THE EFFECTIVENESS OF BANKING SECTOR REFORMS ON FINANCIAL INTERMEDIATION IN AFRICAN COUNTRIES.

A research thesis presented to Wits Business School

By

CYNTHIA CHAKAHWATA - 936785

In partial fulfillment of the requirements of

Master of Management

In

Finance and Investment

Supervisor: Prof Kalu Ojah

DECLARATION

I, Cynthia Chakahwata, declare that the research work reported in this dissertation is my own, except where otherwise indicated and acknowledged. It is submitted for the degree of Master of Management in Finance and Investment in the University of the Witwatersrand, Johannesburg. This thesis has not, either in whole or in part, submitted for a degree or diploma to any other universities.

………………………………….

Cynthia Chakahwata

Signed at ………………………………………………………………………………………..

On the……………………….Day of………………………………..………………..2016

ABSTRACT

The banking industry plays an essential role in any economy in terms of resource mobilisation and allocation. Banks also accept deposits, create credit, offer agency, utility and money transmission services.A well-developed banking industry plays an important role in efficient financial intermediation and this helps to boost economic growth. The financial intermediary role performed by banks allows the banking sector to influence the direction of available resources, thereby affecting the rate of economic growth (Obadeyi, 2014).Due to these benefits derived from the banking sector, a large number of industrialised, developing and transition countries have undertaken extensive reforms in their banking sector over the past two decades (Swary and Topf 1992).

Banking sector reforms are defined as government intervention in the banking industry to provide a panacea for existing anomalies in the banking sector (Azeez and Ojoh, 2012). The reforms that were implemented by various countries included interest rates liberalisation, the removal of quantitative controls on lending, lifting barriers to competition, deregulation of the banking sector, the privatisation of public financial institutions and the introduction of market based securities. They were implemented to enhance the intermediation role of banks, ensure that banks are well positioned to greatly mobilise savings and optimally allocate these mobilised savings in the form of credit extension to profitable investments (Ajayi, 2005).

The treatise investigates the effectiveness of banking sector reforms on financial intermediation in African Countries using data of eleven countries. Annual time series and panel data which covered a period of 20 years from 1980 to 2000 was used.Secondary data which was used for this treatise was gathered fromjournals, books, peer-reviewed articles, International Monetary Fund statistics (IMF), Global Banking (Center for financial markets Milken Institute) and World Bank Financial Development database was used in this research.

The regression results showed that the banking sector reforms had a negative impact on financial intermediation on the eleven countries under study. Thus, the reforms failed to achieve their objectives of mobilising savings and increasing intermediation activities (lending). In addition, the results showed that the control variables which were inflation and gross savings had an inversely relationship with financial intermediation except for income per capita which had a positive relationship. The main causes of the failure of the banking sector

reforms in Africa were the macroeconomic imbalances, financial system instability and wrong sequencing of the reforms.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude and appreciation to the following people for their involvement and assistance in the preparation of this treatise:

First of all to my Lord and Saviour, Jesus Christ, who gave me the opportunity to undertake my studies.

My lovely husband, Masimba Arnold Chakahwata and our beloved son Anesu Chakahwata, for their love, patience, support and understanding during my studies.

My supervisor, Professor Kalu Ojah, for his guidance and assistance throughout the writing of this treatise.

TABLE OF CONTENTS

LIST OF FIGURES

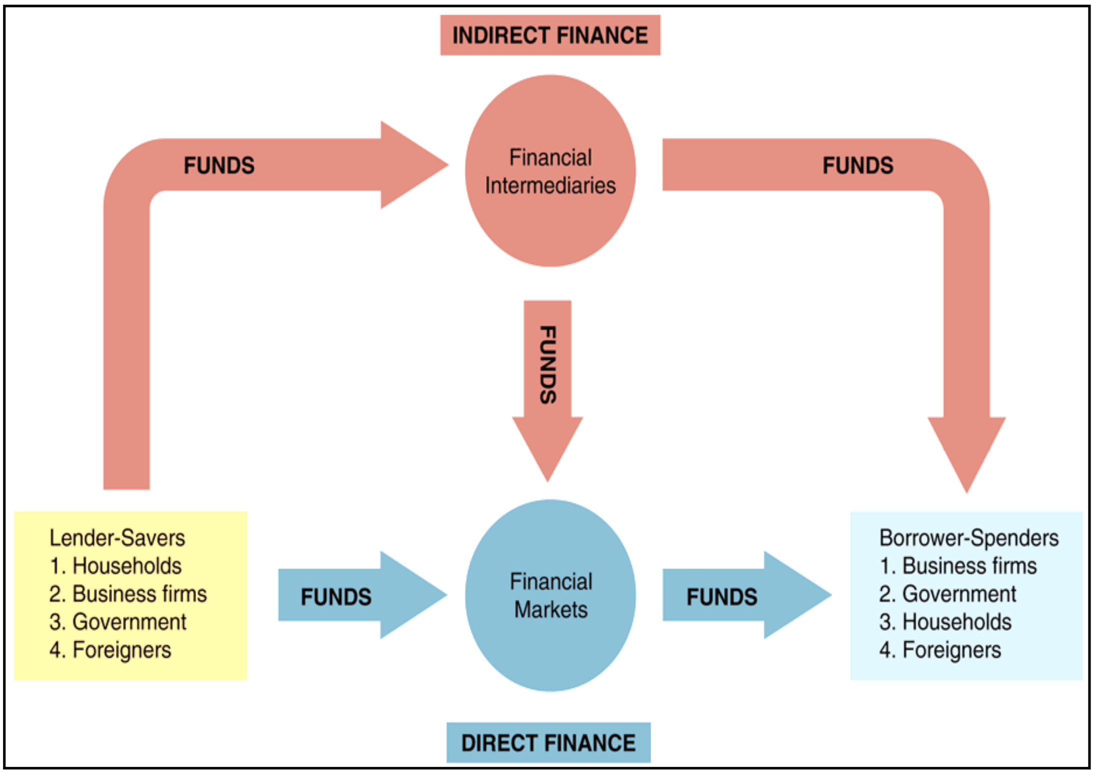
LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.0 INTRODUCTION

The banking industry plays an essential role in any economy in terms of resource mobilisation and allocation. It is by far, the most prevalent institution in the financial system in developing economies, accounting for the bulk of the financial transactions and assets (Moyo *et al*, 2014).A well-developed banking industry plays an important role in efficient financial intermediation and this helps to boost economic growth. According to Dogarawo (2011), through their financial intermediation functions, banks are able to link up lenders (savers) and borrowers (spenders) as shown by Figure 1.1 below. Lenders are those that have saved and are lending their unconsumed funds, while borrowers are those that must borrow funds beyond their savings to finance their spending. Glen (1994) argued that financial intermediation can help to motivate savers of funds to supply capital where it is needed at affordable costs to borrowers. These institutions help to attract funds from savers of surplus funds and accordingly help to channel capital where there is deficit or shortage and where capital is needed for economic development (Yona and Inanga, 2014).

