ₦ 30,192,000.00.Fig 4.5 the variations in banking sector total assets plus balance sheet engagements.

Fig. 4.5: Trend in Total Assets plus off Balance Sheet Engagement 1999 to 2016

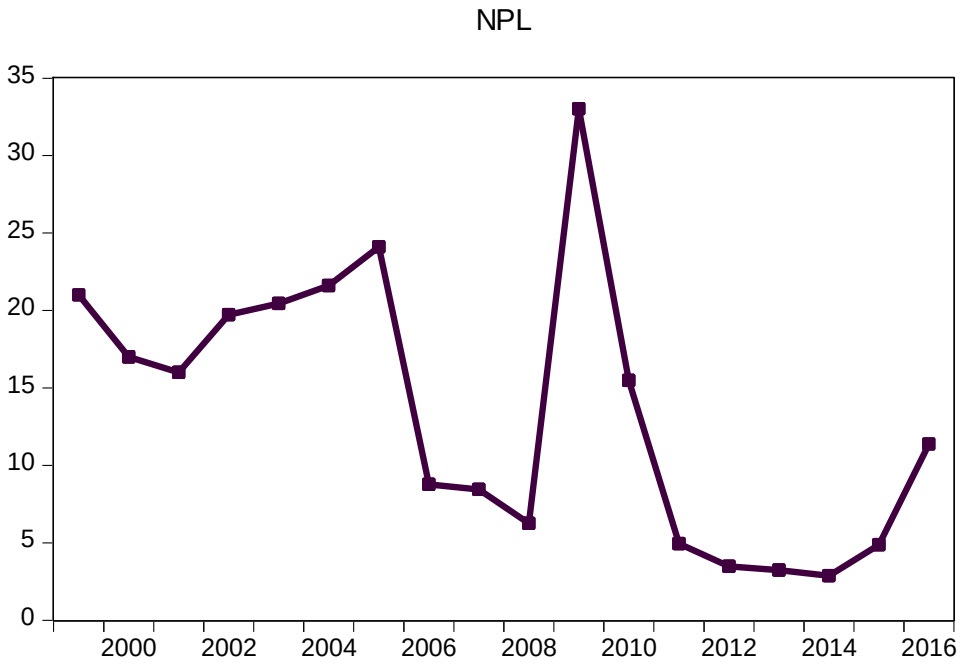


Source: Central Bank of Nigeria (CBN) Supervision Reports

Non-Performing Loan to Total Credit Ratio

Table 4.1 and Fig.4.6 show that the trend in non-performing loan to total credits ratio from 1999 and 2016 fluctuated considerably, changing from 21% in 1999 to 11.38% in 2016. The non-performing loan to total credit ratio at the end of the year 2009 reached a peak of 33.03% as against 2008 when it was just 6.26%.Table4.1 and Fig 4.6 depict this fluctuation.

Fig. 4.6: Trend in Non-Performing Loan to Total Credits Ratio 1999 to 2016



Source: Central Bank of Nigeria (CBN) Supervision Reports

4.2 Summary of Descriptive Statistic

Table 4.2 presents the descriptive characteristics of the variables applied in this study. The mean values of the PBT, NII, ROE, MCR, TAO and NPL are 165190.6, 636980.2, 19.22000, 16055.56, 14910663 and 13.48000 as the median shown to be 96000.00, 639038.5, 21.75500, 25000.00,15267220 and 13.43500 respectively. The maximum values of the variables are 607340.0, 1298590, 57.65000, 25000.00, 32640272 and 33.03000 for PBT, NII, ROE, MCR, TAO and NPL respectively. The minimum values are -1377330 for PBT, 22054.00 for NII,-60.07000 for ROE, 2000.000 for MCR, 1372606 for TAO and 2.880000 for NPL. The variables standard deviations are 458209.8 for PBT, 482360.5 for NII, 25.30645 for ROE, 11537.52 for MCR, 11538813 for TAO and 8.732666 for NPL.TAO and NPL were found to be positively skewed towards normality as evidenced by the positive values of the

skewness statistics. The Kurtosis value shows that all the variables are leptokurtic in nature except for PBT and ROE as evidenced by the less than 3 values of the Kurtosis statistic. The Jarque-Bera suggests that all the variables are not normally distributed as the p-values are insignificant at 5% level of significance except PBT and ROE.

Table 4.2: Summary of Descriptive Statistics

	PBT	NII	ROE	MCR	TAO	NPL
Mean	165190.6	636980.2	19.22000	16055.56	14910663	13.48000
Median	96000.00	639038.5	21.75500	25000.00	15267220	13.43500
Maximum	607340.0	1298590.	57.65000	25000.00	32640272	33.03000
Minimum	-1377330.	22054.00	-60.07000	2000.000	1372606.	2.880000
Std. Dev.	458209.8	482360.5	25.30645	11537.52	11538813	8.732666
Skewness	-2.056248	0.123156	-1.478829	-0.455842	0.239665	0.466437
Kurtosis	8.251644	1.388711	6.684487	1.207792	1.545491	2.343311
Jarque-Bera	33.36928	1.992692	16.74239	3.032383	1.759016	0.976122
Probability	0.000000	0.369226	0.000231	0.219546	0.414987	0.613815
Sum	2973430.	11465644	345.9600	289000.0	2.68E+08	242.6400
Sum Sq. Dev.	3.57E+12	3.96E+12	10887.07	2.26E+09	2.26E+15	1296.411
Observations	18	18	18	18	18	18

Source: Computer analysis using E-views 3.0

4.3 Diagnostic Test Result

Serial Correlation LM Test

The serial Correlation LM test may be used to test for higher order ARMA errors and is applicable whether there are lagged dependent variables or not. The null hypothesis of LM test is that there is no serial correlation up lag order 2. The p-values of the Breusch-Godfrey serial correlation test in Table 4.3a are insignificant at 5% suggesting that the null hypothesis could not be rejected. Therefore, the models are from autocorrelation.

