

**STRUCTURAL ANALYSIS OF THE NIGERIAN FINANCIAL SYSTEM IN THE
POST LIBERALIZATION ERA AND ITS IMPACT ON ECONOMIC GROWTH**

BY

**Kehinde Samuel ALEHILE, B.Sc. ECONOMICS (K.S.U.) 2008
MSC/SOC-SCI/11467/2010-11**

**A THESIS SUBMITTED TO THE SCHOOL OF POST GRADUATE STUDIES,
AHMADU BELLO UNIVERSITY, ZARIA
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A
MASTERS OF SCIENCE DEGREE IN ECONOMICS.**

**DEPARTMENT OF ECONOMICS,
FACULTY OF SOCIAL SCIENCES,
AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA.**

OCTOBER, 2014

DECLARATION

I declare that the work in this thesis entitled Structural Analysis of the Nigerian Financial System in the Post Liberalization Era and Its Impact on Economic Growth has been carried out by me in the Department of Economics. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other institution.

Alehile, Kehinde Samuel

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Signature

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Date

CERTIFICATION

This thesis entitled, “Structural Analysis of the Nigerian Financial System in the Post Liberalization Era and Its Impact on Economic Growth” by Alehile, Kehinde Samuel meets the regulation governing the award of the degree of M.Sc. Economics in Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

Prof. Mike Kwanashie
Chairman, supervisory committee	Signature	Date

Dr Mohammed, Shaibu Jibril
Chairman, supervisory committee	Signature	Date

Dr (Mrs.) Salamatu I. Isah
Head of Department, Department of Economics, A.B.U. Zaria	Signature	Date

Dr (Mrs.) Salamatu I. Isah
Dean of Postgraduate School, A.B.U. Zaria.	Signature	Date

ACKNOWLEDMENT

My appreciation goes to God almighty for giving me inspiration, knowledge, understanding and wisdom throughout the period of my postgraduate study in Ahmadu Bello University, Zaria.

My profound gratitude also goes to my supervisors, Prof. Mike Kwanashie and Dr. Mohammed Shaibu Jibril who in their very busy schedules gave me constructive guidance, academic prudence and moral support. Also, my heartfelt gratitude goes to my Head of Department; Dr. Salamatu Isah for the excellent leadership roles she has been playing in the Department.

I also appreciate Prof. A.G. Garba, Prof. (Mrs) P.S. Aku, Prof. G.D. Olowononi, Dr P.P. Njiforti, Dr A.R. Sanusi, Dr Ishaya Audu, Dr Mike Duru, Dr M.M. Usman, Dr Joseph Adama and all other academic and non-academic staff members of the department of Economics, Ahmadu Bello University, Zaria. My heartfelt gratitude also goes to my beloved wife who stood by me throughout the course of my study and research and Dr S.A. Abdusalam who oversee the writing of this thesis before withdrawing his services from ABU, Zaria.

Also, my appreciation goes to the management of Kogi State University, Anyigba, headed by the Vice-Chancellor, Prof. Hassan S. Isah, the Dean of the faculty of Social Sciences, Kogi State University, Anyigba, Prof Ada Okau and the Head, Department of Economics, Kogi State University, Anyigba, Prof. I.I. Ihimodu for the privilege of going for further studies extended to me and the moral and financial support. All staff members of the Department of Economics, Kogi State University, Anyigba are appreciated for their support and encouragement.

Furthermore, my friends who made my stay in ABU, Zaria memorable are worthy of appreciation among who are Mallam Sanusi Suleiman, Bulus Bula, Ejiro Mudiare, Sheyin Shinkut Hillary, Bulus Emmanuel, Victor O. Babatunde, Akanbi Muritala, Akin Adio, Aminu Umar, Jamaladeen Abubakar, George Adagazu, Bolaji Kehinde Eunice, Bitrus Deborah, Isah Maryam, Chigozie Nsobundu and others too numerous to mention.

Abstract

This study assessed the impact of the liberalization of the Nigerian financial system on the structural changes witnessed in the system as a result of liberalization as well as the impact of the resulting structural change on economic growth using a three stage least in a system of three endogenous variables. System of equations was used to capture the transmission mechanism of financial liberalization as contained in the McKinnon and Shaw financial repression hypothesis with annual data from 1986 to 2012. The study found that the Nigeria financial system had undergone major changes in term of both nature and composition. Liberalization further helped in creating a diversified financial system which is vibrant and robust, though deposit money banks still dominate the sector in term of asset base and branch network. Also, this study found that financial structure has a positive impact on savings as well as on economic growth. In addition, both capital market-base and bank-based financial structure have similar impact on both investment and growth thereby relegating the capital market-base versus bank-based argument to the background and favour of the financial market-based view. Therefore, this study recommends that the liberalization of the Nigerian financial system should be sustained and economic policies should be directed at enhancing growth of the financial system.

TABLE OF CONTENTS

Title page.....	i
Declaration.....	ii
Certification.....	iii
Dedication.....	iv
Acknowledgements.....	v
Abstract.....	vi
Table of Contents.....	vii
List of Tables.....	ix
List of Figures.....	x
1.0 INTRODUCTION	
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	4
1.3 Objectives of Study.....	7
1.4 Justification for the Study	7
1.5 Scope and Limitation of the Study	9
1.6 Organization of Study.....	9
2.0 LITERATURE REVIEW	
2.1 Conceptual Framework.....	10
2.1.1. Financial Structure.....	10
2.1.2 System-Wide Indicators	10
2.1.3. Breadth of Financial System.....	11
2.2. Structure of Nigerian Financial System.....	12
2.3 Structure of Nigerian Financial Market.....	14
2.4 An Overview of Financial Liberalization in Nigeria.....	19

2.5	Theoretical Literature Review.....	24
2.5.1	Some Theories of Financial Structure.....	25
2.5.2	Some Theories of Growth	28
2.6	Empirical Literature Review	31
3.0	METHODOLOGY	
3.1	Framework for Methodology.....	40
3.2	Research Hypothesis.....	41
3.3	Empirical Framework	42
3.4	Model Specification.....	43
3.5	A priori Expectation	44
3.6	Diagnostic Tests	44
3.7	Estimation Techniques	46
3.8	Data and Sources of Data	48
4.0	PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS	
4.1	Presentation and Analysis of Diagnostic Tests Results	49
4.1.1.	Stationary Test Results	49
4.1.2	Evaluation of the Forecasting Power of the Model	50
4.2.	Presentation and Analysis of estimated Models	50
4.3.	Major Findings of the Study	54
5.0	SUMMARY, CONCLUSION AND RECOMMENDATIONS	
5.1	Summary of the Study.....	56
5.2	Conclusion of the Study.....	57
5.3	Recommendations.....	57
	References.....	59
	Appendices	70

List of Tables

Table 3.1. A priori Expectation.....	44
Table 4.1. Unit Root Test Results	49
Table 4.2. Theil's Inequality Test Coefficient	50
Table 4.3. Saving Equation	51
Table 4.4. Investment Equation	52
Table 4.5. Growth Equation	54

List of Figures

Figure I: Structure of Nigerian Financial System	13
Figure II: Growth Rates of Savings in Nigeria (1987-2011) in Percentage	22
Figure III: Growth Rates of Investment (1987-2011) in Percentage.....	23
Figure IV: Growth Rates RGDP (1987-2011) in percentage	24

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Several arguments have been put forward about ways of improving the standard of living through a sustained growth process. This development has elicited paradigm shift in economic growth strategies and policies especially in developing economics and new frontiers were being explored to achieve economic growth.

The important role of finance in the process of economic growth and development was brought to lime light by the works of Bagehot (1873) and Schumpeter (1911). They pointed out the productivity and growth enhancing effects of services provided by a developed financial sector. They posit that the industrial revolution in England was the result of a functioning financial system that was instrumental in mobilizing and allocating long-term capital to the productive enterprises of the country. They argued that financial intermediaries play a crucial role in fostering technological innovation and economic growth by providing basic services such as mobilizing savings, monitoring managers, evaluating investment projects, managing and pooling risks, and facilitating transactions.

The seminal works of McKinnon (1973) and Shaw (1973) supported Schumpeter's view of promoting the development of financial sector to achieve economic growth. They criticized the financial repressionists' view adopted by many governments in developing countries in the early 1970s. The traditional justification for financial repression is that it is presumed to increase the rate of economic growth. This argument is based on the assumption that money and real assets are perfectly substitutable, that increasing returns in real asset markets relative to money market instruments will induce a change in investor behaviour, so shifting investment out of money market into capital investment. An important implication is that setting interest rate ceilings will reduce the rate of return on financial assets, and induce a

shift to investments in productive assets, thereby increasing the rate of economic growth. Government restrictions on the banking system such as interest rate ceilings, high reserve requirements and directed credit programs hinder financial development and reduce output growth.

According to McKinnon, capital accumulation is the most critical element necessary for economic growth, while Shaw emphasizes the ability of the banking system to intermediate adequate amount of credit to finance higher economic growth. Both argue that removing interest rate and credit allocation controls will ease the repressed financial system, which would in turn improve the rate of economic growth through efficiency in financial intermediation subject to improved financial discipline (Dawood, 2004). The basic idea was that adequate savings are necessary for the realization of investment projects desperately needed for the economic growth and development of less developed economies. However, government intervention that seeks to boost investment by keeping real interest rates low prohibit the accumulation of savings in the form of banks' deposits (Akinlo and Egbetunde, 2010). McKinnon and Shaw arguments gave rise to theoretical ideas and policy recommendations which support the liberalization of the financial system.

The liberalization of the financial sector involves the removal of all forms of government interventions in the financial system so that the cost and allocation of loanable funds are determined by the forces of demand and supply. Liberalization which would be associated with higher interest rates would stimulate savings. This is based on the assumption that savings are responsive to interest rates, that is, the higher the saving rate and that the higher the level of investment leading to a higher growth. The liberalization of the financial system was expected to be accompanied by changes in the structure and composition of the financial system as new instruments and institutions are expected to be added to the already existing ones (Oima and Ojwang, 2013). The aggregate size of the financial sector, its sectoral

composition, and range of attributes of individual sectors determine their effectiveness in meeting users' requirements.

Structural changes in the financial system were expected to give rise to a reliable and inexpensive money transfer within the country, reaching remote areas and poor households. There will be remunerative deposit facilities and other investment opportunities offering liquidity and a reasonable risk-return trade-off. Entrepreneurs will have access to a range of sources for funds for their working- and fixed-capital formation; affordable mortgage and consumer finance will be available to households. The credit renewal decisions of banks and the market signals coming from organized markets in traded securities will help ensure that good use continues to be made of investable funds. Insurance intermediaries and the portfolio possibilities offered by liquid securities markets will help maximize the risk pooling and the shifting of risk at a reasonable price to entities that are able and willing to absorb it.

The Nigerian government like most developing countries in Africa, who desired economic growth and development, adopted the Structural adjustment Programme (SAP). SAP has the objective of restructuring and diversifying the productive base of the economy in order to reduce dependency on oil export as well as to reduce the dominance of unproductive investment in the public sector and to enhance the growth potential of the private sector (Philips, 1987).

The financial system of the Nigerian economy was liberalized as part of the Structural Adjustment Programme (SAP) in 1986. The justification given was that the liberalized financial system would better perform the function of financial intermediation by mobilizing more savings that would be invested and this will be accompanied by the much desired economic growth and development. These laudable objectives can only be achieved if the liberalized financial system provides efficient and sufficient outlets for mobilising savings as well as those necessary for investment (Ujunwa, Salami and Nwakoby, (2012)).

Prior to the liberalization of the Nigerian financial system, the system was highly repressed. Interest rate controls, selective credit guidelines, exchange rate regulations, ceiling on credit expansion and use of reserve requirements and other direct monetary control instruments characterized the system. Entry into the banking system was also restricted. Consequently, the introduction of the liberalization of the system led to the adoption of a market based interest and the establishment of a market based autonomous foreign exchange market, among others.

The liberalization of the Nigerian financial system took off with the liberalization of lending and deposit interest rates aimed at guaranteeing efficient allocation of resources followed by deregulation of entry barriers into the banking sector to enhance bank efficiency through increased competition in service delivery and management. The liberalization of the financial system led to the restructuring of the supervisory authorities' (CBN, SEC and NDIC) of the nation's financial sector and their capacity were strengthened by increasing their viability through adequate regulations regarding minimum capital requirements, specifying the range of assets and liabilities they can acquire, introduction of uniform accounting standards for banks to ensure accuracy, reliability and comparability. Nigeria embarked on the programme of financial liberalization in order to maximize the benefits associated with a free market system.

1.2. Statement of Research Problem

Prior to 1986, the Nigeria financial sector was highly regulated. The cost and allocation of credit were controlled by the government. This era witnessed interest rate ceilings fixed by law, directed credits, accommodation of government borrowing, exchange rate controls and informal modes of intermediation and all forms of direct government controls of the system. During this period, the nation's economy was besieged by high level of indebtedness,

unfavourable balance of payment, over dependence on oil revenue, Absence of new investment, wide spread distortion and imbalances in the economy (Anyanwu, 1996).

In July, 1986, the Federal Military government introduced the Structural Adjustment Programme (SAP). The financial system of the Nigerian economy was liberalized as part of the Structural Adjustment Programme (SAP) in 1986.

One of the objectives of the liberalization policy was to encourage the establishment of new financial institutions through relaxed entry requirements (Mordi, Englama and Adebuseyi, (2010)).The liberalized financial system was expected to be accompanied by changes in the structures and composition of the financial system as new instruments and institutions are expected to be added to the existing ones thereby leading to increase in the efficient outlets for savings mobilization and investment thereby enhancing economic growth (Ujunwa, Salami and Nwakoby, (2012)). Though, the Nigeria financial system experienced radical structural and institutional changes such as phenomenal increase in the number of institutions operating in the sector and the addition of some innovative types such as Peoples Bank of Nigeria (PBN), community banks as well as specialized institutions such as primary mortgage institutions (PMIs), Bureaux de Change (BDCs), and even Nigeria Deposit Insurance Corporation (NDIC) was established primarily to insure deposits against total loss in the event of bank failure. Despite all these, the financial system may not have shown a significant improvement in its ability to mobilize savings as the level of savings in the country is low; this low degree of savings is accompanied by liquidity trap, capacity underutilization and low rate of capital formation (Adesoye, Maku and Atanda,(2011)). More so, an examination of the banking sector shows that the sector has remained largely oligopolistic and uncompetitive. Few large banks control the greater segment of the market in terms of total assets, total liabilities and total credit in the banking system (Maduka and Onwuka, 2013).