FIGURE 1.1: BANKS LINKING SAVERS WITH THE BORROWERS



Source: Mishkin, 2013.

Banks also accept deposits, create credit, offer agency, utility and money transmission services. The financial intermediary role performed by banks allows the banking sector to influence the direction of available resources, thereby affecting the rate of economic growth (Obadeyi, 2014).Therefore, the banks act as the strategic engine of economic growth of developing, emerging and developed countries. Obadeyi (2014) found that banks mediate between demand for credit and supply of deposits, but for these to work effectively and efficiently, there should be a platform for fair and healthy competition, which require reforms in and regular monitoring of the banking sector. Due to these benefits derived from the banking sector, a large number of industrialised, developing and transition countries have undertaken extensive reforms in their banking sector over the past two decades (Swary and Topf 1992).

Some authors such as Yona and Inanga (2014) argued that these reforms were introduced because of underperformance of banks due to the lack of strong regulatory framework that could provide strong supervisions and regulation of banking activities. Azeez and Ojoh (2012) supported the arguments of Yona and Inanga (2014), that banking sector reforms were implemented in various countries because of problems that had bedeviled the banking system. Thus, Governments of many developed and developing countries have designed and implemented various financial sector reforms (Dogarawo, 2011). Some of the countries that have implemented these reforms are Botswana, Ghana, India, Kenya, Nigeria, Pakistan, Tanzania, Uganda, Zambia, Zimbabwe only to mention a few. It is in this line of argument that this study aims to carry out an assessment of the effectiveness of banking sector reforms on financial intermediation in African countries.

1.1 BANKING SECTOR REFORMS

Bankingsector reforms are defined as government intervention in the banking industry to provide a panacea for existing anomalies in the banking sector (Azeez and Ojoh, 2012). According to Hardy and Bonaccorsi di Patti (2001), some of these reforms included interest rates liberalisation, the removal of quantitative controls on lending, lifting barriers to competition, deregulation of the banking sector, the privatisation of public financial institutions and the introduction of market based securities. Also, Edirisuriya (2007) identified the banking sector reforms as increase in the private sector participation, removal of restrictions on banking products such as interest rate and loans, and exchange rate relaxation. However, banking sector reforms involve several elements that are particular to each country based on historical, economic and institutional imperatives (Ajayi, 2005).

Banking sector reforms are implemented to enhance the intermediation role of banks, among other goals. These reforms ensure that banks are well positioned to greatly mobilise savings and optimally allocate these mobilised savings in the form of credit extension to profitable investments (Ajayi, 2005). Some of the main objectives of these reforms were to:

- Improve banks operational efficiency and effectiveness
- Develop a more competitive and efficient banking system.
- Increase economic growth.
- Improve the effectiveness of financial intermediation.
- Prevent and reduce financial distress.

Therefore, the objective of this research is to examine the types of banking sector reforms that have been implemented by different African countries and assess whether there have been significant benefits to the banking sector as a result.

1.2 STATEMENT OF THE PROBLEM

Over the past decades there have been a lot of visible bank failures in the financial systems of many countries. Over a hundred major banking crises have occurred worldwide, with bailout costs that averaged about 16% of GDP (Calomiris, 2013). These banking crises have been caused by regulators and supervisors who failed to measure banks' risks accurately and set sufficient minimum equity capital buffers in accordance with those risks, failed to identify bank losses as they mounted, failed to enforce intervention measures for timely resolution of weakened banks and because of the "too-big-to-fail" mentality (Yona and Inanga, 2014).

Due to these crises, many countries were forced to implement some banking reforms to address the challenges faced by the banking sector. However, whether these reforms achieved their objectives, remain a critical empirical question due to limited evidence in this regard. Most of the reforms needed a lot of time to be put in place and for them to show their effects. Thus, in many countries most of the bank reforms effects are only surfacing now and often without dedicated effort at gauging their outcome, both expected benefits and importantly the often unintended consequences of reforms (Hardy and Bonaccorsi di Patti, 2001).

1.3 OBJECTIVES OF THE STUDY

The resolution of the problem articulated in the problem statement is systematically guided by the key objectives. The objectives of the research are of three main thrusts:

a) To identify the different banking sector reforms that has been implemented by African countries.
b) To evaluate the effectiveness of these reforms on financial intermediation.
c) To examine whether there is a positive significant relationship between banking sectorreforms and bank performance in general.

1.4 METHODOLOGY OVERVIEW

The research was quantitative in nature. The research approach involved a comprehensive literature review. The literature review included a broad overview of banking sector reforms in Africa and their impact on financial intermediation. It also included a study of countries that have implemented these reforms, analysed the challenges faced by these countries and the success stories of banking sector reforms. For that reason, empirical evidence was applied to identify the banking sector reforms in Africa and to evaluate the effectiveness of these reforms in improving financial intermediation.

This research made use of secondary data which is data collected and processed by people other than the researcher. Thisincludedannual reports, books, journals, International Monetary reports, World Bank reports and other publications. The data collected was analysed using the Statistics and Data statistical software package (STATA.10). However, given the limited time and resources, the data was collected on at least 10 African countries whose data could be tracked by International Monetary and World Bank reports.

1.5 SIGNIFICANCE OF THE STUDY

The study is designed to add more knowledge to what other researchers had left out. According to the literature review many researchers had dwelled most on investigating the factors that led to bank reforms, evaluating the effects of bank reforms on economic growth and the chronology of bank reforms in various countries. Thus, there has been a paucity of studies on the effectiveness of bank reforms on bank performance with financial intermediation as the major function. Olajide et al (2011) posit that the efficiency gains that have accrued from the large and growing waves of banking reforms have not been verified. Hardy and Bonaccorsi di Patti

(2001) found out that econometrics study of the effects of the financial sector reforms of developing countries have been a rare phenomenon. This study seeks to investigate the effectiveness of banking sector reforms on financial intermediation in African countries and this provide a greatly needed post- audit of such an important economic sector reforms.

1.6LAYOUT OF THE STUDY

The dissertation is divided into five **(5)**Chapters. Chapter one looked atintroduction to the study, background, objectives, statement of the problemand gave an outline of all the other chapters. Chapter two covers the theory of financial intermediation and empirical evidence of countries that embarked on banking reforms. Chapter three highlights research design, research methods, data collection and information sources as well as model. Chapter four providesa summary of data collected, interpretation and analysis of data. Chapter five includes a summary, conclusions and recommendations.