Table 4.3a: Breusch-Godfrey Serial Correlation LM Test

Model	**F-statistic**	**Prob.F(2,12)**
Model 1	1.968310	0.195388
Model 2	2.242461	0.148787
Model 3	1.790293	0.221533

Source: Computer analysis using E-views 3.0

Heteroskedasticity Test

The probability of the Chq. Statistic for the models are insignificant at 5% level of significance, suggesting that there is no existence of heteroskedasticity in the models. This fulfils the econometric assumption that a model should be free from problem of heteroskedasticity. Test of heterskedasticity for the models is presented in Table 4.3b

Table 4.3b: Heteroskedasticity Test

Model	**F-statistic**	**Prob.F(3,14)**
Model 1	0.747445	0.607929
Model 2	4.408929	0.016418
Model 3	1.054812	0.443607

Source: Computer analysis using E-views 3.0

Ramsey RESET Test

The correct specification of the models was evaluated using the Ramsey RESET test. The essence was to ascertain if non-linear combinations of the independent variables have any power in explaining the dependent variable or not. If the dependent variable is explained by the non-linear combinations of the independent variables, the model is not well specified. The significant at 5% level of significance of p-values as in Table 4.3c shows that the models were well specified.

Table 4.3c: Ramsey RESET Test

Model	**Value**	**Probability**
Model 1	0.149048	0.863611
Model 2	3.391109	0.068015
Model 3	0.073598	0.929598

Source: Computer analysis using E-views 3.0

Multicollinearity Test

The correlation between the independent variables was observed highest (0.92) for minimum capital requirement and total assets plus off balance sheet engagements. However, the minimum capital requirement is a regulatory variable while total assets plus off balance sheet engagements is banks specific factor that might impact on performance. Thus, both were allowed to be in the same model (despite high correlation) because there from different facet of the environment. Table 4.3d summarises the correlation between the variables.

Table 4.3d: Correlation Matrix

	PBT	NII	ROE	MCR	TAO	NPL
PBT	1.000000	0.258884	0.700068	0.172357	0.293754	-0.749558
NII	0.258884	1.000000	-0.352593	0.828746	0.925930	-0.617383
ROE	0.700068	-0.352593	1.000000	-0.413379	-0.344517	-0.217923
MCR	0.172357	0.828746	-0.413379	1.000000	0.842448	-0.611120
TAO	0.293754	0.925930	-0.344517	0.842448	1.000000	-0.655645
NPL	-0.749558	-0.617383	-0.217923	-0.611120	-0.655645	1.000000

Source: Computer analysis using E-views 3.0

4.4 Unit Root Result

Augmented Dickey-Fuller (ADF) Test

The ADF test was performed in level, first and second difference at intercept , trend and intercept and none It was revealed in Table 4.4a and 4.4b that all the variables were not stationay in level form at intercept and trend and intercept .

Table 4.4a: ADF Test Result at Level: Intercept

Variables	**ADF Test Statistic**	**Test Critical Value at 1%**	**Test Critical Value at 5%**	**Remark**
PBT	-2.807462	-3.9228	-3.0659	Not Stationary
NII	-1.694710	-3.9228	-3.0659	Not Stationary
ROE	-2.367583	-3.9228	-3.0659	Not Stationary
MCR	-1.249000	-3.9228	-3.0659	Not Stationary
TAO	-0.753423	-3.9228	-3.0659	Not Stationary
NPL	-2.129528	-3.9228	-3.0659	Not Stationary

Source: Computer analysis using E-views 3.0

Table 4.4b: ADF Test Result at Level: Trend and Intercept

Variables	**ADF Test Statistic**	**Test Critical Value at 1%**	**Test Critical Value at 5%**	**Remark**
PBT	-3.135420	-4.6712	-3.7347	Not Stationary
NII	-1.180152	-4.6712	-3.7347	Not Stationary
ROE	-3.075036	-4.6712	-3.7347	Not Stationary
MCR	-1.600239	-4.6712	-3.7347	Not Stationary
TAO	-2.882019	-4.6712	-3.7347	Not Stationary
NPL	-3.303585	-4.6712	-3.7347	Not Stationary

Source: Computer analysis using E-views 3.0

The stationarity test in Tables 4.4c and 4.4d at intercept and **trend** and intercept of first difference shows that all the variables are not stationary at first difference at the 5% level of significance

Table 4.4c: ADF Test Result at First Difference: Intercept

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
PBT	-4.608681	-3.9635	-3.0818	Stationary
NII	-1.765404	-3.9635	-3.0818	Not Stationary
ROE	-5.719123	-3.9635	-3.0818	Stationary
MCR	-2.738613	-3.9635	-3.0818	Not Stationary
TAO	-2.604934	-3.9635	-3.0818	Not Stationary
NPL	-3.423133	-3.9635	-3.0818	Not Stationary

Source: Computer analysis using E-views 3.0

Table 4.4d: ADF Test Result at First Difference: Trend and Intercept

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
PBT	-4.388855	-4.7315	-3.7611	Stationary
NII	-1.740730	-4.7315	-3.7611	Not Stationary
ROE	-5.567688	-4.7315	-3.7611	Stationary
MCR	-2.746540	-4.7315	-3.7611	Not Stationary
TAO	-2.205596	-4.7315	-3.7611	Not Stationary
NPL	-3.266066	-4.7315	-3.7611	Not Stationary

Source: Computer analysis using E-views 3.0

Table 4.4e: ADF Test Result at Second Difference: Intercept

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
PBT	-5.861636	-4.0113	-3.1003	Stationary
NII	-3.237480	-4.0113	-3.1003	Stationary
ROE	-6.695995	-4.0113	-3.1003	Stationary
MCR	-4.062019	-4.0113	-3.1003	Stationary
TAO	-3.126607	-4.0113	-3.1003	Stationary
NPL	-3.816341	-4.0113	-3.1003	Stationary

Source: Computer analysis using E-views 3.0

The stationarity test in Tables 4.4e at intercept of second difference shows that all the variables are stationary at second difference at the 5% level of significance and

integrated of order one i.e. 1(1).

4.5 OLS Regression

The OLS regression was utilized to test relationship between banking reform via minimum capital requirement and bank performance. The coefficient of Adjusted R-squared, F-statistic and Durbin Watson statistic were the statistic criteria used in evaluating the regression result.

Banking Reform and Profit before Tax

Table 4.5a depicts that banking reform as evidenced by increase in minimum capital requirement has positive and insignificant relationship with profit before tax of the banking sector. Non-performing loan to total credit ratio was found to be insignificant and positively relates with profit before tax. On the other hand, total assets of banking sector inclusive of off balance sheet engagement has positive significant relationship with profit before tax. The co-efficient of the constant -4.298811 is an indication that if banking reform in incorporation of total assets plus off balance sheet engagement and non-performing loan to total credit ratio are held constant, banking sector profit before tax would decrease by 4.298811. A unit 'increase in capital base would results to 0.086454 increase in profit before tax. A percentage increase in the ratio of non-performing loan to total credit leads to 0.137814 increase in profit before tax. Similarly, a unit increase in banks total assets inclusive of off balance sheet engagements catapults to 0.961456 million rise in profit before tax.