Empirical evidences from the Nigerian economy show that despite the adoption of financial liberalization, the domestic economy has not experienced impressive performance as envisaged (Bakare, 2011).

According to Umejiaku (2011), after over two decades of reforms in the financial sector, Nigeria is not one of the countries that may have a success story of financial sector reform positively influencing real macroeconomic activities. The aftermaths of all these are the high level of unemployment, most especially youth unemployment which is not unconnected with the high level of social vices, violence and terrorism the country is witnessing as well as high level of poverty (Okpara, 2010). Also, the failure of the financial sector to finance the long term investment required in the real sector of the economy has also being the bane of the nation's economic growth and development. Most industries such as Textile, Automobile, petrochemical etc that existed before 1986 have long gone out of business and this contributed to the country's worsening balance of payments and balance of trade positions as the country is total dependent on the importation of all form of goods (both consumable and capital) and services (Alabi, 2009) .

Furthermore, a look at the performance of the economy in the post-liberalization era brings mixed feeling, for instance, in 1987, savings grew by 34.03% and by 1989 and 1995 it grew by 2.37% and 0.027% respectively. In 2000, the growth rate of savings was 38.7% and by 2005, it increase to 65.13% before declining to 3.307% in 2010 and 9.701% in 2011.

Investment did not do better as well. For instance, in 1987, investment in the Nigerian economy grew by 3.416% while in 1995 investment growth rate was 34.42% and by 1998 it was -0.26%. in 2008 and 2011 respectively, investment in Nigeria grew by 5.99% and 4.48% respectively.

Growth rate of the economy also follow saving and investment in its behaviour during the period under review. In 1987 GDP growth rate was -0.57% while in 1991 GDP growth rate

stood at -0.81%. By 1998 GDP growth rate stood at 0.42% while by 2005 and 2011, it improved to 6.51% and 7.40% respectively.

Sequel to the issues discussed above, this study raised the following research questions:

- a) How has the Nigerian financial structure changed since the liberalization policy was introduced in 1986?
- b) What is the impact of financial structure on savings and investment in the post-liberalization era in Nigeria?
- c) What is the impact of the changes in the Nigerian financial system's structure on economic growth since liberalization?

1.3. Objectives of the Study

The broad objective of this study is to assess the impact of the evolution and structural changes in the Nigerian financial system in the post liberalization era on economic growth.

The specific objectives of this research are as follows:

1. To analyse the trend and pattern of changes in the structure of the Nigerian financial system since the adoption of the financial liberalization policy in 1986.
2. To assess the impact of financial structure on Savings and investment in Nigeria.
3. To assess the impact of the structural changes in the Nigerian financial system since liberalization on economic growth in Nigeria.

1.4. Justification for Study

Developing countries (LDCs) are generally characterized by several features including capital scarcity and lower industrial base when compared with the developed countries (DCs) of the world. The accumulation of capital in any developing country like Nigeria requires an effective, efficient and sound financial sector (Khazri and Djellassi, 2011). In pursuit of this, the government of the country embarked on the liberalization of the sector by adopting the

SAP. Therefore, it is imperative that after over twenty five (25) years of the implementation of this policy to examine its effectiveness in the term of changes in the structure of the financial system and its contribution to economic growth. This is intended to be done in this study

Furthermore, the literature on the Nigerian financial structure is quite substantial. However, the greater part of them focussed on sectoral analysis albeit, and testing of the age long controversies of market based versus bank based financial system. Consequently very little information could be derived from such literature as basically, the structural transformation that financial liberalization brought is often ignored.

For instance, Agbaw (1998) studied the impact of financial deepening on economic growth in Nigeria using least square and cointegration analysis, therefore ignoring the possibility of simultaneity. Bulus (2011) investigated the impact of banking sector reforms on the various sector of the Nigerian economy using error correction method without paying cognisance to the interrelationships among the various sector. Though, Olofin and Afangideh (2008) investigated the role of financial structure on economic growth using a small macroeconometric model, the model did not adequately investigate the transmission mechanism of financial liberalization.

This study, therefore intend to fill this gap by examining the structural changes in the financial system and its impact on the growth of the Nigerian economy since the liberalization of Nigerian financial sector using a system of equation of three endogenous variables estimated using three stage least square (3SLS) which capture endogeneity both in the variables and in the error terms..

Also, investigation of the impact of financial structure on economic growth in Nigeria would be important given the continuing debate on this issue {See Onwumere, Onudugo and Imo

(2013), Oima and Ojwang (2013) Maduka and Onwuka (2013)}. Therefore, this study help shed more light on the controversies surrounding financial structure and economic growth in Nigeria.

1.5. Scope and Limitation of the Study

The Nigerian financial system has gone through various phases since the country became independent. However, for the purpose of this study, only data from 1986-2012 was used. This is purposely used because the liberalization of the Nigerian economy started in 1986. Furthermore, the various institutions involved in the financial system such as issuing houses, deposit money banks, stock exchanges, investment banks, insurance companies will be given adequate attention.

Notwithstanding, whatever level of viability attributed this work, caution should be taken as the data used in this study were sourced from secondary sources whose authenticity cannot be guaranteed by the research.

1.6. Organization of the Study

This study is organized into five chapters. Chapter one presents the general introduction. Chapter two deals with the review of literature; this consists of conceptual literature, theoretical literature, empirical and other relevant literature that could help to explain the relationship among the variables. Chapter three develops and describes the methodology. Chapter four presents and analyses the empirical estimates as well draws implications from the findings. Finally, chapter five presents the summary, conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Conceptual Framework

2.1.1 Financial Structure

Financial structure is the aggregate size of the financial sector, its sectoral composition, and a range of attributes of individual sectors that determine their effectiveness in meeting users' requirements (Maduka and Onwuka, 2013). Indicators of financial structure include the system wide indicators of size, breadth and composition of the financial system (World Bank and IMF, 2005).

2.1.2. System-wide Indicators

The overall size of the financial system could be ascertained by the value of the financial assets both in absolute term and as ratio of gross domestic product (GDP). Although identifying the absolute amount of financial assets is informative, normalizing financial assets on GDP facilitates benchmarking of the state of financial development and allows for comparison across countries at different stages of development. Other indicators of financial size and depth that could be examined include ratio of broad money supply to GDP, Private sector's credit to GDP and ratio of bank's deposit to GDP.

The description of the number and types of financial intermediaries and markets is also useful, and this information should be supplemented by information on the relative composition of the financial system. Even though many countries do have a wide range of non-bank financial intermediaries (NBFIs), banking institutions still tend to dominate overwhelmingly. In advanced markets and in many emerging markets, NBFIs, particularly pension funds or insurance companies, often play a larger part than do banks in domestic and global asset allocation (and, sometimes, in the providing of credit). Similarly, market participants such as hedge funds play an increased role in financial markets and in the

performance of various asset classes. Hence, for one to get a true view of financial structure, it is useful to focus on the share of various sub-sectors (banks, non-banks, financial markets, etc.) in total financial assets by using assets of financial institutions in different sub-sectors and value of financial instruments in different markets as numerators. This type of focus on market shares enables the assessor to get a quick indication of the “effective” structure of the financial system.

Evaluating the overall growth of the financial system and of major sub-sectors is important, and valuable information could be obtained by examining changes in the number and types of financial intermediaries, as well as the growth of financial assets in each sector over time, in both nominal and real terms. Although a description of trends is informative, it is also critical to indicate the driving forces behind (a) observed changes in institutions and their asset positions, and (b) the number of and growth rates of available money and capital market instruments. One factor that has accounted for the observed growth of financial systems in many countries (number of institutions and size of assets) is financial liberalization, especially the softening of entry conditions for banks and other financial institutions and the liberalization of interest rates, which has stimulated financial markets (especially money markets). In addition, changes in prudential regulation and accounting standards often have provided incentives for developing new ways to manage risks (e.g., asset and liability management for insurance company and pension funds) and have led to development of new risk-transfer instruments in capital markets.

2.1.3. Breadth of Financial System

Data on the financial breadth or penetration often serve as proxies for access of the population to different segments of the financial sector. Well-functioning financial systems should offer a wide range of financial services and products from a diversified set of financial intermediaries and markets. Ideally, there should be a variety of financial instruments that

provide alternative rates of return, risk, and maturities to savers, as well as different sources of finance at varying interest rates and maturities. Evaluating the breadth or diversity of the financial system should, therefore, involve identifying the existing financial institutions, the existing markets for financial instruments, and the range of available products and services.

The relative composition of the financial system discussed above is a first-cut approach to determining the extent of system diversification. In addition, comparisons between bank and non-bank forms of financial intermediation are useful, for instance, comparisons between banking credit and issues of bonds by the private sector. Often, significant savings and financing through non-bank forms are indicators of financial diversity because bank deposits and loans constitute the traditional forms of savings and credit in many countries. It is, therefore, useful to compare the extent of financial intermediation through banks with the amount of intermediation through insurance, pensions, collective investment schemes, money markets, and capital markets. In particular, the share of various classes of asset holders (specifically, households, non-financial corporations, banks, and NBFIs) within the total capital market instruments or mutual fund assets can provide valuable information on financial diversification. The breadth of the financial system also could be analyzed in terms of the outreach of existing financial institutions. A common indicator related to this outreach is the branch network of the banking system, in particular, the total number of branches and the number of branches per thousand inhabitants. A comparison of the distribution of branches between rural and urban areas or among different provinces could also be useful as an indicator of the outreach of banking outlets

2.2. Structure of Nigerian Financial System

The Nigeria Financial services sector is made up of the banking system, other financial institutions, and the securities, insurance and the pension sub-sectors (CBN, 2009). The

Nigerian financial system is one of the largest in sub-Saharan Africa, consisting of a fairly diverse array of bank and non-bank financial institutions.

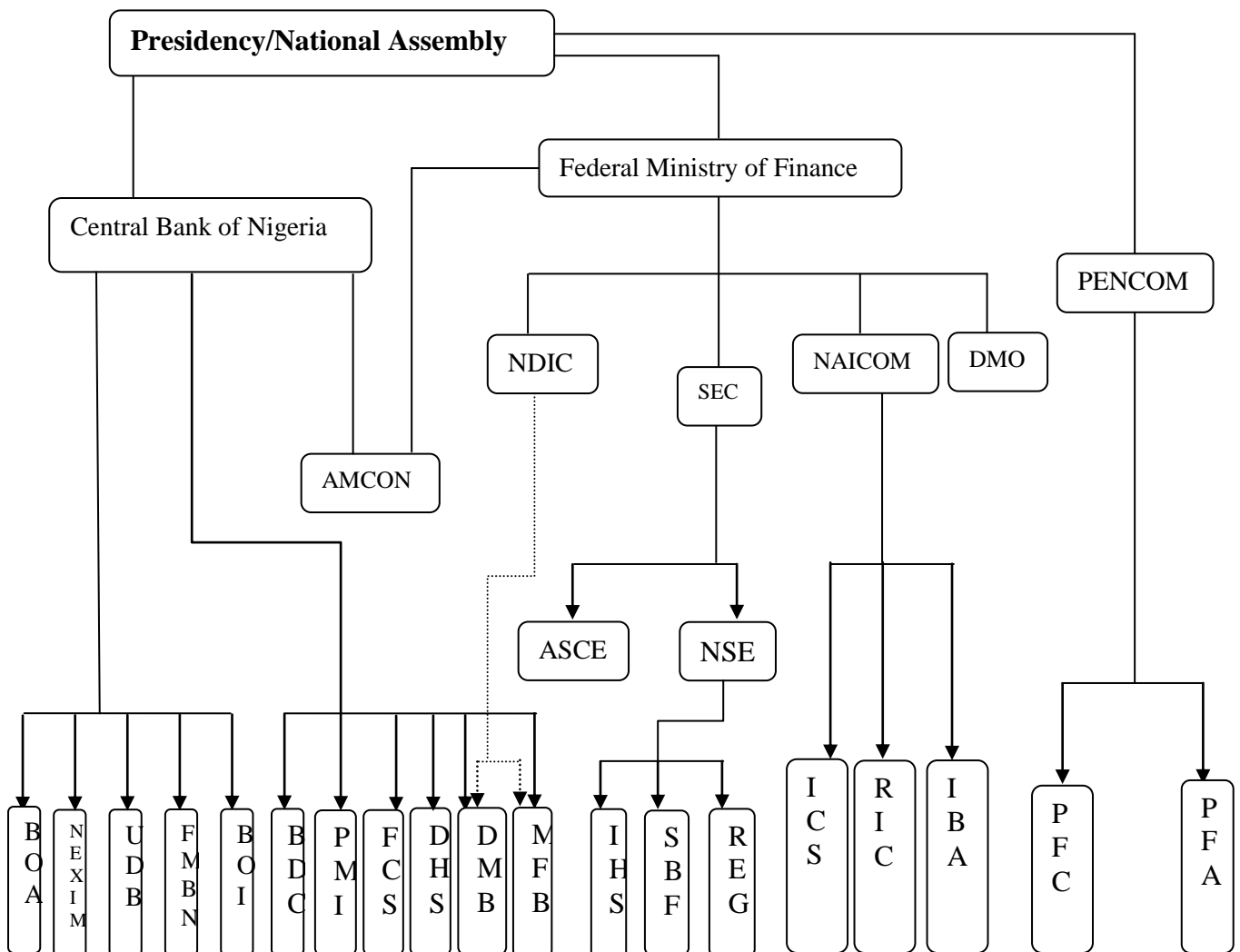


Figure I: The structure of Nigeria Financial System adopted from the CBN Financial Stability Report, 2011.

- | | |
|---|--|
| NDIC - Nigeria Deposit Insurance Commission | SEC – Security and Exchange Commission |
| NAICOM – National Insurance Commission | PENCOM – Pension Commission |
| NSE – Nigeria Stock Exchange | ACSE – Abuja Commodity and Security Exchange |
| FC – Pension Fund Custodian | PFA – Pension Fund Administrator |
| IBA – Insurance Broker & Adjusters | RIC – Reinsurance Companies |
| ICS - Insurance Companies | REG – Registrars |
| SBF – Securities and Brokerage Firms | DMB – Deposit Money Banks |
| DHS – Discount Houses | MFB – Microfinance Banks |
| PMI – Primary Mortgage Institutions | BDC – Bureaux De Change |
| BOI – Bank of Industry | FMBN – Federal Mortgage Bank of Nigeria |
| UDB – Urban Development Bank | NEXIM – Nigeria Import-Export Bank |
| BOA – Bank of Agriculture | DMO- Debt Management Office |
| AMCON-Asset Management Corporation of Nigeria | IHS-Issuing Houses |

These institutions are broadly classified into the money and capital markets. However, the apparent diversified nature of the system is deceptive as commercial banks overwhelmingly dominate the financial sector (accounting for 93% of non-central bank assets) while bank deposits represent the major forms of financial savings (World Bank, 2000).