1.7 CHAPTER SUMMARY

This chapter reveals the importance of the banking industry to an economy and the services offered by banks. Banks have faced a lot of challenges such as bank failure and underperformance and this prompted Governments of various countries to intervene. The government intervened through introducing some reforms into the industry. These reforms included interest rates liberalisation, removal of quantitative controls on lending, lifting barriers to competition, deregulation of the banking sector, the privatisation of public financial institutions and the introduction of market based securities. Thequestion is has these reforms been effective in enhancing the banks performance?

CHAPTER 2: LITERATURE REVIEW

2.0 INTRODUCTION

Financial Institutions play a fundamental role in the development of any economy (World Bank, 1989). Benhabib and Spiegel (2000) believed that economic growth is positively linked to financial development. This was supported by Schumpeter (1911) who argued that financial institutions play a pivotal role in economic development because they determine which firms should use the scarce savings of the society, they allocate credit efficiently by identifying profitable investments and channel funds directly to them (King and Levine, 1993). According to Fry (1988), financial institutions perform two basic functions. Firstly, they create money and facilitate payment system. Secondly, they act as intermediaries by bringing the savers and borrowers together. Therefore, a country with a well organised banking industry can achieve economic growth more rapidly as a corollary of financial development (Levine, 2005).

As a result of the relation between economic growth and financial development many countries have initiated financial sector reforms. The major focuses of these reforms were on the banking sector. However, whether these reforms achieved their objectives, remain as a puzzle.

2.1 FINANCIAL INTERMEDIATION

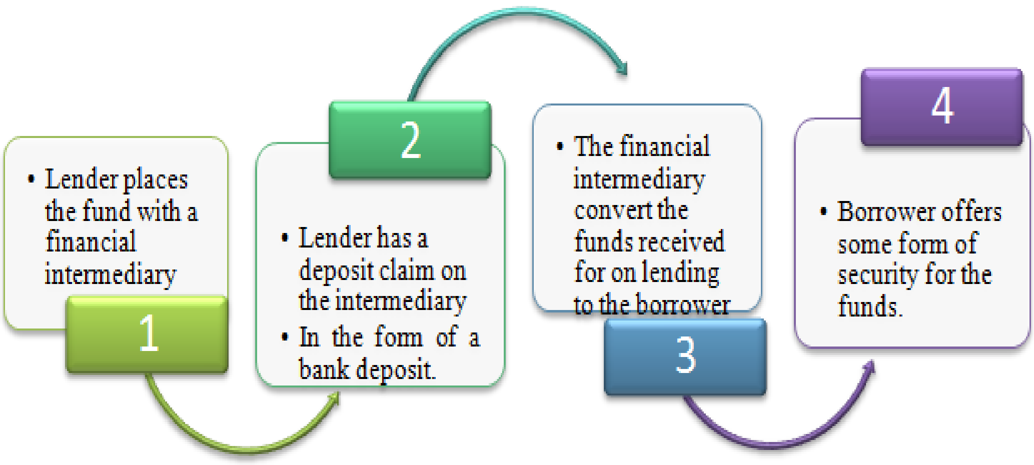
According to Munene (2005) intermediation means a position taken by a middlemen or it is a middle participant in an exchange of financial assets. Financial intermediaries are described as the firms that take funds from savers and channel them to deficit units (Auerbach 1988). They can becategorised into bank and non bank financial intermediaries. Bank financial intermediaries are commercial companies that produce different types of loaning products for the individuals who wish to borrow (Andries, 2009). Bank intermediaries are like commercial banks, savings banks, or savings and loan associations.Non-bank financial intermediaries acquire funds at periodic interval on a contractual basis and do not accept deposits from the general public. Examples of non-bank financial intermediaries are insurance companies, mutual funds, pension funds and finance companies. This research focuses on bank intermediaries or banks in short.

The major finished products of banks are loans which are granted to clients and the deposits which are attracted from surplus units act as the inputs. Banks they earn their income on the spread between the interest paid to the depositors and the interest received from the borrowers

(Gorton and Winston, 2002). This is referred to as the interest rate spread which is the difference between the lending and the deposit rates. If the spread is large it discourages potential savers due to low return on deposits causing limited financing for potential borrowers (Munene, 2005). Therefore, the saving and investment process which is necessary for economic growth revolve around financial intermediation because banks transfer funds from agencies with surplus to agencies with deficit.

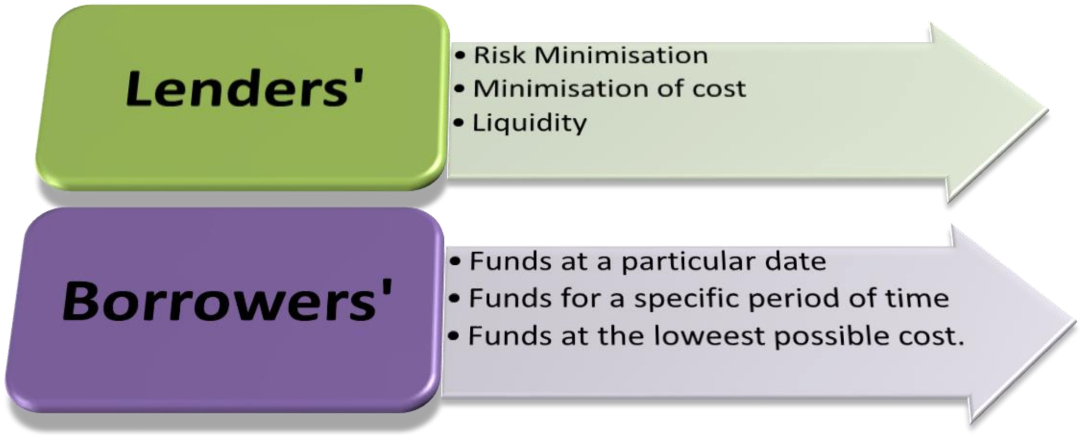
Cartel and Partington (1981) described the financial intermediation process as involving the lenders and borrowers. Lenders are those who have saved and are lending their funds. Lenders places some funds with a financial intermediary (bank) and a deposit claim would be placed on the bank. The bank on receipt of the funds would convert them to different types of loans for lending to borrowers (Munene, 2005). Lenders provide the funds through an intermediary rather than directly to the borrower. This enables the lenders to minimise risks such as default risk (the borrower being unable to repay the loan) and have the benefit of convenience and liquidity. Depending on the type of the loan, the borrower pledges some form of security in case of defaulting. The security can be in various forms, for example property, financial instruments, life insurance policy, guarantees only to mention a few. Figure 2.1 below shows the financial intermediation process. Borrowers are those who must borrow to finance their spending. They seek for funds at the lowest price for a given period and at a particular point in time (Munene, 2005).