Table 4.5a OLS Regression: Banking Reform and Profit before Tax

Dependent Variable: LOG(PBT)

Method: Least Squares

Date: 01/21/18 Time: 10:23

Sample(adjusted): 1999 2015

Included observations: 15

Excluded observations: 2 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.086454	0.198570	0.435385	0.6717
LOG(TAO)	0.961456	0.249226	3.857760	0.0027
LOG(NPL)	0.137814	0.264839	0.520367	0.6131
C	-4.298811	3.461886	-1.241754	0.2402

R-squared	0.911370	Mean dependent var	12.08660
Adjusted R-squared	0.887199	S.D. dependent var	1.135463
S.E. of regression	0.381355	Akaike info criterion	1.133009
Sum squared resid	1.599752	Schwarz criterion	1.321822
Log likelihood	-4.497564	F-statistic	37.70400
Durbin-Watson stat	1.416730	Prob(F-statistic)	0.000004

Source: Computer analysis using E-views 3.0

The Adjusted R-squared reveals that 91.13% variation in the profit before tax was as a result of the joint fluctuation in the explanatory variables: minimum capital requirement, total assets plus off balance sheet engagements and ratio of non-performing loan to total credit ratio. The significant value (5% significance level) of the F-statistic entails that banking reform inclusive of banks' specific variables significantly explained that changes in banking sector profit before tax. The Durbin Watson statistic of 1.41, though not too close to 2.0, in addition to the serial correlation LM test in Table 4.3a signifies that the variables in the model are not serially correlated.

Banking Reform and Net Interest Income

As can be seen in Table 4.5b, banking reform has negative but insignificant relationship with net interest income of banking sector in Nigeria. Non-performing loan to total credit ratio and total assets plus off balance sheet engagements have positive relationship with net interest income, however, the relationship between net interest income and total assets inclusive of off balance engagements is statistically significant at 5% level of significance. The coefficient of the constant discloses that holding minimum capital requirement, non-performing loan to total credit ratio and total assets inclusive of off balance engagements constant, net interest would be -7.304737. A unit increase in minimum capital requirement leads to -0.282836 decrease in net interest income. A percentage increase in total assets inclusive of off balance sheet engagement rises net interest income by 1.406832. On the other hand, net interest income would appreciate by 0.061108 by a unit rise in non-performing loan to total credit ratio.

Table 4.5b: OLS Regression: Banking Reform and Net Interest Income

Dependent Variable: LOG(NII)
Method: Least Squares
Date: 01/21/18 Time: 10:30
Sample: 1999 2016
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	-0.282836	0.227695	-1.242169	0.2346
LOG(TAO)	1.406832	0.276004	5.097150	0.0002
LOG(NPL)	0.061108	0.202632	0.301569	0.7674
C	-7.304737	3.144612	-2.322937	0.0358
R-squared	0.888380	Mean dependent var		12.86934
Adjusted R-squared	0.864461	S.D. dependent var		1.248649
S.E. of regression	0.459698	Akaike info criterion		1.476635
Sum squared resid	2.958510	Schwarz criterion		1.674496
Log likelihood	-9.289718	F-statistic		37.14170
Durbin-Watson stat	1.001893	Prob(F-statistic)		0.000001

Source: Computer analysis using E-views 3.0

From the Adjusted R-square, banking reform controlled with non-performing loan to total credit ratio and total assets inclusive of off balance engagements propelled 88.83% changes in net interest income. This statistically significant as evidenced by the F-statistic and P-value of 37.14 and 0.00 respectively. Although the Durbin Watson value of 1.00 is not quite close to 2.0, the deficiency associated with this was

corrected with the aid of the serial correlation test in Table 4.3a where the model was diagnosed of autocorrelation.

Banking Reform and Return on Equity

Table 4.5c depicts that banking reform as evidenced by increase in minimum capital requirement has positive and insignificant relationship with return on equity of the banking sector. Non-performing loan to total credit ratio was found to be insignificant and positively relates with return on equity. On the other hand, total assets of banking sector inclusive of off balance sheet engagement has negative insignificant relationship with return on equity. The co-efficient of the constant 3.800284 is an indication that if banking reform in incorporation of total assets plus off balance sheet engagement and non-performing loan to total credit ratio are held constant, banking sector return on equity would increase by 3.800284. A unit 'increase in capital base would results to 0.061241 increase in return on equity. A percentage increase in the ratio of non-performing loan to total credit leads to 0.257427 increases in return on equity. Similarly, a unit increase in banks total assets inclusive of off balance sheet engagements catapults to -0.111105 decrease in return on equity.

Table 4.5c: OLS Regression: Banking Reform and Return on Equity

Method: Least Squares

Date: 01/21/18 Time: 13:45

Sample(adjusted): 1999 2015

Included observations: 15

Excluded observations: 2 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.061241	0.260584	0.235012	0.8185
LOG(TAO)	-0.111105	0.327062	-0.339706	0.7405
LOG(NPL)	0.257427	0.347551	0.740689	0.4744
C	3.800284	4.543057	0.836504	0.4207
R-squared	0.229336	Mean dependent var		3.179103
Adjusted R-squared	0.019155	S.D. dependent var		0.505319
S.E. of regression	0.500455	Akaike info criterion		1.676582
Sum squared resid	2.755012	Schwarz criterion		1.865395
Log likelihood	-8.574365	F-statistic		1.091137
Durbin-Watson stat	0.875874	Prob(F-statistic)		0.393439

Source: Computer analysis using E-views 3.0

The Adjusted R-squared reveals that 22.93% variation in return on equity was as a result of the joint fluctuation in the explanatory variables: minimum capital requirement, total assets plus off balance sheet engagements and ratio of non-performing loan to total credit ratio.

4.6 Long Run Relationship

The stationarity test for the variables as presented in Table 4.4a - 4.4e, there was considerable evidence that all the variable have unit root and a devoid of stationarity defect that affects most time series data, hence giving room to testing the long run relationship between the variables concerned. The results of the long run relationship conducted using the Johansen co-integration methodology are summarised in Tables 4.6a, 4.6b and 4.6c. The long run test in Table 4.6a reveals that banking reform and banking sector profit before tax are co-integrated in the long run. The trace and max-eigenvalue each indicate two (2) and one (1) co-integrating equations at 5% level of significance.