The Nigerian financial system is dualistic in nature with the formal and informal intermediation co-existing, reflecting the influence of cultural and social forces rather than economic forces. The formal financial system evolved in 1892 with the activities of the early colonialists and the establishment of the West Africa Currency Board (WACB) in 1913. This was further enhanced with the establishment of numerous indigenous banks between 1929 and 1952, and the Central Bank of Nigeria (CBN) in 1959 and the emergence of state owned banks after independence. The formal institutions, which now dominate the financial system, consist of the regulatory authorities, the financial market, the development finance institutions and other financial institutions.

As shown in figure 2.1 above, regulatory authorities comprise the CBN which is the apex institution in the money market, the Nigeria Deposit Insurance Corporation (NDIC), the Securities and Exchange Commission (SEC) which is the apex institution in the capital market, the National Insurance Commission (NAICOM) and the National Pension Commission (PENCOM). The Presidency and National Assembly exercise statutory oversight over the Federal Ministry of Finance (FMF) and the CBN, while the FMF supervises the NDIC, SEC and NAICOM.

2.3. Structure of Nigerian Financial Market

The financial market consists of the money market and capital market. The foundation for a modern financial market in Nigeria was laid in the early 1960s. The Money market is the market for short term funds designed to channel resources from surplus sectors to deficit

sectors of the economy while the Nigerian capital market is the long-term end of the financial market. It is made up of institutions which facilitate the issuance and trading of long term financial instruments. The Nigerian capital market came into existence with the establishment of Lagos Stock Exchange in 1961.

Nigerian Money Market

The Money market is the market for short term funds designed to channel resources from surplus sectors to deficit sectors of the economy. Prior to the establishment of CBN, there was domestic money market. The operators in the money market are the CBN, Deposit Money Bank, Discount Houses and the investing public. The regulatory authority is the CBN and instruments in the money market include Nigerian Treasury Bills (NTBs), Treasury Certificates (TCs), Banker's unit Fund (BUF), Eligible Development stock (EDs) and certificates of Deposits (CDs) (CBN, 2010).

An analysis of the institutional growth and structure of the Nigerian financial system shows that the system grew rapidly from 1986 to 2000 due to the liberalization of the sector. The number of commercial banks as show by figure 2 below rose from 29 in 1986 to 58 in 1990 and by 1995 it rose further to 64 before declining to 54 in 2000 (CBN, 2009). The dichotomy between commercial bank and merchant bank was removed in 2001 following the introduction of universal banking. Under this system, commercial and erstwhile merchant banks transformed into deposit money banks (DMBs) and were allowed to engage in both money and capital markets activities. To redress the perennial problem of systemic distress in the banking industry, among other problems, the CBN rolled out a 13-points reform agenda on July 6, 2004 which aimed at recapitalising and consolidating the banking industry for efficient service delivery. At the end of the first phase of the banking consolidation exercise

on December 31, 2005 the number of DMBs shrank to 25. By the end of 2009 the number of DMBs in Nigeria stood at 24 and remains at 24 till 2011.

Also, in term of branch network, the Nigeria banking sector experienced improvement during the period under review. In the year 1987, the total number of branches of deposit money Banks stood at 1483 and by the year 1990 it has increased to 1939. It further increased to 2407 branches in the year 1996 before declining slightly to 2193 branches in the year 2000. This decline in the branch network is not unconnected with the adoption of democratic system of government in the country which came with reforms of the various sector of the economy, financial system inclusive. In the year 2002, total number of branches of deposit money bank stood at 3010 branches before increasing to 4200 branches in 2006 and by 2010 it has increased to 5809 branches before declining slightly to 5454 branches in 2011. This decline could be accounted for by the action of CBN which led to the taking over of some banks by bridge banks.

The other financial institutions in the Money market of the financial system have also experienced changes in their compositions and structure. During the 1992-1999 periods, the finance houses sub-sector witnessed a proliferation in number, take for instance there were 280 finance houses in Nigeria in the year 1999. But the performance of the sector was not encouraging as its performance was woeful and this led to the systemic distress in the sub-sector. This led to the reform of the sector by the CBN based on the recommendation of the inter-departmental committee on the problem of finance houses. The guideline of the sub-sector was revised and the minimum paid up capital was increased from ₦5 million to ₦ 20 million with the compliance deadline set at April 2001. As at 2002, a total of 102 finance houses were in operation before increasing to 112 in 2006 and 114 in 2008 and up till 2011 it remain 114 operational fiancé houses.

The discount houses sub-sector of the Nigerian financial system which came on board to serve as financial intermediaries between the CBN and the licensed banks has also experienced changes in its structure though not as elaborate as the other institutions in the sector as contained in figure 5 below. In the year 1993, there were 3 operational discount houses and by 1995, there were a total of 5 discount houses in the country. The total number of operational discount houses rose to 5 in 1996 and has remained at that level till 2011.

The Foreign Exchange Market is a segment of the Nigerian Money market which plays an important role in the money market. Transactions in the market are generally short-term in nature as it is essentially a spot market. The sale of foreign exchange inherently mops up domestic liquidity from the banking system. CBN has used this market to complement its monetary control tools. The major participants in the Nigerian foreign exchange market is the DMBs, the public sector, the bureaux de change (BDCs), retail customers and the CBN. The DMBs are the most important institutions involved in the operation of this market. They buy and sell foreign exchange on behalf of their customers and hold foreign exchange deposits abroad with correspondent banks with the purpose of meeting the foreign exchange needs of their customers. The BDCs are registered foreign exchange dealers who engage 'over-the-counter' transactions to meet the needs of small scale users of foreign exchange. The Wholesale Dutch Auction System (WDAS) was introduced in February, 2006 as a framework for determining the exchange rate in the foreign exchange market.

Nigerian Capital Market

The Nigeria capital market is the long-term end of the financial market. It is made up of institutions which facilitate the issuance and trading of long term financial instruments. The Nigeria capital market came into existence with the establishment of Lagos Stock Exchange in 1961. The exchange was incorporated under the company's ordinance as an association limited by guarantee. Following the recommendations of the government financial system

review committee in 1976, the Lagos Stock Exchange was re-named The Nigeria Stock Exchange and additional trading floors were opened in the same year in Port Harcourt, Kaduna, Onitsha, and Ibadan, Benin among the other state of the federation.

The Nigeria capital Market consists of the Security and Exchange Commission (SEC) which is the apex regulator, the Nigeria Stock Exchange (NSE), The Abuja Security and Commodity Exchange (ASCE) and the facilitating institutions. The Security and Exchange Commission (SEC) is the apex regulatory body in the Nigeria capital market.

The Nigeria Stock Exchange is the centre point of the Nigeria Capital market. The Nigerian capital market is segregated into three sub-markets which are the primary market, secondary market and bond market. In the primary market, new issues of security are bought and sold while in the secondary market, existing securities are traded. The bond market is the platform for the sales and purchase of government debt instruments, its operation started in 1946 with the sale of Federal Government stock of ₦600, 000 with a coupon rate of 3.25% and a tenor of 7-25 years. The major instruments used to raise fund from the Nigeria capital market are equities (ordinary Shares and preference shares), government bonds (federal, states and local governments) and industrial loans/debenture stocks and bonds.

The equity market suffers from low patronage in the late 80s to early 2000 as shown by figure 6 above. The reason usually advanced for this low patronage is the state of the national economy and the lack of public awareness of the activities and benefits of investing in the capital market. Following CBN directives on bank's recapitalization, the tempo of activities increased drastically and the equity market benefitted tremendously as many banks raised additional funds in the stock exchange to meet the minimum capital requirement for consolidation. The tempo of activities peaked in 2008 and decline set in from 2009 as a result the global financial crisis. The equity market is the dominant sub-market in the Nigerian capital market.

Based on figure 7 above, the government stock suffers the same fate as the equity market in the late 80 till early 2000. This is because of the nature of the economy at them the lack of adequate awareness about the activities of the market but with CBN directives to commercial banks to recapitalize, the market experienced increased activities from 2002 and peaked in 2005 before declining.

Examining figure 8 above, the industrial stocks follow the same pattern as the ones discussed above. The submarket came to limelight in 2003 and since then it has been faced with period of both boom and recession both as a result of banking recapitalization and global financial crisis respectively.

2.4. Overview of Financial Liberalization in Nigeria

Prior to 1986, the Nigerian financial sector faced interventionists' policies. There were statutory interest rate ceilings, directed credits, accommodation of government borrowing, exchange rate controls and informal modes of intermediation. The formal banking sector by mid 1980s had been largely static and several institutions in the financial system, including four development banks were wholly owned by government (Umejiaku, 2011). All these were blamed for the failure of the national economy to experienced growth.

In 1986, Structural Adjustment Programme (SAP) was adopted in Nigeria. One of the sub policies of Structural Adjustment Programme (SAP) was the reform of the financial sector. The sequence of reforms in the financial sector shows that it started with liberalization. The first being liberalization of lending and deposit interest rates aimed at guaranteeing efficient allocation of resources. This was followed by deregulation of entry barriers into the banking sector where the three largest banks namely First bank, Union bank and UBA had dominated the market. Deregulation lead to astronomical increase in the number of banks from 34 in 1987 to 90 in 2003 before the recapitalization policy of 2004 that reduced the number of banks to 25 bigger banks compared to what they were earlier (CBN, 2009). The aim of this

was to encourage competition in the banking sector and thus break the existing monopoly. Partial removal of credit ceilings on banks was in operation before the 1992 effective removal of credit ceilings on banks adjudged healthy by the Central Bank.

Foreign Exchange market reform started in 1986 when a second-tier foreign exchange market was established. Reforms in this market have witness several policy reversals and modifications. In 2000 reforms in the area of foreign exchange deposit took place, allowing the public to receive foreign currency in a domiciliary account so as to ensure that such remittances were retained in savings within the banking system.

The Nigeria Deposit Insurance was established in 1988 to ensure safe and sound banking practices through effective supervision and to assist CBN in formulating banking policies in the performance of its statutory duty. The reforms of other regulatory and supervisory framework which started in 1991 with the introduction of the CBN Decree No. 24 of 1991 and the Banks and Other Financial Institutions Decree No 29 also of 1991 gave the CBN a higher degree of autonomy in the conduct of monetary policy and increased banks regulatory and supervisory powers over the deposit money banks and such other financial intermediaries.

Indirect Monetary Control was introduced in 1993 when formal Open Market Operation in Treasury Bills was launched in order to regulate the flow of money and credit through market based auction mechanism of government securities. In order to facilitate the activities of OMO, Discount houses were also licensed as from 1993.

Deregulation of capital market began in 1992. To complete the deregulation of the financial markets, all controls on the capital market were removed in December 1993. Importantly, the pricing of new issues in the market was now to be carried out by the various issuing houses, instead of the Securities and Exchange Commission (SEC). Also, an over-the-counter market was allowed to operate freely within the normal rules governing such markets. The enactment

of Investment and Securities Act (ISA) 45 of 1999 helped in the reconstitution of the Securities and Exchange Commission and introduced measures that helped in alleviating difficulties involved in listing disclosures and check insider trading (Iganiga, 2010).

The universal banking reform of 2001 freed banks to operate both banking, securities and insurance businesses, so as to ensure efficient delivery of all financial services at reduced costs and also improve bank risk-return profile through diversification (Asogwa, 2005). In 2005, the CBN embarked on the recapitalization of the commercial banks which led to the increase of minimum capital base of commercial banks from ₦2 billion to ₦25 billion. This was to reposition the commercial banks for efficiency and effective saving mobilization. This policy is expected to curb banking distress arising from inadequate capital base.

Performance of Saving (1986-2011)

The Nigerian Macroeconomic variables have responded to this policy changes. Figure 1 below shows the growth rate of savings in Nigeria from the period of the liberalization of the nation's financial sector. In the year 1987, savings growth rate was 34.03% before declining to 2.37% in 1989 and by 1993, savings growth rate rose to 54.26% and by 1995 it has decline to an unbelievable level of 0.027%. This sudden decline was generally attributed to lack of trust in the administration of the country then. In 1997, savings' growth rate was 32.077% before declining to 12.62% in 1998. In 2000, the adoption of democracy in Nigeria brought about an improved level of savings and savings grew by 38.72% but by 2003, savings' growth rate fell to 10.75%.

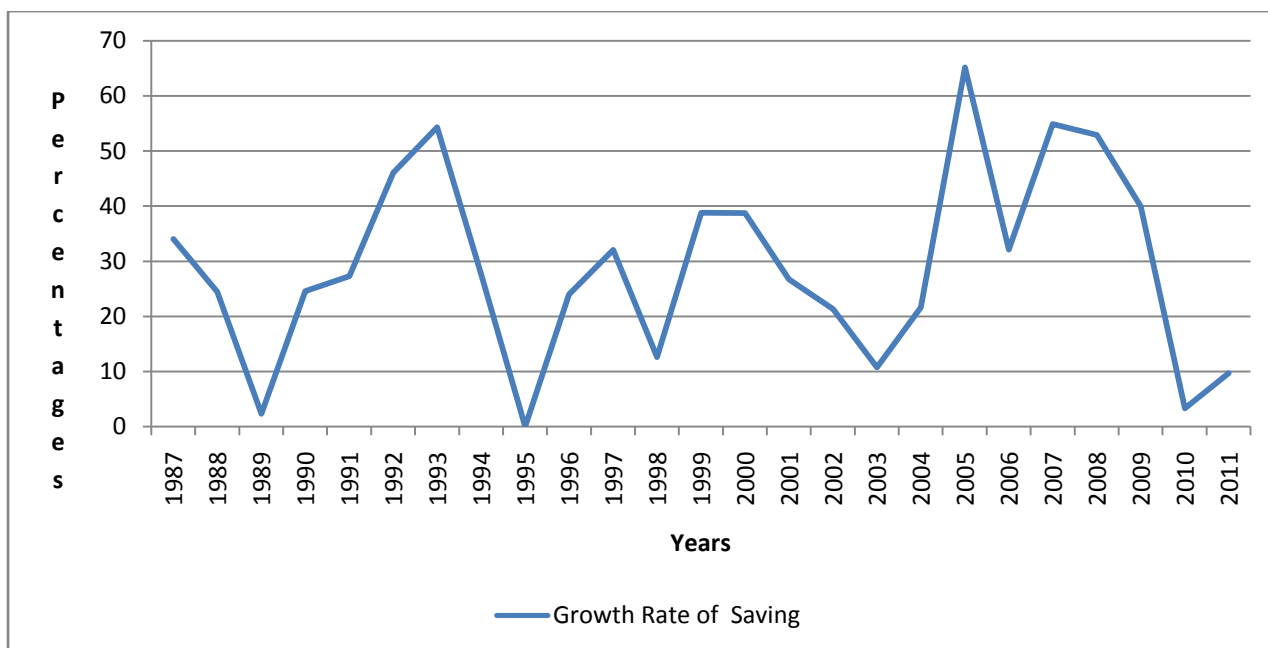


Figure II: Growth Rate of Savings in Nigeria (1987-2011) in Percentage

Savings has the highest growth rate (during the period under review) of 65.13% in 2005 before declining to 52.89%, 3.309% in 2008 and 2010 respectively and by 2011 savings growth rate was 9.701%. The improvement in savings mobilization in Nigeria, most especially through the formal financial system, has been mixed in its performance.