FIGURE 2.1: FINANCIAL INTERMEDIATION PROCESS



The financial Intermediaries satisfy the requirements for both the lenders and borrowers to their mutual benefit (Munene, 2005). Figure 2.2 below shows the requirements for lenders and borrowers. Without the intermediary it is possible for lender not to lend because the asset offered by the borrower as security for funds might be risky or illiquid (Cater and Partington, 1981).For that reason, banks bridge the gap between borrowers and lenders and reconcile their incompatible needs and objectives.

FIGURE 2.2: REQUIREMENTS OF LENDERS AND BORROWERS



Source: Casu, Girardone and Molyneux (2015).

2.1.1 WHY DO FINANCIAL INTERMEDIARIES EXIST?

The major roles of financial Intermediaries in an economy are:

i. Pooling Savings from surplus units (savers) - The banks pool the funds of smaller savers for on-lending in larger parcels to deficit units.

ii. Asset Transformation – Bridging the gap between the needs of lenders and borrowers. They are engaged in size, maturity and risk transformation (Casu et al , 2015)

iii. Reduction of Transaction Costs – They reduce transaction costs through monitoring theborrowers on behalf of investors who lend to the intermediary. Diamond (1984) elucidated that monitoring is costly and it is efficient to delegate the task to a specialized agent (the bank).They screen loan applications to guarantee that the borrowers are creditworthy and monitor loan recipients to ensure that the funds are used as they have claimed.

iv. Channel savings into investments - Without the financial intermediaries, much of the savings of the ultimate lenders would not be available to ultimate borrowers. The funds acquired would be used for financing of productive assets.

v. Efficient allocation of funds - They ensure the available funds are allocated to borrowers who will utilise the funds prudently.
vi. Diversify Risk – assist depositors to spread their funds over many types of loans such that the default of one loan does not put the depositor funds at risk.
vii. Increases economic efficiency by channeling funds from savers to borrowers.

2.2 THEORY OF FINANCIAL INTERMEDIATION

There are five (5) theories that justify the existence of financial intermediation. These theories relate to delegated monitoring, information asymmetry, transaction costs, risk and risk management and consumption smoothing (Casu *et al*, 2015).

2.2.1 INFORMATION ASYMMETRY

Theory of financial intermediation was first put forward by Gurley and Shaw (1960) based on the theory of information asymmetry and agency theory. Financial intermediation theory builds on the notion that intermediaries serve to reduce transaction costs and informational asymmetry. Their existence is elucidated by the existence of high transaction costs, lack of complete information in useful time, adverse selection, moral hazard and risks. The most used factor in explaining financial Intermediation existence is Information asymmetry. Information asymmetry is when one party has more information than the other. It can be of ex ante causing adverse selection and concomitant generating moral hazard.

Financial intermediaries exist because financial markets are not perfect. If markets wereperfect and complete, the allocation of resources would be Pareto efficient and there would be no scope for intermediaries (Allen and Santomero, 1999). They only have a function when the markets are not perfect. Since markets are imperfect all these imperfections caused by information asymmetry causes some specific transaction cost (Andries, 2009). Financial intermediaries play an important role in eliminating some of the costs (*ibid).*

Thus, banks collect information about borrowers and use it to solve financial contracting problems related to adverse selection and moral hazard (Leland and Pyle, 1997). They create contracts which transform the characteristics of assets such that they are more convenient for the society to hold (Hester 1994). Therefore, Intermediaries (banks) overcome asymmetric information problems by acting as delegated monitors on behalf of savers (Diamond, 1984).

2.2.2 TRANSACTION COSTS

Financial intermediation theory is also based on the notion that intermediaries serve to reduce transaction costs. It was put forward by Benston and Smith Jnr (1976) and by Fama (1980). Transaction costs are defined as the cost of providing a good or service such as search and information cost, bargaining and decision costs and policing and information costs. According to Benston and Smith (1976) transaction costs are costs of transportation, administration, search, evaluation, and monitoring among others. Banks enjoy economies of scale, scope, and networks in these tasks. Intermediaries have an advantage over individuals because they allow such costs to be shared. Benston and Smith (1976) found out that banks economise on transactions costs. Therefore, they act as collations of individual's lenders or borrowers who exploit economies of scale through the use of transaction technology.

2.2.3 DELEGATED MONITORING

The other theory put forward to explain the existence of financial intermediation relates to the role of banks as monitors of borrowers. The relevant studies were carried out by Diamond in 1984. An intermediary is delegated the task of monitoring the loan contracts written with firms who borrow from it because of a cost advantage it has in collecting information of the borrowers (Casu et al, 2015).Savers would delegate the monitoring activity to financial intermediary by depositing their funds with the intermediary and sometimes withdrawing the deposits in order to instill discipline on the intermediary. Borrowers and depositors delegate such an activity because monitoring credit risk (the probability that the borrower might default) is very costly. Therefore, financial intermediaries have the expertise and enjoy economies of scale in processing information.

2.2.4. RISKS AND RISK MANAGEMENT

One of the central functions of banks and insurance companies is to absorb risk. Risk can be default risk, maturity risk, market risk, counterparty risk and many others. Financial Intermediaries have the ability to absorb risk on a large scale required by the market because their scale permits a sufficiently diversified portfolio of investments needed to provide some form of security needed by surplus units (Scholtens and vanWensveen, 2000). They can hold liabilities and assets with different liquidity characteristics on their Statement of Financial Position. On the contrary, surplus units hold undiversified portfolios (having the same liquidity and risk features) (Casu *et al*, 2015).Banks provide financial claims to surplus units that have superior liquidity features (*ibid*).The more diversified the banks are, the less likely it is that they would default. Therefore, the risk function bridges the mismatch between the supply of savings and the demand for investments as savers are on average more risk averse than investors.

2.2.5 CONSUMPTION SMOOTHING

The consumption smoothing theory also justifies the reasons why financial intermediaries (especially banks) exist. The banks enable the economic agents to smooth their consumption by offering some insurance shocks to their consumption path (Casu *et al*, 2015). They act as consumption smoothers by providing assets through lending and this assist in smoothing consumption patterns of individuals.

In conclusion, the first three (3) aforementioned theories are usually cited as the main reasons why financial intermediaries exist.

2.3 FINANCIAL INTERMEDIATION PROXIES

The literature on financial intermediation has different measures of financial intermediation. These measures can be categorised into two classes which are deposit based multiplier and credit based indicators. The following are some of the measures that have been used by different researchers in measuring financial intermediation:

a. Credit Intermediation Ratio - measures the degree of banking intermediation on the whole financial intermediation in an economic system. It is calculated by dividing the loans granted by the banks by the sum of the liabilities issued by all the other sectors.
b. Financial Intermediation Ratio - measures the degree of financial intermediation of an economic system by dividing the liabilities of the Financial Corporations by the sum of the liabilities of all the other sectors.
c. Ratio of Broad Money to GDP.
d. Broad money multiplier.
e. Ratio of credit to the private sector – measures the extent to which banks are able to generate funds for external financing the private sector.
f. Bank Deposit to Gross domestic credit.
g. Bank Loans and advances to Gross domestic product ratio.
h. Private sector credit to Gross domestic product.