Table 4.6a: Johansen Co-integration for PBT, MCR, TAO and NPL

EIGEN VALUE	LIKELIHOOD RATIO	5% CRITICAL VALUE	1% CRITICAL VALUE	HYPOTHESISED NO OF (CE_S)
0.810586	58.34745	47.21	54.46	None **
0.658195	31.72636	29.68	35.65	At most 1*
0.460827	14.55014	15.41	20.04	At most 2
0.252981	4.666637	3.76	6.65	At most 3*

*(**) denotes rejection of hypothesis @ 5%(1%) Significant level

L.R. test indicates 2 co-integrating equation @ 5% significant level

Table 4.6b - Johansen Co-Integration Result-NII, MCR, TAO and NPL

EIGEN VALUE	LIKELIHOOD RATIO	5% CRITICAL VALUE	1% CRITICAL VALUE	HYPOTHESISED NO OF (CE_S)
0.908377	63.03162	47.21	54.46	None **
0.624985	24.79045	29.68	35.65	At most 1
0.433207	9.097811	15.41	20.04	At most 2
0.000851	0.013625	3.76	6.65	At most 3

*(**) denotes rejection of hypothesis @ 5%(1%) Significant level

L.R. test indicates 1 co-integrating equation @ 5% significant level

Table 4.6c -Johansen Co-Integration Result-ROE, MCR, TAO and NPL

EIGEN VALUE	LIKELIHOOD RATIO	5% CRITICAL VALUE	1% CRITICAL VALUE	HYPOTHESISED NO OF (CE_S)
0.922166	66.36730	47.21	54.46	None **
0.526142	25.51651	29.68	35.65	At most 1
0.472614	13.56696	15.41	20.04	At most 2
0.187883	3.329784	3.76	6.65	At most 3

*(**) denotes rejection of hypothesis @ 5% (1%) Significant level

L.R. test indicates 1 co-integrating equation @ 5% significant level

Source: - *Co-integration result Computed (See table in the Appendix* Table 4.6a, 4.6b and 4.6c shows that long-run relationship (co-integration) exist among the variables in the tables. Profit before Tax has 2 co-integrating equation, Net Interest Income has 1 co-integrating equation while Return on equity has 1 co-integrating equation.. This is reflected in the **LIKELIHOOD RATIO** of the table that shows a

value greater than that of the **5% CRITICAL VALUE** respectively.

4.7 Test of Hypotheses

Decision Criteria: If the p- value of F-statistic in granger causality test is less than 0.05, the null hypothesis is rejected. On the other hand, if the p-value of F-statistic granger causality test is greater than 0.05, the null hypothesis is accepted.

Hypothesis One

Restatement of Research Hypothesis

H_0: Minimum capital requirement has no significant effect on profit before tax of the Nigeria's banking sub sector.

Looking at the F-statistics of 0.30729 with p-value of 0.74155 (more than 0.05) in Table 4.7a, the null hypothesis that minimum capital requirement has no significant effect on profit before tax of the Nigeria's banking sub sector would not be rejected that is, the null hypothesis that Minimum capital requirement has no significant effect on profit before tax of the Nigeria's banking sub sector is accepted.

Table 4.7a: Granger Causality Result for PBT, MCR, TAO and NPL

Null Hypothesis:	Obs	F-Statistic	Prob.	Remarks
MCR does not Granger Cause PBT	16	0.30729	0.7415	No
PBT does not Granger Cause MCR		0.00145	0.9985	No

Source: Computer analysis using E-views 3.0

Hypothesis Two

Restatement of Research Hypothesis

H_0: Minimum capital requirement has no significant effect on net interest income of the Nigeria's banking sub sector.

From Table 4.7b, the p-value of 0.06347 is greater than 0.05, hypothesis decision

criteria. To this effect, the null hypothesis that minimum capital requirement has no significant effect on net interest income of the Nigeria's banking sub sector is accepted and the alternative hypothesis that minimum capital requirement has significant effect on net interest income of the Nigeria's banking sub sector rejected.

Table 4.7b: Granger Causality Result **for NII, MCR, TAO and NPL**

Null Hypothesis:	Obs	F-Statistic	Prob.	Remarks
MCR does not Granger Cause NII	16	3.57975	0.0634	No
Nil does not Granger Cause MCR		0.07467	0.9285	No

Source: Computer analysis using E-views 3.0

Hypothesis Three

Restatement of Research Hypothesis

H_0: Minimum capital requirement has no significant effect on return on equity of the Nigeria's banking sub sector.

Looking at the F-statistics of 1.51909 with p-value of 0.26149 (more than 0.05) in Table 4.7c, the null hypothesis that minimum capital requirement has no significant effect on return on equity of the Nigeria's banking sub sector would not be rejected that is, the null hypothesis that Minimum capital requirement has no significant effect on return on equity of the Nigeria's banking sub sector is accepted.

Table 4.7a: Granger Causality Result for ROE, MCR, TAO and NPL

Null Hypothesis:	Obs	F-Statistic	Prob.	Remarks
MCR does not Granger Cause PBT	16	1.51909	0.2614	No
PBT does not Granger Cause MCR		0.65652	0.5378	No

Source: Computer analysis using E-views 3.0

4.8 Discussion of Findings

The regression result in Table 4.5a depicts that banking reform reflected by minimum capital requirement has insignificant and positive relationship with profit before tax of the deposit money bank. This actually meet the a priori expectation of a positive relationship, this is a clear evidence that the current minimum capital requirement of N25, billion will help deposit banks to operate soundly and maintain needed liquidity taking into consideration the dynamic nature and uncertainty in Nigeria macroeconomic indexes. It is also discovered that banking reform reflected by minimum capital requirement has insignificant and negative relationship with the net interest income of the deposit money bank. This is against the a priori expectation of a positive relationship. Equally it was observed that banking reform reflected by minimum capital requirement has insignificant and positive relationship with return on equity of the deposit money bank. This met the a priori expectation of a positive relationship. Banking reforms in Nigeria has been empirically found to have improved performance via the studies of Ilorin and Ajiboye (2016), Alalade, Adekunle and Oguntodu (2016),Alajekwu and Obialor (2014), Agbo (2013), Ifionu and Keremah (2016), Olokoyo (2013), Opkara (2011), Owolabi and Ogunlalu (2013, Okpanachi (2011), Kane and Isu (2013) and Okorie and Agu (2013).