Performance of Investment (1986-2011)

Growth in investment in Nigeria suffers similar fate as savings within the years under review. The growth rate of investment was 34.16% in 1987 before increasing to 52.32% in 1989 and by 1990; investment growth rate has declined to 49.56%. Investment growth rate rose to 56.69% in 1992 before declining to 34.42% in 1995 and by 1998, it declined to -0.26%. This negative growth rate was not unconnected to the uncertainty and political instability in the country that occurred as a result of the demise of the then military head of state.

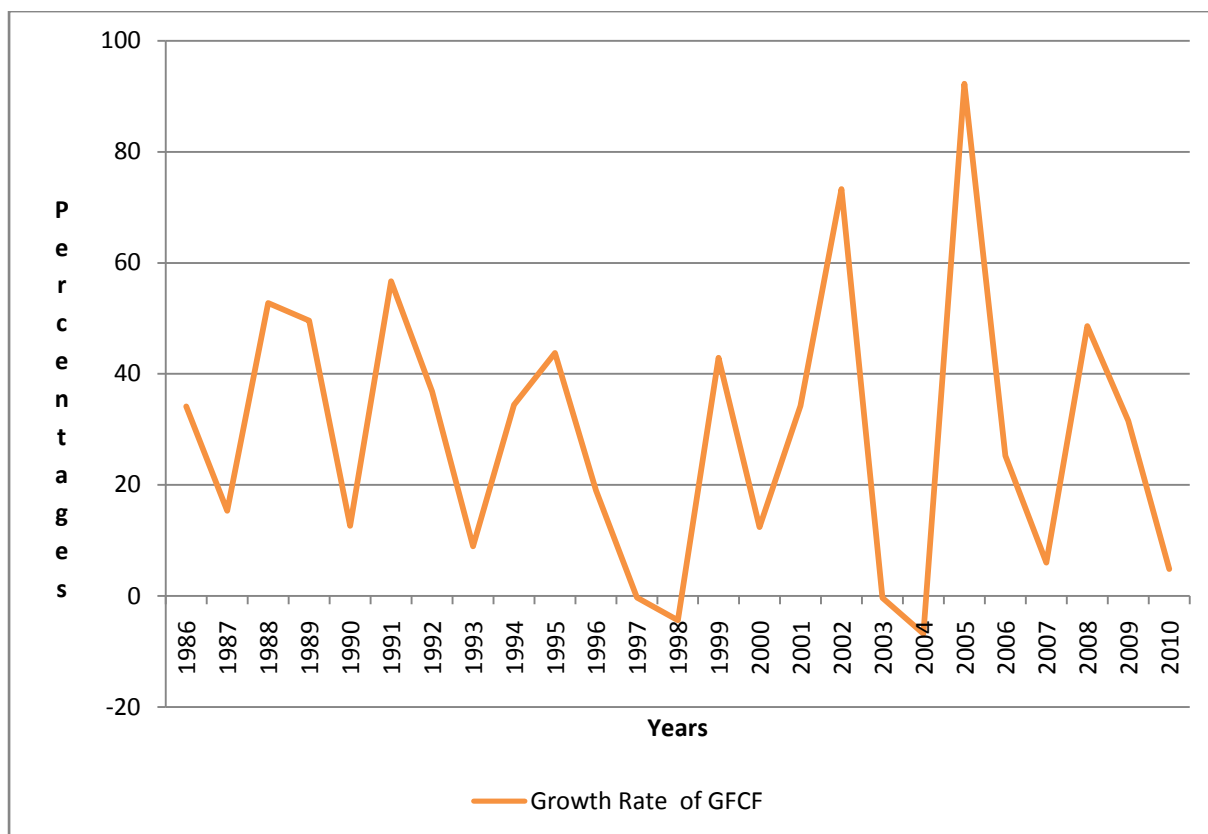


Figure III: Growth Rate of Investment (1987-2011) in Percentage

The return to democracy in 1999 could be ascribed to the high growth rate of 42.91% in investment experienced in 2000. By 2004, investment growth rate fell to -0.323% from 2002 growth rate of 34.27% and by 2006, investment growth rate rose to 92.26% which is the highest in the years under review but by 2008, investment growth rate declined to 5.99% and further declined to 4.84% in 2011. The trend of the growth rate of investment shown above is mixed as the period witnessed both positive and even negative growth rates of investment.

Performance of Economic Growth (1986-2011)

The growth of the country’s economy measured by the growth rate of real income is shown by figure 3 below. In 1987, the year after the liberalization of the country’s financial system, the growth rate of the economy was -0.566% which was common with other economies that just initiated reforms and by the year 1989, the country’s real income grew by 7.66% but

declined to -0.811 in 1991. This is the worst in the years under review. There was an upward swing in the growth rate of the nation's real income in 1994 with growth rate of 0.22%, and by 1996 is rose to 4.38%. The growth rate of real income was 21.35% in 2002, which is the highest in the period under review. This was associated with reform agenda of the then democratic government. In the year 2005, real income growth rate peaked at 6.51% and by 2008 and 2009 respectively it recorded growth rates of 5.98% and 7.4% respectively.

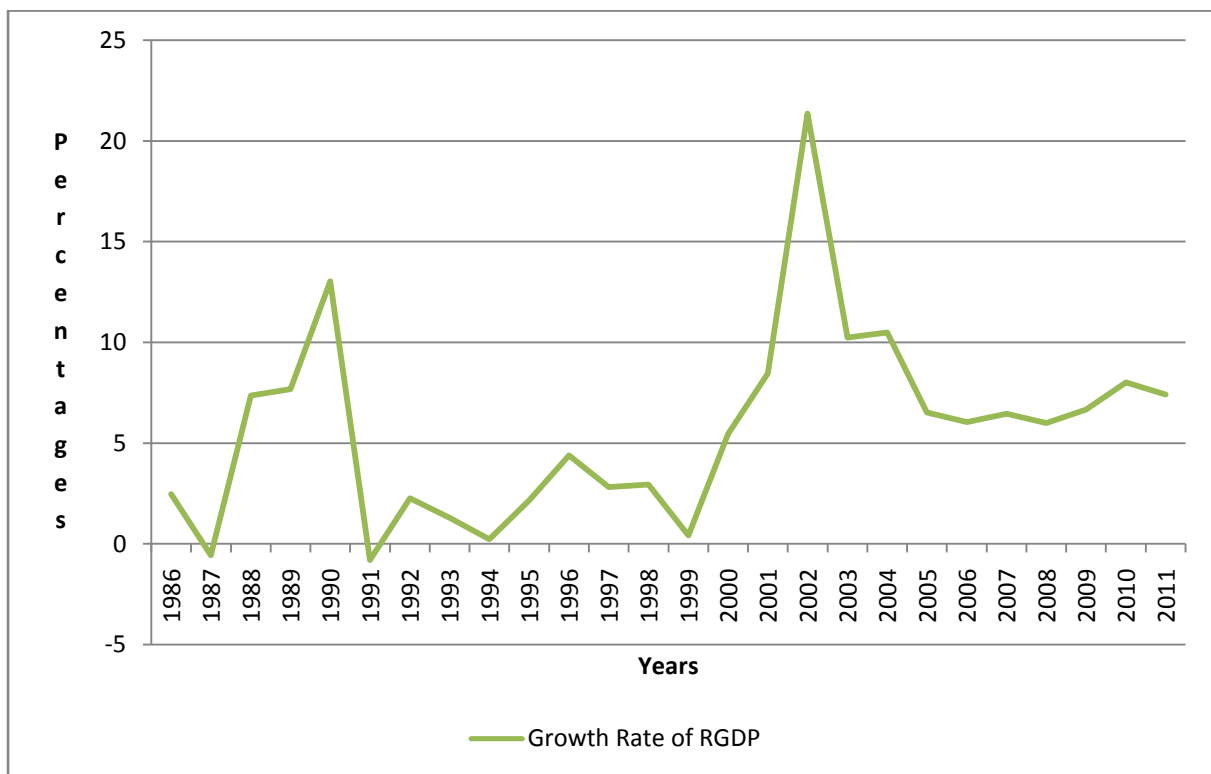


Figure IV: Growth Rate of RGDP (1987-2011) in Percentage

2.5. Theoretical Literature Review

It is generally recognized that financial systems contribute to long-run economic growth (Oima and Ojwang, 2013). However, there is a debate as to whether one form of financial structures is more efficient than others in allocating saving to investment and consequently bringing economic growth. Prominent among these views are intermediation growth theory and market based economic growth theory, however, some analysts Levine (2002), Beck and Levine (2002) are of the view that a well developed financial systems

whether banks or market based are all there for development. In particular, well developed financial intermediaries and well functioning markets can generate growth by improving the effectiveness and efficiency with which savings are used and increasing 'the amount of funds allocated to firms for investment.

2.5.1. Some Theories of Financial Structure

Theory of Intermediary (Market) Based Financial System

The market-based theory underscores the importance of well-functioning markets, and accentuates the problems of bank-based financial systems. Generally, big, liquid and well functioning markets foster growth and profit incentives, enhance corporate governance and facilitate risk management (Levine, 2002, and Beck and Levine, 2002).

According to the theory of intermediary-based financial system, Commercial banks are more growth enhancing than market at the early stages of economic growth and development. In fact these authors who believe in the bank based theory are of the view that financial intermediaries are also vital participant in market. They specifically contribute to effective functioning of the market by providing liquidity which is essential in transaction and in critical time of crisis. Critics of this view have stressed the short coming of intermediary based systems by asserting that it reveals information publicly, thereby reducing incentives for investors to seek and acquire information Boyd and Prescott (1986). Thus, distortion that emanate from asymmetric information can be alleviated by banks through forming long-run relationships-with firms and through monitoring. As a result of this, bank based arrangement can produce better improvement in resource allocation and corporate governance than market-based institutions Stiglitz (1995), Blide (1993).

Theory of Bank Based Financial System

The theory of bank-based financial system stresses the positive role of banks in development and growth, and, also, emphasizes the drawbacks of market-based financial systems. The

theory opines that banks can finance development more effectively than markets in developing economies, and, in the case of state-owned banks, market failures can be overcome and allocation of savings can be undertaken strategically (Gerschenkron, 1962). In a way, those banks that are not impeded by regulatory restrictions, can exploit economies of scale and scope in information gathering and processing (Levine, 2002 and Beck and Levine, 2002 provide more details on these aspects of bank-based systems). In fact, bank-based financial systems are in a much better position than market-based systems to address agency problems and short-termism (Stiglitz, 1985; Singh, 1997). In particular, the free-rider problem inherent in atomistic markets in acquiring information about firms is emphasized by Stiglitz (1985). But well-developed markets quickly reveal information to investors at large and thereby dissuading individual investors from devoting resources toward researching firms. Thus, banks can make investments without revealing their decisions immediately in public markets and this creates incentives for them to research firms, managers, and market conditions with positive ramifications on resource allocation and growth. Additionally, Rajan, and Zingales (1999) stresses that powerful banks with close affinity to firms may be more effective at exerting pressure on firms to re-pay their debts than atomistic markets. The bank-based view also stresses the shortcomings of market-based systems by asserting that it reveals information publicly, thereby reducing incentives for investors to seek and acquire information. Information asymmetries are thus emphasised, more so in market-based rather than in bank-based financial systems (Boyd and Prescott, 1986). Thus, distortions that emanate from asymmetric information can be alleviated by banks through forming long-run relationships with firms, and, through monitoring, to contain moral hazard. As a result, bank-based arrangements can produce better improvement in resource allocation and corporate governance than market-based institutions (Stiglitz,

1985; Bhide, 1993).

The Theory of Financial Services Based Financial System

The financial services view (Merton and Bodie, 1995; Levine, 1997), downplays their importance in the sense that the distinction between bank-based and market-based financial systems matters less than was previously thought. It is financial services themselves that are by far more important than the form of their delivery (World Bank, 2001). The issue is not the source of finance in the financial services view, but the creation of an environment where financial services are soundly and efficiently provided. The emphasis is on the creation of better functioning banks and markets rather than on the type of financial structure. Simply put, this theory suggests that it is neither bank nor markets that matter, but both. They are different components of the financial system; they do not compete, and as such ameliorate different costs, transaction and information, in the system (Boyd and Smith, 1998; Levine, 1997; Demirguc-Kunt and Levine, 2001). Under these circumstances, financial arrangements emerge to ameliorate market imperfections and provide financial services that are well placed to facilitate savings mobilization and risk management, assess potential investment opportunities, exert corporate control, and enhance liquidity. Consequently, as Levine (2002) argues, the financial services view places the analytical spotlight on how to create better functioning banks and markets, and relegates the bank-based versus market-based debate to the shadows.

The Law and Finance View Theory

The law and finance view, initiated by La porta, Lopez de-Silanes, Shleifer, and Vishny (1998), emphasizes the role of creditor and investor rights for financial intermediation. In countries where the legal system enforces these rights effectively, the financial system also becomes more efficient in providing services to the private sector. Consequently, the quality of the legal system is a strong predictor of financial development. Empirically, this view

suggests a positive relationship between economic performance and the component of financial development identified by the legal environment. Evidence from cross-country growth analysis supports this view (Levine 1999, 1998; Laporta et al. 1998). The implication of the law and finance view is that the establishment of an appropriate legal environment will facilitate the development of banks and stock markets, which enhances economic performance.