There is no consensus among researchers on the proxies that are used to measure financial intermediation up to this date. This is mainly because different studies focus on different aspects of financial intermediation which are in line with the research objectives. Therefore, researcher selects a proxy for financial intermediation that would enable them to achieve their research objectives as shown in table 2.1 below:

TABLE 2.1: FINANCIAL INTERMEDIATION PROXIES.

AUTHOR	SAMPLE	RESEARCH METHOD	FINANCIAL INTERMEDIATION PROXIES
Bhatia and Khatkhate (2011)	Eleven countries in Africa- 1960-1970	Cross sectional and time series analysis	Ratio of currency, demand deposits and quasi money to Gross domestic product (GDP)
De Gregorio and Guidotti (1995)	Twelve Latin American countries – 1950-1985	Panel Analysis	Ratio of bank credit to the private sector to Gross domestic product (GDP).
Odedokun (1996)	Seventy-one developing economies countries- 1960-1980	Time series analysis	Credit issued to private enterprises divided by GDP
Levine (2000)	Seventy-one countries 1960-1995	Cross section and dynamic panel analysis	Ratio of liquid liabilities to GDP Credit issued to private enterprises divided by GDP.
Rother (1999)	Nineteen Transition economies -	Panel Analysis	Ratio of broad money to GDP Broad money multiplier Ratio of credit to private sector over the monetary base.
Mehl et al (2005)	Nine transition economies	Panel Analysis	Ratio of broad money to GDP Credit issued to private enterprises divided by GDP.

Source: Author's compilation.

However, for most studies done for the African continent,bank deposits to Gross Domestic Product (GDP) ratio and bank loan and advanceto Gross Domestic Product ratio,Ratio of Broad Money to GDP and Private Sector Credit to GDP ratio has been used as proxies of financial intermediation. In this research private credit by money deposit banks as a percent of GDP and Ratio of Broad Money to GDP were used as measures of financial intermediation. The main reason for selecting these proxies is because they show clearly the bank's ability to create deposits and intermediate. Therefore, the degree at which banks create money represents their degree of financial intermediation.

2.4 FACTORS THAT DRIVE FINANCIAL INTERMEDIATION

The factors that affect affect intermediation can be categorised into supply side and demand side factors. The supply sides factors are defined as the factors that affect the ability and willingness of the banks to raise deposits and to grant credit. On the other hand, the deman side factors affect the aggregate demand for financial intermediation. The following factors drive financial intermeadiation in an economy.

2.4.1 RESERVE REQUIREMENT

Reserve requirement are the funds that the central bank of any countries requires the commercial banks to hold on the basis of the deposits they have accepted from the public.These funds are held in an exclusive account separate from the other deposits of the banks at the central bank. Any change on the reserve requirement leads to changes on the availability of loanable funds. Therefore, reserve requirements impose an upper limit on the creation of deposit money and induce additional costs on financial intermediation (Rother, 1999).

2.4.2 INTEREST RATE SPREAD

Interest rate spread is the difference between interest rates on deposits and those paid on credit (Rother, 1999). The higher the interest spread the more banks become interested in providing credit because it means more profits for banks. The lower the spread the less the banks becomes interesting in performing their financial intermediation role.

2.4.3 NON PERFORMING LOANS (NPLS)

Non- performing loans affect the bank's decision to provide financial intermediation because they increase the chances of the bank violating prudential regulations (Rother, 1999). In order to address the bad loans, banks end up increasing their interest rates on new credit so that the cover losses from bad loans. However, this would discourage surplus units from saving with banks and deficit units from borrowing because of a higher interest rate spread.

2.4.4 CAPITAL ADEQUACY

Capital Adequacy is defined as the amount of capital a bank has to hold as required by the financial regulator. According to Rother 1999, the financial soundness of a bank affects its financial intermediation role. Banks that are financial sound tend to engage in long term lending to the deficits units. On the other hand, banks with a weak capital base favours to seek short term profits and this reduces their intermediation activities.

2.4.5 INFLATION RATE AND INTEREST RATES

Inflation rate affect interfere with the ability of the financial sector to allocate resources effectively. According to Boyd et al (2000), there is a significant negative relationship between inflation rate and bank lending activity.Inflation rate drives down the real rate of return on money and exacerbates credit market frictions. Theories that have been put forward emphasise that increases in the inflation rate adversely affect credit market friction and the performance of financial intermediaries (Boyd et al, 2000). As a result, banks start rationing credit as inflation rates rises leading to fewer loans being offered and intermediary activity diminishing.

2.4.6 NUMBER OF BANKS IN A FINANCIAL SYSTEM

The market structure of a financial system affects the bank supply of financial intermediation. In an oligopolistic market structure banks may limit the supply of financial intermediation and still make excessive profits because of low competition. However, in a perfect market structure there is high competition and many banks in the market. Hence, it increases the level of financial intermediation in the financial system.

2.4.7 INCOME PER PERSON

The higher the income per capita the more people save with banks using various types of deposits. The banks would then convert these deposits into different types of loans. Also the lower the income per capita the less the people save and thus affecting financial intermediation negatively.

2.5 IMPEDIMENTS TO FINANCIAL INTERMEDIATION IN AFRICA

Financial Intermediation has remained relatively lower in Africa. The factors that have affected the financial intermediation areunstable macroeconomic environment,lack of credit and saving friendly policies, political factors and legal and regulatory environment.

A stable macroeconmic environment provides a sound financial intermediation in both formal and informal sectors (Rau,2004). Most African countries have implemented reckless monetary and fiscal policies which lead to run away inflation and triggered high nominal interest rates. This failed to bring about positive interets rates for investors and caused exchange rates to deteriorate. As a result it discouraged investment and savings and raised a lot of uncertainity.

Aonther factor has been the lack of credit and saving friendly policies. According to Rau(2004), most of the African countries lack attractive credit and saving policies to stimulate financial intermediation. Most of the credit is directed on political rather than economical grounds(Rau,2004).In most countries the Government decides on the sectors to be granted credit. Therefore, the policies are more distortionary than supportive of intermediation.

Political factors have also played a major role in hindering financial intermediation in Africa. Most African countries have been experiencing a lot of political instability which has led to economic instability and in turn caused fiancial instability. According to Rau(2004), financial instability reduces capital flows into a country and financial intermediation because of loss of confidence by the investors. Also corrupt Governments in these countries directed financial institutions to extend credit to favoured individuals and institutions for political reasons. It was also worsened by state owned financial instituitions which are generally inefficient and have a thin line between political-cum- economic activitiesof the state and economic activities of the financial institutions (Rau,2004).