Non-performing loan to total credit ratio has positive and exert insignificant effect on deposit money bank profit before tax, Net interest income and return on equity, while total assets off balance sheet engagement has positive and significant effect on deposit money bank profit before tax, Net Interest Income but it has negative and exert insignificant effect on return on equity.

CHAPTER FIVE

SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATIONS

5.1. Summary of Findings

This study evaluated the effect of bank capitalisation reforms on financial performance of deposit money bank in Nigeria over a period of seventeen years, which is from 1999 to 2016. The findings of the study revealed the following

1. Banking sector reform reflected by minimum capital requirement has insignificant effect on profit before tax of deposit money bank. However, a positive relationship was found to exist between banking reform and profit before tax of deposit money bank.
2. Banking reforms has insignificant effect on net interest income of the deposit money bank and there is negative relationship between net interest income and banking reform.
3. Banking sector reforms reflected by minimum capital requirement has insignificant effect on return on equity of deposit money bank, however a positive relationship exist between return on equity and banking reform in deposit money bank.

5.2. Conclusion

The study explored bank capitalisation reforms and financial performance of deposit banks in Nigeria. This has become necessary in the face of evolving developments in the industry in Nigeria especially with the exchange of baton by the Central Bank of Nigeria (CBN) governors and introduction of new ideas and reforms. As a result of this, the Nigerian banking system has undergone remarkable changes in recent years,

terms of the number of institutions, ownership structure, as well as depth and breadth of operations. However the reform progaramme has brought about certain implications on Nigeria banking sector which include brand and structural implication. Brand implications refer to those issues the new entities would face if they are to survive in the long term. They include change of name, change of logo, and change of brand message, to ascertain what the brand would become over time. Structural implication on the other hand refers to issues that have direct impact on staff, customers and the structure of the entire banking sector. From the finding of this study, it is established that there is an impact of bank reforms on the performance of banks as well as on Nigeria economy. It is therefore important that these new evolved banking groups understand the implications of their consolidation in order to be a successful unit, both in the short and long run which will in turn benefit the banking industry and the Nigeria economy at large. It is clear that the reforms has affects the performance of the banking sector over the period, thus for a stronger and more resilient banking and financial system, banks need to improve their current state of development to be truly classified amongst the top banks in the world.

5.3. Recommendations

In review of the findings of this study, the following recommendation are suggested to bank management and policymakers for execution to improve the deposit money bank operation and financial system stability in general:

1. There is need for banks' to improve their assets quality and off balance sheet engagements by advancing loans to productive sectors of the economy rather

than seeing oil and gas sector a the only fertile and profitable sector for large loans and advances.

2. Banks should improve their total asset turnover and diversify in such way that they can generate more income on their assets
3. Bank should diversify their investment and it should be more long-term bases.
4. The ongoing banking reform should be sustained in Nigeria
5. Ban management should embark on effective intermediation drive which will provide cheap source of fund for the banks which they can sue to generate more interest income that would eventually increase their profit
6. Government should evolve a good regulatory environment that will enable the banks to expand their scope of business but strictly within the financial service industry.
7. Monetary authorities should ensure effective and efficient banking supervision.
8. For a bank to enjoy depositors confidence, it must have a strong capital base as evidence of its strength and as a tool for operating profitability so that as the confidence of the depositors in the banking system increase they will make more deposit which will enhance the profitability of entire sector
9. Deposit money bank should invest in liquid short term guilt edge financial asset such as treasury bills to ensure adequate liquidity.

5.4. Contribution to Knowledge

This study makes a contribution to knowledge by establishing annual effect examination of the effect of bank capitalisation reforms on financial performance of deposit money banks in Nigeria by utilizing an up to date data on the variable concerned.

Furthermore, the application of net interest income as measure of banking sector performance is an improvement to the subject matter as it is scarce in previous studies reviewed.

5.5 SUGGESTION FOR FURTHER STUDIES

This study examined the effect of bank capitalization reforms on financial performance of profit before tax, net interest income and return on equity using annual time series data from 1999 to 2016, it is suggested that future researchers should consider utilizing monthly or quarterly data to validate the result of this current study. Furthermore, other financial performance variables indicators such as net profit, return on assets, liquidity ratio, cash ratio etc should be considered for future studies.

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APPENDIXS

Dependent Variable: LOG(PBT)
Method: Least Squares
Date: 01/21/18 Time: 10:23
Sample(adjusted): 1999 2015
Included observations: 15
Excluded observations: 2 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.086454	0.198570	0.435385	0.6717
LOG(TAO)	0.961456	0.249226	3.857760	0.0027
LOG(NPL)	0.137814	0.264839	0.520367	0.6131
C	-4.298811	3.461886	-1.241754	0.2402

R-squared	0.911370	Mean dependent var	12.08660
Adjusted R-squared	0.887199	S.D. dependent var	1.135463
S.E. of regression	0.381355	Akaike info criterion	1.133009
Sum squared resid	1.599752	Schwarz criterion	1.321822
Log likelihood	-4.497564	F-statistic	37.70400
Durbin-Watson stat	1.416730	Prob(F-statistic)	0.000004

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.968310	Probability	0.195388
Obs*R-squared	4.564508	Probability	0.102054

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 01/21/18 Time: 10:25
Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.121210	0.233265	0.519624	0.6159
LOG(TAO)	-0.099882	0.273437	-0.365283	0.7233
LOG(NPL)	0.043306	0.247889	0.174700	0.8652
C	0.417471	3.395426	0.122951	0.9048
RESID(-1)	0.531203	0.384934	1.379987	0.2009
RESID(-2)	-0.398994	0.311443	-1.281116	0.2322

R-squared	0.304301	Mean dependent var	3.40E-15
Adjusted R-squared	-0.082199	S.D. dependent var	0.338035
S.E. of regression	0.351654	Akaike info criterion	1.036838
Sum squared resid	1.112946	Schwarz criterion	1.320058
Log likelihood	-1.776283	F-statistic	0.787324
Durbin-Watson stat	2.130350	Prob(F-statistic)	0.584019

White Heteroskedasticity Test:

F-statistic	0.747445	Probability	0.607929
Obs*R-squared	4.401144	Probability	0.493218