2.5.2. Some Theories of Growth

Endogenous Growth Theory

The endogenous growth theories emphasise the role of financial intermediaries in economic growth. They show how there can be self-sustaining long-run growth as a result of a developed financial markets and better functioning financial intermediaries. The influence of financial markets on economic growth can be best seen in the simplest of this endogenous growth models. The model of Pagano (1993) may be utilised to make the point. In this framework the ‘AK’ model, in which aggregate output is a linear function of the aggregate capital stock can be expressed as:

$$Y_t = AK_t \dots \dots \dots (2.1)$$

Pagano (1993) assumes firstly that the population is stationary. He also assumes that a single good is produced in the economy, which can be consumed or invested (to depreciate at the rate of δ per period); and thirdly, he assumes that a proportion $(1-\phi)$ of the flow of saving is lost during financial intermediation.

Following from these assumptions, gross investment can be expressed in the form below:

$$I_t = K_{t+1} - (1 - \delta) K_t \dots \dots \dots (2.2)$$

Capital market equilibrium is given by:

$$\phi S_t = I_t \dots \dots \dots (2.3)$$

This follows from combining the third assumption with the capital market equilibrium condition (saving = investment) that rules in a closed economy with no government.

From equation (2) the growth rate of output, Y , at time $t + 1$ will now be:

$$g_{t+1} = Y_{t+1}/Y_t = K_{t+1}/K_t$$

Using equation (3) and dropping the time indices the steady-state growth rate can now be expressed as:

$$g = A \frac{I}{Y} - \delta = A\phi s - \delta \dots \dots \dots (2.4)$$

Where $s = S/Y$ is the gross saving rate.

Equation (4) shows that financial development can affect growth in three ways:

- (a) Improving the allocation of capital by raising A , the social marginal productivity of capital, financial intermediaries improve the allocation of capital. This can be done in two principal ways: first, by inducing individuals to invest in riskier but more productive technologies by providing risk-sharing opportunities; and second, by collecting information and making sure that the most productive investments are financed.
- (b) Channelling funds to firms by raising ϕ , the proportion of saving channelled to investment, intermediaries can help to increase the growth rate g .
- (c) Affecting the savings rate by raising s , the private savings rate, and the financial system increases the resources available for capital accumulation, and given that returns to capital are non-decreasing, the financial system can permanently raise the rate of growth of output per capita.

Harrod-Domar Growth Theory

The Harrod-Domar Growth Model holds that the principal strategy of development is the mobilization of domestic and foreign saving in order to generate sufficient investment (capital) to accelerate economic growth. However, in order to grow, new investment

representing new additions to the capital stock are necessary and this can be mobilized through the nation's financial system.

The simplified version of the famous equation in the Harrod-Domar theory of economic growth is presented below.

- (i) Saving (S) is some proportion, s , of national income (y) such that we have the simple equation.

$$S = sy \dots 2.5$$

- (ii) Net Investment (I) is defined as the change in the capital stock, k , and can be represented by Δk such that

$$I = \Delta k \dots 2.6$$

But because the total capital stock, k , and bears a direct relationship to total national income or output, y , as expressed by the capital-output ratio, k , it follows that:

$$\frac{K}{Y} = k \text{ or } \frac{\Delta k}{\Delta y} = k$$

Finally, $\Delta k = k\Delta y \dots 2.7$

Finally, because net national savings, s , must equal net investment, I , we can write this equality as

$$S = I \dots 2.8$$

From equation 2.5, we know that $S = sy$ and equation 2.6 and 2.7 we know that

$$I = \Delta k = k\Delta y$$

It therefore follows that we can write the identity of saving equalling investment shown by equation 2.8 as

$$S = k\Delta k = \Delta k = I \dots 2.9$$

Or simply as

$$s_y = k\Delta y \dots 2.10$$

Dividing both sides of equation 2.10 by y and then k , we obtain the following expression

$$\frac{\Delta y}{y} = \frac{s}{k} \dots 2.11$$

Where $\frac{\Delta y}{y}$ represents the rate of change or rate of growth of GNP (i.e. % Δ in GNP)

Harrod-Domar theory of economic growth states simply that the rate of growth of GNP $\frac{\Delta y}{y}$ is determined jointly by the national saving ratio, s , and the nation capital output ratio, k .

2.6. Empirical Literature Review

Economists hold startlingly different opinions regarding the importance of the financial system in the process economic growth and development. There are some economists who hold the view that financial structure and financial development are essential for economic growth. However, there some economists who hold the view that financial development do not lead to economic growth and development. Some of these views are reviewed below.

Nigerian Case Studies

Maduka and Onwuka (2013) investigated the impact of financial structure on economic growth in Nigeria within the period of 1970 to 2008. The study employed unit root test, cointegration test using the Johansen and Juselius (1990) maximum likelihood procedure, and vector error correction mechanism. The results of the study revealed a negative significant effect of financial market structure on economic growth within the period under study. The study concluded by recommending that there is the need to put appropriate financial policies in place that will encourage the growth per capita GDP.

Ujunwa et al (2013) examine specifically the impact of competing financial structure theories on economic growth in Nigeria using time series data for a 17 year period: 1992-2008. The study used the Ordinary Least Square regression approach to estimate the formulated models in line with financial structure theories. The growth rate of the gross domestic product per capita was adopted as the dependent variable, while the independent variables include; conglomerate index of bank-based financial structure; conglomerate index of market-based financial structure, conglomerate index of financial service-based financial structure; and the conglomerate index of the legal-based financial structure. This study found that the coefficients of bank-based theory and legal-based theory were positive in promoting economic growth, while the regression coefficients of market-based theory and the financial service theory were negative in promoting economic growth.

Onwumere, Onudugo and Imo (2013) investigated the impact of financial structure on economic growth in Nigeria using ordinary least square. The study finds support for the assertion that financial structure has positive and significant impact on economic growth. However, the study finds out that some sector exert more influence (Banking and Market) than others (Insurance). The study recommended that greater efforts should be made by government and regulatory authorities at ensuring that an enabling environment is provided.

Ujunwa and Salami (2011) examined specifically the impact of legal-based financial structure on long-run economic growth in Nigeria, using time series data for 17 year period: 1992 – 2008. Time series general method of movement (GMM) regression was used to estimate the necessary models. The growth rate of gross domestic product per capita was adopted as the dependent variable, while the independent variables were the country's legal codes. The study also controlled for government expenditure as a ratio of GDP and gross capital formation as ratio of GDP. The regression result showed that the components of legal-

based financial structure are negative and non-significant in promoting economic growth in Nigeria.

Bulus (2011) assessed the impact of financial sector reforms on Nigeria's economic growth using the error correction mechanism and discovered that growth in the banking sector credit has a negative impact on economic growth while he found that at sector level, banking sector credit has positive significant impact on manufacturing and service sectors but a negative significant impact on agricultural output.

Olofin and Afangideh (2008) investigated the role of financial structure in economic development in Nigeria using aggregate annual data from 1970 to 2005. It developed a small macroeconometric model to capture the interrelationships among aggregate bank credit activities, investment behaviour and economic growth given the financial structure of the economy. Three stage least square estimation technique was adopted while counterfactual policy simulations were conducted. The study holds that a developed financial system alleviates growth financing constraints by increasing bank credit and investment activities with resultant rise in output. A major outcome of the study is that financial structure has no independent effect on output growth through bank credit and investment activities, but financial sector development merely allows these activities to positively respond to growth in output. The policy implication therefore is that effort should not be dispensed at promoting a particular type of financial structure but geared towards policies that would reduce transaction cost such as the enforcement of creditors and investors rights in the financial system. This will bring about the development of both banks and the capital market and this in turn would stimulate growth in the economy.

Audu (2003) investigated the impact of domestic credit on economic growth in Nigeria between the periods 1970 to 2000. He applied two-stage least square and granger causality analytical techniques and found that domestic credit exerted positive influence on economic

growth in Nigeria and also discovered a bi-directional causation running from domestic credit to gross domestic product.

Agbawn (1998) investigated the impact of financial deepening on economic growth in Nigeria using OLS and granger causality test and observed a negative relationship between financial deepening and economic growth in both sample periods of 1975-1985 and 1986-1996. He discovered a negative unidirectional causality between financial deepening and economic growth and a positive unidirectional causality from economic growth to financial deepening.

Other Countries Case Studies

Mohammed and Shatta (2013) investigated the nexus between financial sector development and economic growth in the Saudi economy over the period 1970-2012 by using four alternative proxies for financial development and several techniques including unit root tests, the co-integration test, the Granger Causality Test, and the Vector Error Correction Model (VECM). We used time series econometrics techniques to examine the causal relationship between financial sector development and economic growth in the Saudi economy. The results obtained from the analyses show that there is a positive relationship between financial sector development and economic growth in Saudi Arabia. The development of the financial system will thus have a positive impact on the growth of the Saudi's economy.

Ageli and Zaidan (2013) investigated the nexus between financial sector development and economic growth in the Saudi economy over the period 1970-2012 by using four alternative proxies for financial development and several techniques including unit root tests, the co-integration test, the Granger Causality Test, and the Vector Error Correction Model (VECM). Time series econometrics techniques were used to examine the causal relationship between financial sector development and economic growth in the Saudi economy. The results obtained from the analyses showed that there is a positive relationship between financial

sector development and economic growth in Saudi Arabia. The development of the financial system will thus have a positive impact on the growth of the Saudi economy.

Irfan et al (2009) examined empirically the relationship between long-run growth and financial structure, measures by weighted sum of structure- activity and structure-size in Pakistan employing error correction method (ECM) for short run dynamics and applying the Fully Modified Ordinary Least square(FMOLS). This study found that the variables of financial structure are correlated with growth and financial structure significantly explains output levels in case of Pakistan and argued that the latter finding was the result of financial liberalization in a poor regulatory environment. These findings also showed that the main channel of transmission from financial development to growth is the efficiency, rather than the volume, of investment.

Wolde-Rafael (2009) applies multivariate VAR and Modified Wald test (MWALD) for Kenya. He establishes bidirectional causality between financial development and economic growth in three out of four measures of financial development used. His study uses annual data and covers the period 1966 to 2005.

Abu-Badr and Abu-Qarn (2008) also obtain similar results for Egypt using annual data from 1960 to 2001 and applies a multivariate VAR method. Their results reveal bidirectional causality for all the four measures of financial development employed.

Ergungor (2003) investigated how the structure of a financial system, whether it is bank or market oriented, affects economic growth in Cleveland. The study expressed real per capita GDP growth, the growth rate of the per capita capital stock and productivity growth as a function of overall financial development measured by the activity of markets and banks .also included is the structure financial system, which is measured by the activity of markets relative to banks (higher values indicate more dominant markets), the flexibility of the

judicial system, and a number of economic, social, and political factors. Two estimation methods were used in this study. The first was ordinary least squares using White's heteroscedasticity-robust standard errors and the second estimation technique controls for potential simultaneity. This study found that countries grow faster when they have flexible judicial system and more market-oriented financial systems.

Yusuf and Peters (1984) implement a similar study for the Republic of Korea for the years 1965-1982. They regressed gross national savings and gross domestic savings on gross national income, inflation, real time deposit rate, foreign savings and a dummy variable for the recession years 1980-1982. Their results indicate that a 10% increase in the real interest rate on time deposits raises gross national savings by 11.57% and gross domestic savings by 5.03%.

Cross Country Studies

Oima and Ojwang (2013) investigated the relationship between financial structure and real growth of Gross Domestic Product in some selected ECOWAS States using time series data from 1976 to 2008, employing the Unrestricted Error Correction Model (UEGCM) which follows the order of Autoregressive Distributed Lag (ARDL) to investigate the existence of cointegration relationship among some macroeconomic variables such as GDP, Financial Structure proxied by the ratio of stock market capitalization to bank credit, banking sector domestic credit to GDP, domestic investment, broad money supply and stock market capitalization as percentage of GDP. This study asserted empirically that financial structure matters for growth of real Gross Domestic Product. However some economies are more of bank growth while the others are markets led growth.

Odhiambo (2007) examines the causal relationship between financial development and economic growth in three Sub-Saharan African countries. The findings reveal that in both

Kenya and South Africa, the direction of causality is from economic growth to financial development while Tanzania also exhibits unidirectional causality; but this is from finance to economic growth,

Khan and Senhadji (2003) use both panel and cross-sectional methodologies on 159 countries for the period 1960-1999. They conclude that financial development does have positive impact on economic growth.

Beck, Levine and Loayza (2000) however used the Generalised-Method-of-Moments (GMM) technique on cross sectional data and the overall results of their findings reveal that financial development is positively related to both per capita GDP growth and total factor productivity growth.

Luintel and Khan (1999) applied time-series and dynamic heterogeneous panel methods to examine the relationship between financial structure and economic growth. The results indicate that for most countries in the sample, financial structure and financial development tend to have a strong impact on economic growth. Meanwhile, on the time-series, there is a long-run relationship between the level of output, capital stock, financial structure and financial development.

King and Levine (1993a) carried out a cross-country study with an endogenous growth model on eighty countries with data covering the period 1960-1989. The results show that financial development has a positive impact on economic growth. Meanwhile, the issue of causality could not be resolved due to the cross-country technique employed in their analysis.

King and Levine (1993) used IMF cross sectional data and various financial indicators to conclude that there is a positive relationship between financial indicators and growth, and that financial development is robustly correlated with subsequent rates of growth, capital

accumulation, and economic efficiency. They correctly emphasize that policies that alter the efficiency of financial intermediation exert a first-order influence on growth

Levine (1993) examined the relationship between the evolution of financial services and long run economic growth among different countries and found that liquidity, risk, transactions cost, information gathering and resource coordination cost create incentive for the emergence of financial contracts and institutions and that the level of income per capita, public policies and legal codes determine the provision of financial services and type of financial structures that provide these services. The resultant financial institution can alter investment incentive such as steady state growth rate per capita output increase.

Ogun (1986) used cross-section analysis to estimate the correlation between financial deepening and economic growth by using data for 20 countries in Africa from 1969 - 1983. The degree of financial intermediation is measured using the ratios of monetary liabilities (M1, M2, and M3) to GDP. For the full sample, all the monetary liabilities are negative and only the ratio of M3 to GDP is statistically significant. When the countries are split into high and low income countries, some of the coefficients of the monetary liabilities are positive while some were negative. However, they were all insignificant and offer no support to the growth enhancing capabilities of financial intermediation

Fry (1982) estimated an OLS regression that related inflation to the growth of per capita money stock, the change in the real deposit rate and lagged per capita real money stock. The test was implemented for seven Asian countries (Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand) of the Pacific Basin for the period 1961-1977. The results were supportive of the financial liberalization hypothesis since the change in real deposit rate was negatively related to the inflation rate. This means that an increase in the deposit rate raises demand for money, raises output growth and reduces inflation at the same time.