Last but not least, the legal and regulatory environment also hindered financial intermediation in Africa. In many African countries, central bank leadership is politically determined and the institutions do not operate independently(Rau,2004). This has affected the ability on the central bank to supervise the financial system and caused a lot of bank failures. In addition, there have been over regulation and weak prudential regulations that failed to protect the depositors money.

As a result of all the above mentioned factors many African countries introducedbanking sector reforms around the mid 1980s as part of the International Monetary Fund and World Bank

Structural Adjustment Policies in order to address these challenges faced by their financial sectors.

2.6 BANKING SECTOR REFORMS

Banking sector reforms are an inevitable process when the bank cannot perform according to the desired level. The banking sector problems have been exemplified as banking fragility, crisis, distress, failure, collapse and insolvency. All these predicaments called for banking sector reforms which were put in place to strengthen the regulatory and supervisory framework of variouscountries. Sheng (1996) defined banking sector reforms as the package of macroeconomic, microeconomic, institutional and regulatory measures taken to restore fragile banking systems into financial solvency and discipline. According to Munene (2005) banking sector reforms fall within the neoclassical school of thought of competitive and free market as the most efficient way of allocating resources. Schumpeter (1911) identified the banking sector as the main source of fund for long term investment and laid a proper foundation of economic growth.

Various reforms were undertaken by many developing countries in order to free their economies from excessive Government control. Most countries implemented their reforms between 1980s and late 1990s through Structural Adjustment Programmes. The most important reforms were in the financial sector through financial liberalisation. Majority of the reforms were broadly on policy, institutional and legal issues of the financial system. However, theforms ofliberalisation measures differed from one country to another because of unique economic and financial conditions that existed in different countries (Johnson and Brekk, 1993). These different conditions helped significantly in shaping reform objectives and the outcomes.

2.6.1 ELEMENTS OF BANKING SECTOR REFORMS IN AFRICA

Around the 1980s financial systems of most African countries showed signs of weakness and vulnerability because of deteriorating macroeconomic conditions and political interference in the operations of financial institutions (Mehran, 1998). The financial sector was multifaceted with structural weaknesses such as absence of an appropriate legal framework to grant independence to central bank, inefficient payment system, controlled interest rates, foreign exchange restrictions, weak operating procedures, directed credit allocation to specific sectors of the economies and banking resources were used to finance the Government budget deficits and to provide finance to state owned companies. Inanga and Ekpenyong(2002) identified the various economic conditions that prevailed in various African countries before the implementation of the banking sectors reforms as shown in table 2.2 below:

TABLE 2.2: ECONOMIC CONDITIONS THAT LED TO THE BANKING SECTOR REFORMS IN AFRICAN COUNTRIES.

COUNTRY NAME	**PREVAILING CONDITIONS**
KENYA	• Severe macroeconomic imbalances • Financial system instability.
NIGERIA	• Severe macroeconomic imbalances • Financial system instability.
GHANA	• Macroeconomic Instability • Financial Distress
TANZANIA	• Macroeconomic Instability • Financial Distress
ZAMBIA	• Macroeconomic Instability
ZAIRE	• Unhealthy Banking System
MALAWI	• Unhealthy Banking System
BOTSWANA	• Unhealthy Banking System
MAURITANIA	• Banks were bankrupt

Source: Inanga and Ekpenyong (2002), Chirwa and Mlachile: World Bank Privatisation Database.

Many African countries particularly in Sub- Saharan Africa embarked on financial sector reforms. The reforms were intended to reverse the adverse consequences of the repressive financial policies of the post independence era (Inanga and Ekpenyong, 2002).These adverse consequences limited the financial system efficiency and the ability to perform its financial intermediation function. Table 2.3 below shows the implementation dates of banking sector reforms in some of the African Countries. The reforms implemented included interest rate liberalisation, removal of credit ceilings, promoting the development of financial markets, restructuring and privatisation of state owned banks. The type and extent of financial sector reforms in Africa varied across countries but most of the reforms focused on savings mobilisation. However, the most important elements of the reforms were interest rate and credit market liberalisation.

TABLE 2.3: DATES OF BANKING SECTOR REFORMS IN SELECTED AFRICAN COUNTRIES IN SUB- SAHARAN AFRICA.

NAME OF THE COUNTRY	STRUCTURAL ADJUSTMENT PROGRAMME ADOPTED	CREDIT MARKET LIBERALISATION	BANKS RESTRUCTURED	BANKS PRIVATISATION
Benin		1989		
Botswana	1991	1991		
Cameroon		1990		1998
Cote delvoire		1989		1999
Ghana	1983	1988	1989	1997
Kenya	1989	1991		1989
Madagascar		1994		1999
Malawi	1987	1988	1980	
Mauritania		1990		
Mauritius	1983	1993		
Namibia	1992	1991		
Nigeria		1987	1987	1990
Tanzania	1985	1991	1991	1994
Uganda	1987	1988		1994
Zambia	1991	1992		
Zimbabwe	1991	1991		1997

Source: Inanga and Ekpenyong(2002), Chirwa and Mlachile: World Bank Privatisation Database

2.7 BANKING SECTORS REFORMSIN AFRICA - EMPIRICAL EVIDENCE.

2.7.1 NIGERIA

Nigeria adopted the Structural Adjustment Programme (SAP) in 1986 and the major focus was on bank reforms. The Nigerian financial sector was highly repressed. There were credit ceilings and banks struggled to maintain an efficient flow of funds within the financial system. The banks were exposed to high risk lending and had weak balance sheets. According to Ofanson*et al* (2013), the reforms that were introduced were raising the capital base of banks, improving the structure of regulations and supervision, uniform accounting standards and prudential regulations, assisting distressed banks and foreign exchange management). The major objectives of the reforms were to build a robust, efficient and deeper financial system and have a financial system which could support the growth of private sector enterprises so that the sector could contribute meaningfully to economic growth. The reforms were done in four (4) phases since the adoption of the SAP and these were:

a. Financial system reforms (1986 – 1993) – Deregulation of banking industry.

- The regulatory government agencies such as Nigerian Deposit Insurance Corporation and Central Bank of Nigeria were strengthened and capital adequacy of banks were reviewed (Obadeyi, 2014). The banks were required to raise their capital base to N25billion within eighteen months. The number of new bank increased significantly from 28banks in 1985 to 66by 1993(Ofanson*et al*, 2013).Also, the credit ceilings and interest rates were removed.

b. Re-introduction of regulations (1993 – 1998) – Financial distress increased in the banking sector.

c. Liberalisations of the financial sector (1999) – Adoption of distress resolution measures that empowers banks to operate in retail banking and non- bank financial markets.

d. Bank Consolidation through mergers and acquisition (2004) - The banks were required to raise their capital base to N25billion within eighteen (18) months (Inyang *et al*, 2014).