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/21/18 Time: 10:27
Sample: 1999 2015
Included observations: 15
Excluded observations: 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-20.14759	14.83461	-1.358148	0.2075
LOG(MCR)	0.026495	0.128145	0.206757	0.8408
LOG(TAO)	2.615748	1.956121	1.337212	0.2140
(LOG(TAO))^2	-0.084997	0.063130	-1.346381	0.2111
LOG(NPL)	0.059075	0.744391	0.079360	0.9385
(LOG(NPL))^2	-0.020797	0.178939	-0.116224	0.9100

R-squared	0.293410	Mean dependent var	0.106650
Adjusted R-squared	-0.099141	S.D. dependent var	0.148060
S.E. of regression	0.155226	Akaike info criterion	-0.598694
Sum squared resid	0.216856	Schwarz criterion	-0.315473
Log likelihood	10.49020	F-statistic	0.747445
Durbin-Watson stat	2.610618	Prob(F-statistic)	0.607929

Ramsey RESET Test:

F-statistic	0.149048	Probability	0.863611
Log likelihood ratio	0.488777	Probability	0.783183

Test Equation:
Dependent Variable: LOG(PBT)
Method: Least Squares
Date: 01/21/18 Time: 10:28
Sample: 1999 2015
Included observations: 15
Excluded observations: 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	3.638909	9.975553	0.364783	0.7237
LOG(TAO)	39.20538	107.6905	0.364056	0.7242
LOG(NPL)	5.727624	15.55446	0.368230	0.7212
C	-328.8609	922.2595	-0.356582	0.7296
FITTED^2	-3.440533	9.492224	-0.362458	0.7254
FITTED^3	0.098555	0.266583	0.369696	0.7202

R-squared	0.914212	Mean dependent var	12.08660
Adjusted R-squared	0.866552	S.D. dependent var	1.135463
S.E. of regression	0.414791	Akaike info criterion	1.367090
Sum squared resid	1.548464	Schwarz criterion	1.650310
Log likelihood	-4.253176	F-statistic	19.18191
Durbin-Watson stat	1.493174	Prob(F-statistic)	0.000147

Net interst income

Dependent Variable: LOG(NII)
Method: Least Squares
Date: 01/21/18 Time: 10:30
Sample: 1999 2016
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	-0.282836	0.227695	-1.242169	0.2346
LOG(TAO)	1.406832	0.276004	5.097150	0.0002
LOG(NPL)	0.061108	0.202632	0.301569	0.7674
C	-7.304737	3.144612	-2.322937	0.0358

R-squared	0.888380	Mean dependent var	12.86934
Adjusted R-squared	0.864461	S.D. dependent var	1.248649
S.E. of regression	0.459698	Akaike info criterion	1.476635
Sum squared resid	2.958510	Schwarz criterion	1.674496
Log likelihood	-9.289718	F-statistic	37.14170
Durbin-Watson stat	1.001893	Prob(F-statistic)	0.000001

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.242461	Probability	0.148787
Obs*R-squared	4.897116	Probability	0.086418

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 01/21/18 Time: 10:31
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.088068	0.222032	0.396643	0.6986
LOG(TAO)	-0.119459	0.282217	-0.423286	0.6796
LOG(NPL)	-0.041826	0.194778	-0.214736	0.8336
C	1.209619	3.227888	0.374740	0.7144
RESID(-1)	0.611553	0.318064	1.922732	0.0786
RESID(-2)	-0.407183	0.309858	-1.314097	0.2134

R-squared	0.272062	Mean dependent var	4.17E-15
Adjusted R-squared	-0.031245	S.D. dependent var	0.417169
S.E. of regression	0.423636	Akaike info criterion	1.381318
Sum squared resid	2.153611	Schwarz criterion	1.678109
Log likelihood	-6.431863	F-statistic	0.896984
Durbin-Watson stat	1.614528	Prob(F-statistic)	0.513516

White Heteroskedasticity Test:

F-statistic	4.408929	Probability	0.016418
Obs*R-squared	11.65539	Probability	0.039827

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/21/18 Time: 10:33
Sample: 1999 2016
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	40.00660	11.96441	3.343801	0.0058
LOG(MCR)	-0.056620	0.076839	-0.736873	0.4754
LOG(TAO)	-5.196414	1.544327	-3.364841	0.0056
(LOG(TAO))^2	0.165623	0.048997	3.380270	0.0055
LOG(NPL)	1.049061	0.390031	2.689689	0.0197
(LOG(NPL))^2	-0.203834	0.083713	-2.434904	0.0314

R-squared	0.647522	Mean dependent var	0.164362
Adjusted R-squared	0.500656	S.D. dependent var	0.204175
S.E. of regression	0.144279	Akaike info criterion	-0.772937
Sum squared resid	0.249796	Schwarz criterion	-0.476146
Log likelihood	12.95643	F-statistic	4.408929
Durbin-Watson stat	2.272788	Prob(F-statistic)	0.016418

Ramsey RESET Test:

F-statistic	3.391109	Probability	0.068015
Log likelihood ratio	8.064071	Probability	0.017738

Test Equation:
Dependent Variable: LOG(NII)
Method: Least Squares
Date: 01/21/18 Time: 10:33
Sample: 1999 2016
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.465838	13.13077	0.035477	0.9723
LOG(TAO)	-2.575805	65.85234	-0.039115	0.9694
LOG(NPL)	-0.291367	2.918767	-0.099825	0.9221
C	13.12218	535.1105	0.024522	0.9808
FITTED^2	0.475433	3.778104	0.125839	0.9019
FITTED^3	-0.019154	0.101031	-0.189585	0.8528

R-squared	0.928685	Mean dependent var	12.86934
Adjusted R-squared	0.898971	S.D. dependent var	1.248649
S.E. of regression	0.396883	Akaike info criterion	1.250854
Sum squared resid	1.890198	Schwarz criterion	1.547644
Log likelihood	-5.257683	F-statistic	31.25374
Durbin-Watson stat	1.551403	Prob(F-statistic)	0.000002

Return on assets

Dependent Variable: LOG(ROE)
Method: Least Squares
Date: 01/21/18 Time: 13:45
Sample(adjusted): 1999 2015
Included observations: 15
Excluded observations: 2 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.061241	0.260584	0.235012	0.8185
LOG(TAO)	-0.111105	0.327062	-0.339706	0.7405
LOG(NPL)	0.257427	0.347551	0.740689	0.4744
C	3.800284	4.543057	0.836504	0.4207