Implication of Literature for the Study

There is a large body of literature on the effects of the structure of the financial system on the economy and a few of these have been reviewed above. However, it is obvious from the literature reviewed above that most of the reviewed studies focussed on just the impact assessment of financial structure and/or financial development of economic growth; none attempted the analysis of the structural changes in the financial system. This, this study aimed to attempt by examined the trend and pattern of diversity the Nigerian financial system has experienced since the liberalization of the Nigerian financial system. Also, most of the studies reviewed above focussed on testing whether a market based financial system is better than a bank based financial system and vice-visa. This study is based on financial services view.

CHAPTER THREE

METHODOLOGY

3.1. Framework for Methodology

McKinnon and Shaw Financial Repression Hypothesis argued that the liberalization of the financial system will better position the financial system to adequately mobilize savings necessary for the realization of investment and accelerated economic growth.

McKinnon (1973) and Shaw (1973) projected the analysis that financial liberalisation was needed to remedy the problems caused by financial repressive policies of developing countries. McKinnon and Shaw both identified financial repression as a regime consisting of the imposition of interest-rate ceilings, foreign exchange regulations, direct credit allocation policies, high reserve requirements, and heavy taxation of the financial sector. They identified many developing countries as pursuing such policies, which had the effect of retarding economic growth in the long run. Such policies they both argued resulted in shallow finance, which reduced the real size of the financial system and consequently, hampered its role of efficient mobilisation and allocation of resources. McKinnon and Shaw noted that the problem with lagging economies is not lack of investment opportunities but unattractive savings. A main feature of shallow finance is that the low level of interest rates discourages agents from saving and consequently, this makes capital for investment hard to come by. Lagging economies are also characterised by manipulation of prices in virtually all markets. The general policy prescription that the McKinnon-Shaw model implies is to raise real interest rates either by increasing the nominal interest rates or by reducing the rate of inflation. Such a policy would result in a reallocation of households' portfolios in favour of deposits and hence an increase in the supply of credit and the volume of investment.

Galbis (1977) extended the analysis of McKinnon and Shaw. He examines an economy comprised of two production sectors with contrasting financial constraints and technological processes, but which produce the same output.

There are two sectors: a less efficient sector and a more efficient sector which is more technologically advanced and has higher rates of return on investment. With low deposit rates of interest because of financial repression, investment will take place in the less efficient sector as it would be more profitable for firms to invest rather than increase their bank deposits. Credit will not flow to the more efficient sector. However, with increased deposit rates following financial liberalisation (and other liberalization measures) would increase the mobilization of savings by the formal financial sector (financial deepening), the low return on investment in the less efficient sector means that firms would prefer to increase their bank deposits by reducing investment and this increases credit flowing to the more efficient sector. The higher rate of return on investment in the more efficient sector would result in the deepening of the financial system and increase the quality of investment, and this will increase economic growth.

3.2. Research Hypothesis

In view of the objectives of this study, the following hypotheses as shown below were formulated:

Hypothesis One (1)

Null Hypothesis (H_0): There is no significant relationship between Financial Structure, Savings and Investment in Nigeria.

Alternative Hypothesis (H_1): There is a significant relationship between Financial Structure, Saving and Investment in Nigeria

Hypothesis Two (2)

Null Hypothesis (H₀): There is no significant relationship between Financial Structure and Economic growth in Nigeria.

Alternative Hypothesis (H₁): There is a significant relationship between Financial Structure and Economic Growth in Nigeria.

3.3. Empirical Framework

Saving Function

Theoretically, saving is a function of level of income and interest.

$$TS = \alpha_0 + \alpha_1 DIR + \alpha_2 RGDP + \mu_t \dots \dots \dots (3.1)$$

For the purpose of this study Savings (TS) is estimated as a function of Monetary Policy Rate (MPR) since this is the anchor rate for other interest rate, Inflation, Income in the past period (GDP(-1)) and Financial Structure (FSR)

Investment Function

Investment is determined by interest rate and Level of Income theoretically.

$$INV = \beta_0 + \beta_1 DIR + RGDP + \square_t \dots \dots \dots (3.2)$$

For the purpose of this study, investment equation is specified as a function of Real level of Income (RGDP), Monetary Policy Rate (MPR) , Total Savings (TS) and Banking Sector Credit to the Economy (BSC), Stock Market Capitalization (SMC) and Foreign Direct Investment (FDI)

Growth Function

Economic growth is determined by investment and Savings level in an economy.

$$RGDP = \gamma_0 + \gamma_1 INV + \gamma_2 TS + V_t \dots \dots \dots (3.3)$$

For the purpose of this study, the growth function will be estimated as a function of Total Saving (TS), Investment (INV), Banking Sector Credit (BSC), Financial Structure (FSR) and Stock Market Capitalization (SMC).

3.4. Model Specification

The study adopted Olofin and Afangideh's (2008) model as a framework for the specification of the Savings, investment and growth equations. These equations are specified below:

Savings Equation

The saving function for this study is specified below:

$$TS = \alpha_0 + \alpha_1 MPR + \alpha_2 INF + \alpha_3 RGDP (-1) + \alpha_4 FSR + \mu_t \dots \dots \dots (3.4)$$

TS is Total Savings, MPR is Monetary Policy Rate, INF is Inflation, RGPD is Real Income, and FSR is an index for Financial Structure. FSR is defined as the stock market capitalization ratio over credit to private sector ratio. Higher FSR means a system that is more of the capital market-based variety; while a lower FSR means more of a bank-based system. It is important to note that for the purposes of this study, just as in Olofin and Afangideh (2008), we are interested in the significance or otherwise of the coefficient of FSR, rather than its sign. In either case, a significant coefficient of FSR implies that financial structure matters; an insignificant coefficient of FSR implies that financial structure is of no consequence whatsoever.

Investment Equation

The investment equation estimated in this study is specified as shown below:

$$INV = \beta_0 + \beta_1 RGDP_{t-1} + \beta_2 MPR + \beta_3 TS + \beta_4 BSC + \beta_5 SMC + FDI \beta_6 \square_t \dots \dots \dots (3.5)$$

The choice of explanatory variables included in the investment equation follows Olofin and Afangideh (2008) and other empirical literatures reviewed.

Growth Equation

The growth equation to be estimated is of the form:

$$RGDP = \gamma_0 + \gamma_1 TS + \gamma_2 INV + \gamma_3 BSC + \gamma_4 FSR + \gamma_5 SMC + V_t \dots \dots \dots (3.6)$$

Where RGDP is Real Income, TS is Total Saving, INV is investment (proxied by Gross Fixed Capital Formation) and BSC is Banking Sector Credit, FSR is Financial Structure and SMC is Stock Market Capitalization.

3.5. A priori Expectation

Based on the endogenous growth theory the variables in the models above are expected to have the following signs.

Table 3.1: A priori Expectation

S/N	Variables	A priori Expectation
1	Monetary Policy Rate (MPR)	Positive (+)
2	Inflation (INF)	Positive (+)
3	Real Gross Domestic Product Lag (RGDP(-1))	Positive (+)
4	Financial Structure Index (FSR)	Positive (+)
5	Real Gross Domestic Product Lag (RGDP(-1))	Positive (+)
6	Monetary Policy Rate (MPR)	Positive (+)
7	Total Savings (TS)	Positive (+)
8	Banking Sector Credit (BSC)	Positive (+)
9	Stock Market Capitalization (SMC)	Positive (+)
10	Foreign Direct Investment (FDI)	Positive (+)
11	Total Savings (TS)	Positive (+)
12	Investment (INV)	Positive (+)
13	Banking Sector Credit (BSC)	Positive (+)
14	Financial Structure Index (FSR)	Positive (+)
15	Stock Market Capitalization (SMC)	Positive (+)

3.6. Diagnostic Tests

Unit Root Test

Tests for unit roots are often undertaken to determine the time series behaviour of the variable i.e. whether a time series variable have unit roots (non-stationary) or is a stationary variable. The unit root tests ascertain the order of integration for a given variable.

Augmented Dickey-Fuller Test (ADF)

The study tested for the presence of unit root using Augmented Dickey-Fuller test in order to overcome the problem of spurious regression often associated with non-stationary time series

which are misleading and makes prediction unreliable. The starting point for stationarity test is to find the order of integration of both dependent and independent variables of the model. The order of integration which would help us ascertain the number of times a variable will be differenced to arrive at stationarity. It will also give us the standing ground to make meaningful inferences from the estimation of the variables under investigation. The Augmented Dickey Fuller (ADF) tests were used to examine the characteristics of the data samples at level, constant, and constant and trend. The ADF test is implemented by OLS estimate of the following equations:

$$\Delta Y_t = a + b_t + \beta_0 Y_{t-1} + \sum \alpha_i \Delta Y_{t-i} + \varepsilon_t \dots \dots \dots (3.7)$$

Where; Δ = first difference operator, t = the trend variable, Y_t = the variable under consideration, ε_t = a white noise error term. In the case of equation (3.9), the null hypothesis is: $H_0: b = 0$ (i.e. there is a unit root or the time series is non Stationary). Alternative hypothesis is $H_1: b < 0$ (i.e. the time series is stationary possibly around a stochastic trend). Usually, a null hypothesis (H_0) of non stationary is rejected if the computed t-statistics is greater than the critical t-values at a chosen level of significance. The lag length is strictly an empirical issue base on the various information selection criteria.

Philips-Perron (PP) Test

Phillips and Perron (1998) proposed an alternative method of controlling for serial correlation when testing for unit root. The PP method estimates the non-augmented DF test equation,

$$Y_t = \pi Y_{t-1} + (\text{Constant, time, trend}) + \mu_t \dots \dots \dots (3.8)$$

and modifies the ρ -ratio of the coefficient so that serial correlation does not affect the asymptotic distribution of the test statistic. The PP test is based on the statistic:

$$t_\alpha = t_\alpha \left[\frac{\gamma_0}{f_0} \right]^{\frac{1}{2}} - \frac{T(f_0 - \gamma_0)(se(\alpha))}{2f_0^{\frac{1}{2}} S} \dots \dots \dots (3.9)$$

Where α is the estimate, and t_α the t-ratio of α , $se(\alpha)$, is coefficient standard error, and is the standard error of the test regression. In addition, γ_0 is a consistent estimate of the error variance (calculated as $(T - K)S^2/T$, where k is the number of regressors). The remaining term, f_0 , is an estimator of the residual spectrum at frequency zero.

3.7. Estimation Techniques

Three Stage Least Square (3SLS)

For the purpose of achieving the first objective of this study, simple percentages, ratio and trend analyses was adopted while the second objective of this study was achieved using a system of equations based on McKinnon-Shaw hypothesis. The system of equations consists of three equations in three endogenous variables: Savings equation, investment equation and growth equation. The intention is to capture the spirit of McKinnon's hypothesis in a system of equations context so that the direct and indirect effects among the variables (including potential feedback) are taken into account. The system of equations was estimated using three-stage least square (3SLS) which is a combination of two-stage least squares and seemingly unrelated regression to solve the problem of simultaneity among the variables and the error terms.

Three-stage least square is a special case of instrumental variable regression. As the name suggests, there are three distinct stages in three-stage least squares. The first step is the estimation of the reduced-form of the model and the theoretical values for the equations. The second stage requires the estimation of the parameters for individuals' equations in the structural form (2SLS). In this step, empirical endogenous variables are replaced with theoretical values from step one (1). Acknowledging the simultaneous correlations of error terms in the model is the third step. Three-Stage Least square regression is very similar to the 2SLS regression form but uses the fact that these equations could be related through their error-terms and uses all information available.

Evaluation of the Forecasting power of the Model

In order to evaluate the reliability of the forecasting ability of the model Theil's inequality test was carried out. Theil's inequality coefficient and its decomposition into bias, variance and covariance proportions were used. The Theil's inequality coefficient always lies between zero and one, where zero indicates a perfect fit and one otherwise. While bias proportion tells us how far the mean of the forecast is from the mean of the actual series, the variance proportion tells us how far the variation of the forecast is from the variation of the actual series. The covariance proportion measures the remaining unsystematic forecasting errors.

Identification Condition

Three Stage Least Square (3SLS) is one of the Instrumental Approaches to modelling time series data. Therefore, there is the need to identify the instrumental variables for this analysis.

The choice of instrumental variable for this research work is based on the conditions below:

- There must be at least as many instrumental variables as coefficients to be estimated in a structural equation. This is called the order condition for identification. This condition is a necessary, but not sufficient, condition for identification. Usually, however, a structural equation model that satisfies the order condition is identified.
- Any variable that is not correlated with the residual can be used as instrumental variables. That is, all variables that are exogenous in the system of equation can be used as instruments.

Therefore, given the two conditions highlighted above the following variables were chosen as instrumental variables.

MPR: Monetary Policy Rate

INF: Inflation,

FSR: Financial Structure Index

SMC: Stock Market Capitalization

BSC: Banking Sector Credit

FDI: Foreign Direct Investment

Given the Instrumental variables above, the rank condition is met since none of the equation to be estimated has more than six (6) estimated parameters.

3.8. Data and Sources of Data

This study employed secondary time-series data from 1986 to 2012. Data on Gross Domestic Product (GDP), Gross Fixed Capital Formation (GFCF), Banking Sector Credit to the economy (BSC), Stock Market capitalization of the Nigeria Stock Exchange (SMC), Monetary Policy Rate (MPR), Inflation (INF), Foreign Direct Investment (FDI) were sourced from the Central Bank of Nigeria Statistical Bulletin 2012 edition while data on the Nigerian Pension Industry were sourced from the National Pension Commission (PENCOM) Annual Report and Statement of Account various issues . Financial Structure Index (FSR) was computed by the researcher by dividing Stock Market Capitalization (SMC) by Banking Sector Credit (BSC).

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1. Presentation and Analysis of Diagnostic Test results

4.1.1. Stationarity Test Results

Augumented Dickey-Fuller and Phillips-Perron unit root tests were carried out to determine some stochastic properties of the data employed in this study. Table 4.1 below shows that all the variables were stationary at First difference.