- Some banks could not raise such an amount. Therefore, they resorted to mergers and acquisitions.

All these phases were aimed at strengthening the banking sector, enhancing the bank’s function of financial intermediation and to foster the growth of banks and other financial institutions.

2.7.2 ZAMBIA

In Zambia banking sector reforms were initiated in 1992 after more than two decades of financial repression. Financial liberalisation offered an opportunity for a revival of the Zambian banking industry (Simpasa, 2013). The reforms werecategorised into three (3) broad phase. Each phase was differentiated by the government's approach to design, implementation and focus of the financial sector reforms (Mwenda and Mutoti, 2011). Phase I started in 1992 by introducing the removal of interest rates controls and credit supply ceilings. This was followed by the removal of exchange controls, elimination of multiple exchange rates to market determined exchange rates.

Phase II focused on establishing and strengthening the financial infrastructure to support a sound and well functioning banking system (Mwenda and Mutoti, 2011).The main focus was on bank supervision, regulation and payment and settlement systems. In 1994 a Banking and Financial Services Act (BFSA) was introduced and was further enhanced in order to be consistent with the 25 principles of sound bank supervision and regulation under the Basel Capital I Accord. Also, additional foreign exchange policy reforms were instituted.

Phase III was based on IMF and World Bank Financial Sector Assessment (FSAP) 2002 report. The Government formulated a Financial Sector Development Plan (FSDP I) which guided financial sector reforms for the period of 2004-2008. This was after several banks had collapsed during the 1990s reducing thenumber of banks to 16 in 2000 which later reduced to 15 following the amalgamation of two local banks. Since then the Zambia banking sector has begun to show some signs of improvement. There has been an increase in new branches, ATM and agencies. The bank infrastructure expanded and commercial bank intermediation with regards to consumer lending to salaried individuals also improved (Mwenda and Mutoti, 2011). However, the degree of banking competition remained low and the market remained dominated by foreign private banks.

2.7.3 TANZANIA

Prior to the reforms in Tanzania the banking sector was stagnant. Most of the banks were state owned banks and there were underperforming in terms of profitability and services offered to customers (Yona and Inanga, 2014). This was mainly caused by lack of a strong regulatory framework. In 1990s, Tanzania embarked on implementing financial reforms after recommendations from International Monetary Fund (IMF), World Bank study and Nyiraba commission study of 1998. The banking sector reforms were necessitated by the deterioration of the performance of the state controlled financial sector and the non performing assets of banks. The Government intervened in the management of financial institution through directed credit policies and regulated interest rates. Loans were given to parastatals enterprises, cooperative unions and the Government itself. This caused crowding out of private investments and impairment of the loan portfolio.

The Tanzania banking sector reformsobjectives were to reform the commercial banks to increase competition, diversify ownership of banks, financial restructuring, improving customer service and ensuring financial viability, integrity and sustainability. The reforms introduced were prudential regulation (capital requirements), liquidity requirements, enactment of banking and financial Institution Act of 1991 which was later revised in 2006, licensing requirements of new banks and financial institutions and liberalisation of foreign exchange rates and interest rates. Banking sector reforms in Tanzania managed to introduce strong legal regulatory framework, increased the number of banks to 17 banks and 11 non banking institutions by 2000, improved customer service, relatively competitive environment and increased variety of financial products (Lizwa and Nwankwo, 2002).

2.7.4 GHANA

Ghana introduced banking sector reforms with the assistance of the World Bank in 1987 and the major focus was on banks. The economy had experienced severe crisis and most of banks were showing signs of distress because of severe inflation which was experienced between 1970s and 1980s. Banks were used as instruments of industrialisation and operated under a framework characterised by controlled interest rates, directed credit programmes, high reserve requirements and other restrictions on financial intermediation (Adams and Agbemade, 2012). Bank credit was directed to public sector borrowers at the expense of economic efficiency. The banking industry was mainly dominated by state ownedbanks and only two foreign owned banks namely Barclays Bank and Standard Chartered Bank. According to Gockel (1995), the government policies were targeting to raise level of investment, change the sectoral pattern of investment and keep interest rates low and stable. As a result of this financial intermediation declined as people abandoned the banking system because of negative real interest rates of return.

In 1987the Government of Ghana implemented the banking reforms and the main objectives were to:

a. Establish a sound prudential and regulatory framework for banking operations.
b. Restructure distressed banks with the intention of transferring nonperforming assets from their balance sheets to a new government agency (Non- performing Assets Recovery Trust (NPART).
c. To put in place an effective banking supervision with the capabilities to enforce the prudential rules and regulations and a code of conduct for the banking sector.
d. Liberalisation of interest rates with the aim of improving financial intermediation in the financial sector.

As a result of these reforms the number of banks licensed to operate in Ghana doubled within the last two decades, competition increased which led to declinein interest rates and accessibility to loan facilities and banks were free to price deposits and loans. However, the market share of the dominating banks declined from 76% to 47% by the end of 2007(Browbridge and Gockel, 1995).