R-squared	0.229336	Mean dependent var	3.179103
Adjusted R-squared	0.019155	S.D. dependent var	0.505319
S.E. of regression	0.500455	Akaike info criterion	1.676582
Sum squared resid	2.755012	Schwarz criterion	1.865395
Log likelihood	-8.574365	F-statistic	1.091137
Durbin-Watson stat	0.875874	Prob(F-statistic)	0.393439

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.790293	Probability	0.221533
Obs*R-squared	4.269180	Probability	0.118293

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 01/21/18 Time: 10:45
Presample and interior missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	0.416517	0.333478	1.249009	0.2432
LOG(TAO)	-0.295626	0.343490	-0.860654	0.4118
LOG(NPL)	0.176786	0.343871	0.514104	0.6196
C	0.601197	4.259987	0.141127	0.8909
RESID(-1)	0.927999	0.451903	2.053537	0.0702
RESID(-2)	-0.083759	0.328714	-0.254807	0.8046

R-squared	0.284612	Mean dependent var	-3.96E-16
Adjusted R-squared	-0.112826	S.D. dependent var	0.443606
S.E. of regression	0.467963	Akaike info criterion	1.608318
Sum squared resid	1.970903	Schwarz criterion	1.891539
Log likelihood	-6.062388	F-statistic	0.716117
Durbin-Watson stat	2.081040	Prob(F-statistic)	0.627217

White Heteroskedasticity Test:

F-statistic	1.054812	Probability	0.443607
Obs*R-squared	5.542286	Probability	0.353331

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/21/18 Time: 10:48
Sample: 1999 2015
Included observations: 15
Excluded observations: 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-23.04908	25.85813	-0.891367	0.3959
LOG(MCR)	0.251114	0.223369	1.124209	0.2900
LOG(TAO)	2.766411	3.409705	0.811334	0.4381
(LOG(TAO))^2	-0.090407	0.110041	-0.821569	0.4325
LOG(NPL)	-0.495929	1.297544	-0.382206	0.7112
(LOG(NPL))^2	0.187005	0.311908	0.599551	0.5636

R-squared	0.369486	Mean dependent var	0.183667
Adjusted R-squared	0.019200	S.D. dependent var	0.273209
S.E. of regression	0.270574	Akaike info criterion	0.512631
Sum squared resid	0.658892	Schwarz criterion	0.795851
Log likelihood	2.155266	F-statistic	1.054812
Durbin-Watson stat	2.189153	Prob(F-statistic)	0.443607

Ramsey RESET Test:

F-statistic	0.073598	Probability	0.929598
Log likelihood ratio	0.243342	Probability	0.885439

Test Equation:
Dependent Variable: LOG(ROE)
Method: Least Squares
Date: 01/21/18 Time: 10:49
Sample: 1999 2015
Included observations: 15
Excluded observations: 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR)	-13.97875	36.60356	-0.381896	0.7114
LOG(TAO)	25.38823	66.47110	0.381944	0.7114
LOG(NPL)	-58.91727	154.2593	-0.381937	0.7114
C	-630.2288	1653.055	-0.381251	0.7119
FITTED^2	73.39975	191.5009	0.383287	0.7104
FITTED^3	-7.789876	20.35947	-0.382617	0.7109

R-squared	0.241738	Mean dependent var	3.179103
Adjusted R-squared	-0.179519	S.D. dependent var	0.505319
S.E. of regression	0.548805	Akaike info criterion	1.927026
Sum squared resid	2.710678	Schwarz criterion	2.210246
Log likelihood	-8.452694	F-statistic	0.573849
Durbin-Watson stat	0.899942	Prob(F-statistic)	0.719577

COINTEGRATION PBT

Date: 01/24/18 Time: 00:11
Sample: 1999 2016
Included observations: 16
Test assumption: Linear deterministic trend in the data
Series: PBT MCR TAO NPL
Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.810586	58.34745	47.21	54.46	None **
0.658195	31.72636	29.68	35.65	At most 1 *
0.460827	14.55014	15.41	20.04	At most 2
0.252981	4.666637	3.76	6.65	At most 3 *

*(**) denotes rejection of the hypothesis at 5%(1%) significance level
L.R. test indicates 2 cointegrating equation(s) at 5% significance level

Unnormalized Cointegrating Coefficients:

PBT	MCR	TAO	NPL
4.99E-07	4.04E-05	-6.74E-09	0.050051
-1.39E-06	1.48E-05	-4.26E-08	-0.088747
2.40E-06	7.65E-05	-7.88E-08	0.053210
2.08E-06	6.80E-05	-5.73E-08	0.001883

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

PBT	MCR	TAO	NPL	C
1.000000	81.07882	-0.013515	100396.1	-2633782.
	(48.6738)	(0.01995)	(68875.5)	
Log likelihood	-652.8081			

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

PBT	MCR	TAO	NPL	C
1.000000	0.000000	0.025589	68162.40	-1461324.

		(0.01528)	(25811.1)	
0.000000	1.000000	-0.000482	397.5604	-14460.72
		(0.00039)	(655.072)	
Log likelihood	-644.2200			

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

PBT	MCR	TAO	NPL	C
1.000000	0.000000	0.000000	33316.28	-624646.3
			(6525.00)	
0.000000	1.000000	0.000000	1054.334	-30230.27
			(253.964)	
0.000000	0.000000	1.000000	1361780.	-32697196
			(246911.)	
Log likelihood	-639.2782			

Cointegration NII

Date: 01/24/18 Time: 22:32
Sample: 1999 2016
Included observations: 16
Test assumption: Linear deterministic trend in the data
Series: NII MCR TAO NPL
Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.908377	63.03162	47.21	54.46	None **
0.624985	24.79045	29.68	35.65	At most 1
0.433207	9.097811	15.41	20.04	At most 2
0.000851	0.013625	3.76	6.65	At most 3

*(**) denotes rejection of the hypothesis at 5%(1%) significance level
L.R. test indicates 1 cointegrating equation(s) at 5% significance level

Unnormalized Cointegrating Coefficients:

NII	MCR	TAO	NPL
-8.65E-07	-2.88E-05	1.06E-07	0.028734
-1.44E-06	-6.96E-05	1.62E-07	0.093619
8.51E-07	-2.59E-05	-4.18E-08	-0.054278
-3.23E-06	5.50E-05	6.40E-08	-0.039652