Table 4.1: Unit root Test Results

Variables		Unit Root Test Statistics		Conclusion
		ADF	PP	
Total Savings(TS)	Levels	0.1050	1.2196	I(1)
	1 st Difference	-7.7920	-3.5634	I(1)
Financial Structure (FSR)	Levels	-2.3329	-2.2437	I(1)
	1 st Difference	-5.0003	-4.8142	I(1)
Inflation (INF)	Levels	-2.4946	-2.5190	I(1)
	1 st Difference	-4.3104	-5.3415	I(1)
Investment (INV)	Levels	-1.9667	-2.1038	I(1)
	1 st Difference	-4.3104	-5.0535	I(1)
Monetary Policy Rate (MPR)	Levels	-2.7809	-2.7081	I(1)
	1 st Difference	-5.3242	-5.3166	I(1)
Real Gross Domestic Product (RGDP)	Levels	-2.1978	-2.8460	I(1)
	1 st Difference	-4.2440	-4.5771	I(1)
Stock Market Capitalization (SMC)	Levels	-2.0881	-0.7200	I(1)
	1 st Difference	-5.0257	-4.2972	I(1)
Banking Sector Credit (BSC)	Levels	-0.9691	-1.2911	I(1)
	1 st Difference	-3.7946	-3.4970	I(1)
Foreign Direct Investment (FDI)	Levels	0.8178	-2.3171	I(1)
	1 st Difference	-10.6258	-5.8852	I(1)

Source: Author's Computation

This means that all the variables are to be differenced once before they became stationary.

4.1.2. Evaluation of the Forecasting power of the Model

Theil's inequality test was employed to evaluate the forecasting power and the reliability of the model employed in this study. In all the equations, the model performs well as Theil's inequality coefficients are below one. The same holds for the bias proportions, variance proportions and covariance proportions. Thus, these are good indicators and serves as a useful measure of the simulation performance. These indices have all shown that our model is good for forecasting and policy simulation.

Table 4.2: Theil's Inequality Test Coefficient

Model	Theil's Inequality Coefficients	Theil's Inequality Decomposition		
		Bias Proportions	Variance Proportions	Covariance Proportions
Saving Equation	0.107798	0.0000	0.215278	0.78472
Investment Equation	0.127957	0.0000	0.171618	0.82838
Growth Equation	0.028955	0.0000	0.006698	0.993302

Source: Author's Computation

4.2. Presentation and Analysis of Estimated Models

The estimation results for the saving, investment and growth equations are shown in tables 4.3, 4.4 and 4.5 respectively below.

The savings equation presented in table 4.3 shows that monetary policy rate (MPR) has a positive impact on savings. This is consistent with the a priori expectation. A unit increase in monetary policy rate will result in 56.37127 units change in total savings. Also, inflation has a positive impact on total savings; this is consistent with theoretical expectation. A unit increase in inflation will result in 8.522012 units change in total saving. Lagged value of real income (GDP (-1)) also has a positive impact on total savings; a unit change in lagged value of real income will result in 15.76012 units change in total savings. This conforms to a priori expectation. Financial structure as represented by financial structure index (FSR) has a

positive impact on savings; this agrees with theoretical economic expectation. A unit change in financial structure index will result in 914.9305 unit change in total savings. Going by these results, it can be deduced that FSR has the highest impact on total savings. Monetary policy rate (MPR) and inflation (INF) are not statistically significant and this could be attributed to the fact that interest rates are ineffective in the mobilization of savings in Nigeria (Oima and Ojwang (2013)) while lagged value of real income (RGDP (-1)) and financial structure index (FSR) are both statistically significant at 1% level of significance. R-Squared adjusted value of 0.93 shows that the model is a good fit as it explains 93% of total systematic variation in total savings. In addition, the DW statistic of 1.75 when compared with the theoretical value of DW statistic falls within the region where conclusion cannot be taken (1.08-1.76).

Table 4.3: Savings Equation

Variable	Three-Stage Least Square (3SLS)		
	Coefficient	t-statistics	Probability
D(MPR)	56.37127	1.626444	0.1090
D(INF)	8.522012	1.423931	0.1596
D(RGDP(-1))	15.76012	16.54541	0.0000
D(FSR)	914.9305	4.938068	0.0000
Adjusted R-Squared	0.9371	Durbin-Watson Statistic	1.7504

Source: Author's Computation

The investment equation as presented in table 4.4 shows that lagged real income (RGDP (-1)) has a positive impact on investment. This conforms to the a priori expectation. A unit increase in RGDP (-1) will result in 4.567685 units increase in investment. It can be deduced from the above that past performance of the economy is important for saving mobilization. Monetary policy rate (MPR) has a negative impact on investment as a unit increase in MPR will result in 0.128676 unit decrease in investment. This negative relationship is contrary to the a priori expectation based on the McKinnon and Shaw financial repression hypothesis but agrees with the classical theory of investment which postulated a negative relationship

between investment and interest rates. Total savings (TS) has a positive impact on investment as a unit increase in total savings will be accompanied by 1.9760558 unit increase in investment. Also, banking sector credit has a positive impact on investment as a unit increase in BSC will cause investment to increase by 2.9000745 units. Stock market capitalization (SMC) has a positive relationship with investment; a unit increase in SMC will be accompanied by 6.547563 units increase in investment. Foreign direct investment has a positive impact on investment as a unit increase in FDI will result in 0.014401 unit increase in investment. RGDP (-1) is statistically significant at 1% level of significance and total savings (TS) is also statistically significant at 5% level of significance. All this variables' signs conform to theoretical expectation.

Monetary policy rate is not statically significant and this could be attributed to the fact that interest rates are not effective in the mobilization of saving and investment in Nigeria (Oima and Ojwang (2013)). Also, banking sector credit (BSC) is not statistically significant and this insignificance could be attributed to the pattern of disbursement of banking sector credit where loans are not given for investment in the real sector because of the risk involved in investing in real sector of the Nigerian Economy{Maduka and Onwuka (2013)}.

Table 4.4: Investment Equation

Variable	Three-Stage Least Square (3SLS)		
	Coefficient	t-statistics	Probability
D(RGDP(-1))	4.597685	3.068898	0.0043
D(MPR)	-0.128676	-0.764280	0.4476
D(TS)	1.979899	1.960558	0.0417
D(BSC)	2.900745	0.329671	0.7424
D(SMC)	6.547563	0.867621	0.3892
D(FDI)	0.014401	0.174187	0.8623
R-Squared	0.82588	Durbin-Watson	1.928599
Adjusted		Statistic	

Source: Author's Computation

Stock market capitalization is also statistically insignificant; this could results from the low patronage of the market by Nigerians {Ujunwa, Salami and Nwakoby (2012)}. Foreign direct

investment (FDI) is also statistically insignificant as this could be because most foreign investments in Nigeria are portfolio investment easily transferable.

R-Squared adjusted value of 0.82588 indicates that the model is a good fit as it accounted for over 82% of the systematic variation in investment. Also, there is no evidence of autocorrelation as the DW statistic of 1.928599 falls in the region of no autocorrelation when compared with the theoretical value of the DW Statistic (1.96-2.30).

The growth equation reported in equation 4.4 indicates a positive impact of total savings, investment, banking sector credit, financial structure index and stock market capitalization on economic growth. This is in conformity with theoretical expectations. A unit increase in total savings will be accompanied by 0.080337 unit increase in real GDP. Also, investment positively impacts on growth and a unit increase in investment will result in 16.70411 units increase in real GDP. Furthermore, banking sector credit (BSC) has a positive impact on economic growth because a unit increase in BSC will result in real GDP increasing by 0.011329. Financial Structure represented by financial structure index has a positive impact on growth as a unit increase in financial structure index will result in 0.691382 unit increase in real GDP. Stock market capitalization (SMC) positively impact on economic growth. A unit increase in SMC will be accompanied by 0.007656 unit increase in real GDP.

Total savings is statistically significantly at 1% and investment is also statistically significant 5% but banking sector credit is not statistically significant. The insignificance of banking sector credit could be attributed to the pattern of disbursement of banking sector credit where loans are not given for investment in the real sector because of the risk involved in investing in real sector of the Nigerian economy{Maduka and Onwuka (2013)}. Financial structure index (FSR) is statistically significant at 5% but stock market capitalization (SMC) is not

statistically insignificant and this could be attributed to the low patronage of the market by Nigerians {Ujunwa, Salami and Nwakoby (2012)}

Table 4.5: Growth Equation

Variable	Three-Stage Least Square (3SLS)		
	Coefficient	t-statistics	Probability
D(TS)	0.080337	2.939738	0.0046
D(INV)	16.70411	2.124311	0.0377
D(BSC)	0.011329	0.767195	0.4459
D(FSR)	0.691382	1.836585	0.0472
D(SMC)	0.007656	0.656455	0.5140
R-Squared Adjusted	0.919881	Durbin-Watson Statistic	1.509772

Source: Author's Computation

The adjusted R-Squared further confirmed that the model is a good fit with a value of 0.919881 meaning that the model accounted for over 91% of the systematic change in Growth and DW statistic value of 1.509772 fall within the region of inconclusive decision (0.98-1.97).

From the result of the growth equation presented above, it is obvious that investment has the highest impact on economic growth. Therefore investment should be encouraged most especially in the real sector of the economy as this has the prospect of bringing about the much desired economic growth.

The presence of autocorrelation in the estimated system was investigated using system residual portmanteau test for autocorrelation (reported in appendix D) which revealed the absence of autocorrelation in the estimated system up to the 12th lag. This test was necessary since the DW statistic for two of the estimated equation fell in the ignorance zone of the test.

4.3. Major Findings of the Study

This study found that the Nigerian financial system has undergone major changes in its composition in term of institutions and instruments as an aftermath of the liberalization of the

nation's financial system. Therefore, the liberalization of the Nigerian financial system has helped in creating a diversified financial system which can be said to be vibrant and robust.

Also, this study found that financial structure index has a direct positive impact on savings (914.9305) as well as on economic growth (0.691382). Both impact of financial structure index on savings and growth are statistically significant. This means that the structure of the financial system is important for saving mobilization and economic growth.

More so, this study found that past level of income is a determinant of the current level of savings and investment. This is based on the positive and significant impact of RGDP (-1) in both the savings and investment equations. Therefore, saving and investment can be said to be cumulative.

Furthermore, this study found that both capital market-base and bank-based financial structures have similar impact on both investment and growth. This is because both have positive coefficients. This is in agreement with the finding of Olofin and afangideh (2008). Therefore, policies should be directed at the overall growth of the financial system rather than focussing on any of the types of financial structures.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Study

This study analysed the structure of the Nigeria financial system in the post liberalization era and its impact on economic growth for the period of 1986 to 2011. The objectives of this study were to analyse the pattern and trend of the Nigerian financial system in the post liberalization era as well as to examine the impact the structural changes in the financial system had on economic growth. This study employed simple percentages and ratio for the analysis of the trend and pattern of the Nigerian financial system and small macroeconometric model for the impact of the changes in the financial structure on economic growth.

This study found that the Nigerian financial system has undergo major changes in its composition in term of institutions and instruments and the system has also evolved into a vibrant, reliable and well capitalized sector as an aftermath of the liberalization of the Nigerian financial system. Also, the liberalized financial sector is well positioned to better perform its intermediation function.

Also, the study found that financial structure as represented by financial structure index (FSR) has a statistically significant positive impact on savings. Monetary policy rate (MPR) and inflation also have direct impact on savings but are not statistically significant. Previous period real income has a positive impact that is as well statistically significant. The overall model shows that the model fit the data well given R-Square adjusted value of 0.93 which means that the model explain 93% of the systematic variation while real income in the past period and total savings have a statistically significant direct impact on investment. Banking

sector credit, stock market capitalization and foreign direct investment have positive impact on investment as well but these impacts are not statistically significant. More so, there is a statistically significant positive impact of total savings, investment, and financial structure index on economic growth. Though banking sector credit and stock market capitalization also have positive impact on growth, they are not statistically significant. The adjusted R-Square further confirmed that the model is a good fit with a value of 0.919881 implying that the model captured over 91% of systematic variation in growth.

5.2. Conclusion of the Study

The finding of this study suggests that the financial system liberalization obviously have a significant beneficial impact on the structural changes of the financial system and that the structural changes that resulted from the liberalization of the financial sector resulted in increased economic growth rate. Also, despite the structural changes, the deposit money bank still remained the dominant in term of branch network and asset base and significantly impacted on economic growth. Therefore, the liberalization and the reform of the various sub-sector of the financial sector should be continued and in fact further effort should be put in place to do away with the remaining rigidities in the financial sector. Financial liberalization benefitted the financial sector by positioning the financial system in a better position to bring about economic growth.

5.3. Recommendations

Based on the findings and conclusion of this study above, the following policy recommendations were advocated:

- The liberalization of the Nigerian financial system should be sustained and any element of government intervention left in the system should be done away. This is

because the liberalization of the country's financial system gave rise to the evolution of innovative financial institutions and instruments.

- Deliberate efforts should be made to further provide a more convenient policy and economic environment for the financial system so that the reach of the services (savings mobilization from savers and lending to borrowers) provided by financial institutions will be increased given that financial system contributes positively to economic growth.
- The Nigerian populace should be sensitized and encouraged to patronize the Nigeria capital market arm of the Nigerian financial system. This is because the patronage enjoyed by this market was majorly as a result of the recapitalization of the Nigeria banks and this patronage has begun to decline as a result of the global financial crisis.
- Prudent and diversified financial system growth should be encouraged, as this will promote economic growth and development, especially since banks and capital markets function as complements, not substitutes, in promoting economic development.
- Nigerian financial system should be encouraged to finance the real sector of the Nigerian economy by providing measure to reduce the risk associated with the sector.

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APPENDIX A

Data on the Nigerian Financial System and Economic Growth (₦ Million) (1986-2012)									
Year	Banking Sector Credit	Inflation	Real Gross Domestic Product	Monetary Policy Rate	Investment	Foreign Direct Investment	Financial Structure Index	Stock Market Capitalization	Total Saving
1986	15701.6	13.67347	257784.4	10	11351.46	3.612941	0.445976	6800	13934.1
1987	17531.9	9.694794	255997	12.75	15228.58	3.903796	0.388939	8200	18676.3
1988	19561.2	61.21113	275409.6	12.75	17562.21	4.117214	0.365946	10000	23249
1989	22008	44.67005	295090.8	18.5	26825.51	3.693643	0.421008	12800	23801.3
1990	26000.1	3.614035	328606.1	18.5	40121.31	3.17587	0.485875	16300	29651.2
1991	31306.2	22.9597	328644.5	14.5	45190.23	3.725454	0.558612	23100	37738.2
1992	42736.8	48.80198	337288.6	17.5	70809.16	6.081646	0.536793	31200	55116.8
1993	65665.3	61.26226	342540.5	26	96915.51	19.49755	0.373669	47500	85027.9
1994	94183.9	76.75887	345228.5	13.5	105575.5	20.48342	0.462265	66300	110966.8
1995	144569.6	51.59132	352646.2	13.5	141920.2	33.85591	1.002196	180400	108490.3
1996	169437.1	14.31428	367218.1	13.5	204047.6	33.3864	1.197838	285800	134503.2
1997	385550.5	10.21333	377830.8	13.5	242899.8	33.96544	0.891504	281900	177648.7
1998	272895.5	11.91292	388468.1	14.30807	242256.3	39.23382	0.746116	262600	200065.1
1999	322764.9	0.223606	393107.2	18	231661.7	39.2235	0.695784	300000	277667.5
2000	508302.2	14.52697	412332	13.5	331056.7	38.19946	0.890505	472300	385190.9
2001	796164.8	16.49485	431783.2	14.30807	372135.7	37.38951	0.866057	662500	488045.4
2002	954628.8	12.16854	451785.7	19	499681.5	36.88289	0.822037	764900	592094
2003	1210033	23.81136	495007.2	15.75	865876.5	36.05576	1.239631	1359300	655739.7
2004	1519243	10.00848	527576	15	863072.6	47.2388	1.485935	2112500	797517.2
2005	1976711	11.56515	561931.4	13	804400.8	57.77515	1.5775	2900060	1316957
2006	2524298	8.548721	595821.6	12.25	1546526	80.76899	2.235598	5120900	1739637
2007	4813489	6.563952	634251.1	8.75	1936958	87.11038	3.593055	13181690	2693554
2008	7799400	15.05556	672202.6	9.8125	2053006	87.22219	1.381832	9562970	4118173
2009	8912143	13.92956	718977.3	7.4375	3050576	177.1705	0.772446	7030840	5763511
2010	7706430	11.8	776332.2	6.125	4012919	116.6679	0.976488	9918210	5954260
2011	7312726	10.3	834000.8	9.1875	3908280	163.1063	0.907372	9672650	6531913
2012	8150030	12	888893	12	3357398	125.2694	1.01035	14800900	8062901

APPENDIX B

UNIT ROOT TEST RESULTS

ADF UNIT ROOT TEST RESULTS

TS at Level

Null Hypothesis: TS has a unit root
 Exogenous: Constant
 Lag Length: 8 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.105008	0.9568
Test critical values: 1% level	-3.857386	
5% level	-3.040391	
10% level	-2.660551	

*MacKinnon (1996) one-sided p-values.

TS at First Difference

Null Hypothesis: D(TS) has a unit root
 Exogenous: Constant
 Lag Length: 7 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	- 7.792993	0.0000
Test critical values: 1% level	-3.857386	
5% level	-3.040391	
10% level	-2.660551	

FSR at Level

Null Hypothesis: FSR has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.332861	0.1698
Test critical values: 1% level	-3.711457	
5% level	-2.981038	
10% level	-2.629906	

FSR at first difference

Null Hypothesis: D(FSR) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.167474	0.0003
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

INF at Level

Null Hypothesis: INF has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.494648	0.1282
Test critical values: 1% level	-3.711457	
5% level	-2.981038	
10% level	-2.629906	

INF at First Difference

Null Hypothesis: D(INF) has a unit root

Exogenous: Constant

Lag Length: 3 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.310246	0.0030
Test critical values: 1% level	-3.769597	
5% level	-3.004861	
10% level	-2.642242	

INV at Level

Null Hypothesis: INV has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.966742	0.2986
Test critical values: 1% level	-3.711457	
5% level	-2.981038	
10% level	-2.629906	

INV at First Difference

Null Hypothesis: D(INV) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.808538	0.0008
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

MPR at Level

Null Hypothesis: MPR has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=8)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.780919	0.0748
Test critical values: 1% level	-3.711457	
5% level	-2.981038	
10% level	-2.629906	

*MacKinnon (1996) one-sided p-values.

MPR at First Difference

Null Hypothesis: D(MPR) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on AIC, MAXLAG=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.324180	0.0002
Test critical values: 1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

RGDP at Level

Null Hypothesis: RGDP has a unit root
Exogenous: Constant
Lag Length: 5 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	- 2.197843	0.9999
Test critical values: 1% level	-3.495677	
5% level	-2.890037	
10% level	-2.582041	

*MacKinnon (1996) one-sided p-values.

RGDP at First Difference

Null Hypothesis: D(RGDP) has a unit root
Exogenous: Constant
Lag Length: 4 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.244003	0.0000
Test critical values: 1% level	-3.495677	
5% level	-2.890037	
10% level	-2.582041	

*MacKinnon (1996) one-sided p-values.

SMC at Level

Null Hypothesis: SMC has a unit root
Exogenous: Constant
Lag Length: 4 (Automatic based on AIC, MAXLAG=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.068195	0.9997
Test critical values: 1% level	-3.769597	
5% level	-3.004861	
10% level	-2.642242	

SMC at first difference

Null Hypothesis: D(SMC) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on AIC, MAXLAG=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.025725	0.0005
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

BSC at Level

Null Hypothesis: BSC has a unit root
Exogenous: Constant
Lag Length: 3 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.969050	0.7465
Test critical values: 1% level	-3.752946	
5% level	-2.998064	
10% level	-2.638752	

BSC at First Difference

Null Hypothesis: D(BSC) has a unit root
Exogenous: Constant
Lag Length: 4 (Automatic based on SIC, MAXLAG=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.794579	0.0103
Test critical values: 1% level	-3.808546	
5% level	-3.020686	
10% level	-2.650413	

*MacKinnon (1996) one-sided p-values.

FDI at Level

Null Hypothesis: FDI has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic based on SIC, MAXLAG=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.817841	0.9923
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

*MacKinnon (1996) one-sided p-values.

FDI at First Difference

Null Hypothesis: D(FDI) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=4)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.62582	0.0000
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

*MacKinnon (1996) one-sided p-values.

PP UNIT ROOT TEST RESULT

TS at level

Null Hypothesis: TS has a unit root

Exogenous: Constant

Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	1.219636	0.9843
Test critical values: 1% level	-3.492523	
5% level	-2.888669	
10% level	-2.581313	

*MacKinnon (1996) one-sided p-values.

TS at First Difference

Null Hypothesis: D(TS) has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-3.563371	0.0000
Test critical values: 1% level	-3.493129	
5% level	-2.888932	
10% level	-2.581453	

FSR at Level

Null Hypothesis: FSR has a unit root
Exogenous: Constant
Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.243745	0.1924
Test critical values:		
1% level	-3.492523	
5% level	-2.888669	
10% level	-2.581313	

FSR at First Difference

Null Hypothesis: D(FSR) has a unit root
Exogenous: Constant
Bandwidth: 13 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-4.814189	0.0001
Test critical values:		
1% level	-3.493129	
5% level	-2.888932	
10% level	-2.581453	

*MacKinnon (1996) one-sided p-values.

INF at Level

Null Hypothesis: INF has a unit root
Exogenous: Constant
Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.519040	0.1138
Test critical values:		
1% level	-3.492523	
5% level	-2.888669	
10% level	-2.581313	

*MacKinnon (1996) one-sided p-values.

INF at First Difference

Null Hypothesis: D(INF) has a unit root
Exogenous: Constant
Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-5.341596	0.0000
Test critical values:		
1% level	-3.493129	
5% level	-2.888932	
10% level	-2.581453	

*MacKinnon (1996) one-sided p-values.

INV at Level

Null Hypothesis: INV has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.103863	0.2437
Test critical values:		
1% level	-3.492523	
5% level	-2.888669	
10% level	-2.581313	

*MacKinnon (1996) one-sided p-values.

INV at First Difference

Null Hypothesis: D(INV) has a unit root

Exogenous: Constant

Bandwidth: 19 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-5.053484	0.0000
Test critical values:		
1% level	-3.493129	
5% level	-2.888932	
10% level	-2.581453	

*MacKinnon (1996) one-sided p-values.

MPR at Level

Null Hypothesis: MPR has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.708120	0.0760
Test critical values:		
1% level	-3.492523	
5% level	-2.888669	
10% level	-2.581313	

MPR at First Difference

Null Hypothesis: D(MPR) has a unit root

Exogenous: Constant

Bandwidth: 24 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-5.316554	0.0000
Test critical values:		
1% level	-3.493129	
5% level	-2.888932	
10% level	-2.581453	

*MacKinnon (1996) one-sided p-values.

RGDP at Level

Null Hypothesis: RGDP has a unit root
Exogenous: Constant, Linear Trend
Bandwidth: 2 (Used-specified) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	- 2.846012	1.0000
Test critical values:		
1% level	-4.046072	
5% level	-3.452358	
10% level	-3.151673	

*MacKinnon (1996) one-sided p-values.

RGDP at First Difference

Null Hypothesis: D(RGDP) has a unit root
Exogenous: Constant, Linear Trend
Bandwidth: 13 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-4.577128	0.0019
Test critical values:		
1% level	-4.046925	
5% level	-3.452764	
10% level	-3.151911	

*MacKinnon (1996) one-sided p-values.

SMC at Level

Null Hypothesis: SMC has a unit root
Exogenous: Constant, Linear Trend
Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.720017	0.9686
Test critical values:		
1% level	-4.046072	
5% level	-3.452358	
10% level	-3.151673	

*MacKinnon (1996) one-sided p-values.

SMC at First Difference

Null Hypothesis: D(SMC) has a unit root
Exogenous: Constant, Linear Trend
Bandwidth: 12 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-4.297230	0.0047
Test critical values:		
1% level	-4.046925	
5% level	-3.452764	
10% level	-3.151911	

*MacKinnon (1996) one-sided p-values.

BSC at Level

Null Hypothesis: BSC has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 8 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-1.291129	0.8848
Test critical values:		
1% level	-4.046072	
5% level	-3.452358	
10% level	-3.151673	

*MacKinnon (1996) one-sided p-values.

BSC at First Difference

Null Hypothesis: D(BSC) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 6 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-3.497012	0.0448
Test critical values:		
1% level	-4.046925	
5% level	-3.452764	
10% level	-3.151911	

*MacKinnon (1996) one-sided p-values.

FDI at Level

Null Hypothesis: FDI has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 16 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat
Phillips-Perron test statistic	-2.317133
Test critical values:	
1% level	-4.046072
5% level	-3.452358
10% level	-3.151673

*MacKinnon (1996) one-sided p-values.

FDI at First Difference

Null Hypothesis: D(FDI) has a unit root

Exogenous: Constant, Linear Trend

Bandwidth: 105 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat
Phillips-Perron test statistic	-5.885219
Test critical values:	
1% level	-4.046925
5% level	-3.452764
10% level	-3.151911

*MacKinnon (1996) one-sided p-values.

APPENDIX C

ESTIMATED RESULTS USING THREE STAGE LEAST SQUARE

System: FINANCIALSTRUCTURE
 Estimation Method: Three-Stage Least Squares
 Date: 01/23/14 Time: 10:35
 Sample: 1986 2012
 Included observations: 27
 Total system (unbalanced) observations 79
 Linear estimation after one-step weighting matrix

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	4068.123	858.3237	4.739614	0.0000
C(2)	56.37127	34.65922	1.626444	0.1090
C(3)	8.522012	5.984847	1.423931	0.1596
C(4)	15.76012	0.952538	16.54541	0.0000
C(5)	914.9305	185.2811	4.938068	0.0000
C(6)	26.49328	11.76552	2.251774	0.0279
C(7)	4.597685	1.498155	3.068898	0.0043
C(8)	-0.128676	0.168363	-0.764280	0.4476
C(9)	1.979899	1.009865	1.960558	0.0417
C(10)	2.900745	8.798907	0.329671	0.7424
C(11)	6.547563	7.546587	0.867621	0.3892
C(12)	0.014401	0.082678	0.174187	0.8623
C(13)	455.1102	94.11469	4.835698	0.0000
C(14)	0.080337	0.027328	2.939738	0.0046
C(15)	16.70411	7.863307	2.124311	0.0377
C(16)	0.011329	0.014766	0.767195	0.4459
C(17)	0.691382	0.376450	1.836585	0.0472
C(18)	0.007656	0.011663	0.656455	0.5140

Determinant residual covariance 4.60E+20

Equation: $D(TS)=C(1)+C(2)*D(MPR)+C(3)*D(INF)+C(4)*RGDP(-1) + C(5)*D(FSR)$
 Instruments: D(FSR) D(INF) D(MPR) D(SMC) D(BSC) D(FDI) C
 Observations: 26

R-squared	0.947203	Mean dependent var	1553158.
Adjusted R-squared	0.937146	S.D. dependent var	2405087.
S.E. of regression	602970.0	Sum squared resid	7.64E+12
Durbin-Watson stat	1.750433		

Equation: $D(INV)=C(6)+C(7)*D(RGDP(1))+C(8)*D(MPR)+C(9)*D(TS)+ C(11)*D(SMC)+ C(12)*D(FDI)$
 Instruments: D(FSR) D(INF) D(MPR) D(SMC) D(BSC) D(FDI) C
 Observations: 26

R-squared	0.875669	Mean dependent var	10.35225
Adjusted R-squared	0.825880	S.D. dependent var	4.022572
S.E. of regression	3.302726	Sum squared resid	6.36E+12
Durbin-Watson stat	1.928599		

Equation: $RGDP=C(13)+C(14)*D(TS)+C(15)*D(INV)+C(16)*D(BSC)+ C(17)*D(FSR) + C(18)*SMC$
 Instruments: D(FSR) D(INF) D(MPR) D(SMC) D(BSC) D(FDI) C
 Observations: 27

R-squared	0.935288	Mean dependent var	468398.3
Adjusted R-squared	0.919881	S.D. dependent var	181766.5
S.E. of regression	51449.68	Sum squared resid	5.56E+10
Durbin-Watson stat	1.509772		

APPENDIX D

System Residual Portmanteau Tests for Autocorrelations

Null Hypothesis: no residual autocorrelations up to lag h

Date: 09/30/14 Time: 21:03

Sample: 1986 2012

Included observations: 108

Lags	Q-Stat	Prob.	Adj Q-Stat	Prob.	Df
1	240.8274	0.0000	243.0994	0.0000	9
2	389.1633	0.0000	394.2607	0.0000	18
3	472.8842	0.0000	480.3966	0.0000	27
4	530.2199	0.0000	539.9590	0.0000	36
5	572.1214	0.0000	583.9144	0.0000	45
6	602.8167	0.0000	616.4332	0.0000	54
7	628.5624	0.0000	643.9812	0.0000	63
8	656.6509	0.0000	674.3394	0.0000	72
9	685.7208	0.0000	706.0790	0.0000	81
10	716.6862	0.0000	740.2367	0.0000	90
11	752.2295	0.0000	779.8527	0.0000	99
12	794.0432	0.0000	826.9481	0.0000	108

*The test is valid only for lags larger than the System lag order.

df is degrees of freedom for (approximate) chi-square distribution

*df and Prob. may not be valid for models with lagged endogenous variables