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

NII	MCR	TAO	NPL	C
1.000000	33.26485	-0.122568	-33227.20	1032310.
	(15.8565)	(0.03104)	(14340.3)	
Log likelihood	-645.4244			

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

NII	MCR	TAO	NPL	C
1.000000	0.000000	-0.143625	36858.69	967687.5
		(0.18542)	(100103.)	
0.000000	1.000000	0.000633	-2106.905	1942.663
		(0.00479)	(2585.27)	
Log likelihood	-637.5781			

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

NII	MCR	TAO	NPL	C
1.000000	0.000000	0.000000	-171177.7	1575644.
			(291926.)	
0.000000	1.000000	0.000000	-1190.005	-736.8472
			(3007.17)	
0.000000	0.000000	1.000000	-1448465.	4232932.
			(3105503)	
Log likelihood	-633.0360			

RETURN ON EQUITY

Date: 01/24/18 Time: 22:38
Sample: 1999 2016
Included observations: 16
Test assumption: Linear deterministic trend in the data
Series: ROE MCR TAO NPL
Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.922166	66.36730	47.21	54.46	None **
0.526142	25.51651	29.68	35.65	At most 1
0.472614	13.56696	15.41	20.04	At most 2
0.187883	3.329784	3.76	6.65	At most 3

*(**) denotes rejection of the hypothesis at 5%(1%) significance level
L.R. test indicates 1 cointegrating equation(s) at 5% significance level

Unnormalized Cointegrating Coefficients:

ROE	MCR	TAO	NPL
0.036585	1.68E-05	7.76E-08	0.117832
0.001898	4.95E-05	-3.40E-08	-0.026556
0.038204	5.24E-05	-9.18E-09	0.019421
-0.002392	-3.27E-05	2.82E-08	-0.030215

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

ROE	MCR	TAO	NPL	C
1.000000	0.000460	2.12E-06	3.220770	-101.1654
	(0.00013)	(2.1E-07)	(0.22028)	
Log likelihood	-496.2392			

Normalized Cointegrating Coefficients: 2 Cointegrating Equation(s)

ROE	MCR	TAO	NPL	C
1.000000	0.000000	2.48E-06	3.529771	-103.0112

		(1.9E-07)	(0.27604)	
0.000000	1.000000	-0.000781	-671.4804	4011.092
		(0.00031)	(445.809)	
Log likelihood	-490.2645			

Normalized Cointegrating Coefficients: 3 Cointegrating Equation(s)

ROE	MCR	TAO	NPL	C
1.000000	0.000000	0.000000	0.371901	-24.78850
			(0.75011)	
0.000000	1.000000	0.000000	322.7187	-20615.93
			(423.826)	
0.000000	0.000000	1.000000	1272777.	-31527585
			(279425.)	
Log likelihood	-485.1459			

Granger causality text

Pairwise Granger Causality Tests
Date: 01/24/18 Time: 22:55
Sample: 1999 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
MCR does not Granger Cause PBT	16	0.30729	0.74155
PBT does not Granger Cause MCR		0.00145	0.99855
TAO does not Granger Cause PBT	16	0.57331	0.57964
PBT does not Granger Cause TAO		2.56073	0.12216
NPL does not Granger Cause PBT	16	1.37604	0.29284
PBT does not Granger Cause NPL		1.89687	0.19599
TAO does not Granger Cause MCR	16	0.11318	0.89401
MCR does not Granger Cause TAO		1.86795	0.20026
NPL does not Granger Cause MCR	16	0.17027	0.84562
MCR does not Granger Cause NPL		1.01788	0.39302
NPL does not Granger Cause TAO	16	0.39895	0.68035
TAO does not Granger Cause NPL		1.76973	0.21560

Pairwise Granger Causality Tests
Date: 01/24/18 Time: 23:35
Sample: 1999 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
MCR does not Granger Cause NII	16	3.57975	0.06347
NII does not Granger Cause MCR		0.07467	0.92851
TAO does not Granger Cause NII	16	3.02409	0.08983
NII does not Granger Cause TAO		0.18763	0.83152
NPL does not Granger Cause NII	16	3.66600	0.06026
NII does not Granger Cause NPL		1.58797	0.24781
TAO does not Granger Cause MCR	16	0.11318	0.89401
MCR does not Granger Cause TAO		1.86795	0.20026
NPL does not Granger Cause MCR	16	0.17027	0.84562

MCR does not Granger Cause NPL		1.01788	0.39302
NPL does not Granger Cause TAO	16	0.39895	0.68035
TAO does not Granger Cause NPL		1.76973	0.21560

Pairwise Granger Causality Tests
Date: 01/24/18 Time: 23:43
Sample: 1999 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
MCR does not Granger Cause ROE	16	1.51909	0.26149
ROE does not Granger Cause MCR		0.65652	0.53784
TAO does not Granger Cause ROE	16	3.85674	0.05380
ROE does not Granger Cause TAO		1.93193	0.19096
NPL does not Granger Cause ROE	16	1.15265	0.35118
ROE does not Granger Cause NPL		1.81872	0.20778
TAO does not Granger Cause MCR	16	0.11318	0.89401
MCR does not Granger Cause TAO		1.86795	0.20026
NPL does not Granger Cause MCR	16	0.17027	0.84562
MCR does not Granger Cause NPL		1.01788	0.39302
NPL does not Granger Cause TAO	16	0.39895	0.68035
TAO does not Granger Cause NPL		1.76973	0.21560

Dependent Variable: LOG(ROE)
Method: Least Squares
Date: 02/06/18 Time: 13:20
Sample(adjusted): 2002 2013
Included observations: 10
Excluded observations: 2 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MCR(3))	-0.317036	0.197077	-1.608691	0.1588
LOG(TAO(-3))	0.137151	0.170129	0.806160	0.4509
LOG(NPL(-3))	-0.766952	0.392902	-1.952020	0.0988
C	6.406559	2.816496	2.274655	0.0633

R-squared	0.502063	Mean dependent var	3.139988
Adjusted R-squared	0.253094	S.D. dependent var	0.480035
S.E. of regression	0.414864	Akaike info criterion	1.367443
Sum squared resid	1.032673	Schwarz criterion	1.488477
Log likelihood	-2.837215	F-statistic	2.016572
Durbin-Watson stat	2.013884	Prob(F-statistic)	0.213168