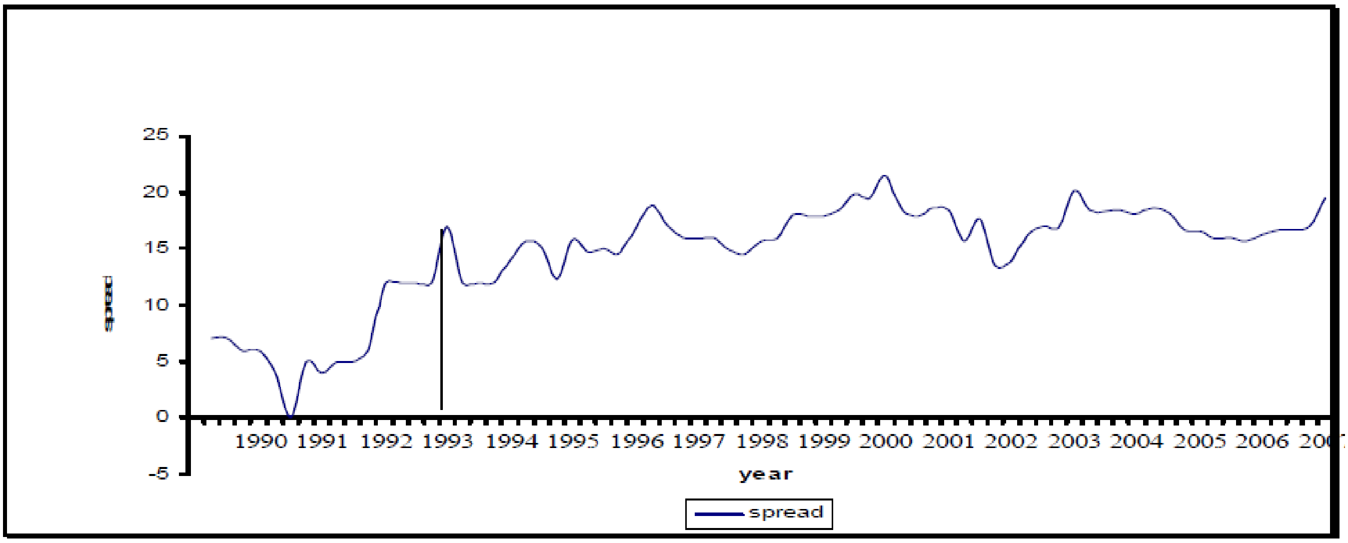
2.7.5 UGANDA

The Uganda's financial sector was very small and fragile by late 1980s.It was considered the weakest in the Sub-Saharan Africa with liabilities comprising less than 10% of the country's GDP (Brownbridge, 1996).The banking sector was dominated by foreign owned banks which were Barclays, Standard Chartered, ANZ Grindlays and Bank of Baroda. Also the Government intervened a lot in this sector through interest rates controls and directed credit or lending. The interest rates were determined by Bank of Uganda (central bank) until 1992 and the nominal interest rates were held below the inflation rate (Brownbridge, 1996).

The inflation rate in Uganda during that period was very high and this caused a lot of financial disintermediation. The real interest rates were negative, credit to Gross Domestic Product ratio was only 4% and the two dominating banks which accounted for two thirds of the commercial banking system were insolvent (Mehran,1998).The banking sector reforms began in Uganda around the 1990s after it had achieved macroeconomic stability. The main focus of the reforms was on removal of interest rates controls, reducing barriers to the entry of new banks, boosting deposit, and mobilisation, stimulating competition, restructuring insolvent banks, improving prudential regulation and restricting directed lending. The key objective was to reduce interest rates spreads (difference between average lending rates and deposits rates) (Sologoub, 2006).

These reforms managed to reduce nominal interest rates, made real interest rates positive and stabilised. All this was possible because of the single digit inflation rate (Mehran, 1998). However, regardless of all the positives, the financial system remained weak. More than half of all loans were non- performing and intermediation margins remained high (*ibid*). Financial intermediation remained very low and weak instead of improving due to interest rates liberalisation. According Shaw (1973), the interest rates liberalisation expands the amount of financial intermediation between savers and investors. Contrary to this, the interest rates spreads increased and became very volatile and discouraged savers from saving as shown in figure 2.3 below:

FIGURE 2.3: INTEREST RATES SPREADS BEFORE AND AFTER REFORMS IN UGANDA.



Source: Bank of Uganda website.

In conclusion these reforms had huge damaging effects on the banking system of Uganda (Brownbridge, 1996).

2.7.6 ZIMBABWE

The liberalisation of the financial sector in Zimbabwe was introduced through the Economic Structural Adjustment Programme (ESAP) in 1991(Moyo, 2014). ESAP was given as a prerequisite for assistance from International Monetary Fund (IMF) and World Bank (WB).It was a five (5) year programme from 1991 to 1995 and it was followed by the introduction of Zimbabwe Programme of Economic and Social Transformation (ZIMPREST) for the period

1996-2000(Moyo, 2001). Prior, to the reforms the banking sector was heavily controlled by the state. The interest rates were fixed by the Government (lending rates and deposit rates to savers), credit ceilings which channeled resources to specified sectors, restrictions on banking licensing and banks were conferred to specified types of banking business and would engage in that line of business only (Moyo, 2001). Zimbabwean banking sector was highly oligopolistic with very few large expatriate banks dominating the market (Barclays and Standard Chartered).

Reforms were introduced in 1991 and the main objectives were to remove controls over the direction of bank lending, establish positive real interest rates, liberalise the licensing of new banks in order to foster competition and improve banking services (Harvey, 1996). The expected results from these reforms were to improve financial intermediation, increase deposits through higher real interest rates and increase credit available from banks to support private sector development.

To a limited extent the reforms were successful in terms of increasing deposit (mobilising saving) because there were new entrants in the market and this resulted in massive mobilisation of savings and the decontrolling of interest rates also assisted. The savings grew on average from Z$2.9billion in 1985 to Z$7.0 billion in 1990 and Z$32.3 billion by June 1997(Moyo, 2001). This resulted in an increase in lending by banks by over 15 percent over the period of 1985 to 1996.According to Moyo (2001), the banking and financial sector was among the few sectors that benefited from these reforms while other sectors experienced negative growth. The reforms also managed to increase the assets and liabilities of banks between the period of 1993 to 1998 as shown in table 2.4 below;

TABLE 2.4: GROWTH IN ASSETS AND LIABILITIES OF THE BANKING SECTOR SINCE 1994 IN MILLONS (Z$).

YEAR	1993	1994	1995	1996	1997	1998(October)
COMMERCIAL BANKS	14 900	20 275	24 668.6	32 647.6	48 647.5	61 966.2

Source: Reserve Bank of Zimbabwe Quarterly Economic and Statistics Review (September – December 1998).

In addition competitionalso increasedthe number of services offered by the banks and removed barriers to entry. There were new innovations and increase in the number of Automated Teller Machine (ATMs).

On the other hand, the reforms caused more harm than good to the banking sector. They caused a problem of nonperforming loans which almost caused the collapse of one of the banks. This bank was providing mortgage loans to low income customers at high interest rates and this caused customers to default(Moyo, 2001). The high interest rates failed to stimulate more lending and caused financial distress on banks. Depositors started to withdrawal their moneys from local banks to international banks such as Barclays and Standard Chartered banks. All these problems left many people with questions on whether Zimbabwe was prepared for these reforms? Moyo (2001) argued that the reforms were introduced before a comprehensive and adequate regulatory and supervisory framework was in place. As a result, it affected the viability and reliability of the banking sector reforms.

2.7.7 KENYA

The Kenyan financial sector was mainly dominated by commercial banks which had about 70 percent of the total loans and advance in 1998(Ngugi and Kabubu, 1998). The Government controlled the allocation of credit and took a substantial share of loanable fund to finance their budget deficit and parastatals (*ibid*). Around 1986 the sector experienced crisis and most financial institutions became undercapitalised. According to Ngugi and Kabubo (1998), the major causes of this crisis were:

- Inadequate regulatory and legal frameworks.
- A weak prudential supervision.
- Different central bank regulation between commercial banks and Non-Bank Financial Institution (NBFIs).
- Segmentation of the financial sector.
- Weak monetary control by the Central bank.

All these challenges necessitated the launching of banking sector reforms in early 1989. The main objectives were to mobilise and allocate the domestic resources, liberalise interest rates, improve efficiency of financial intermediation, improve credit allocation, instill public confidence in the financial sector and upgrade the supervisory and regulatory framework. However, the reforms failed to yield any meaningful results. The industry remained characterised by negative interest rates and inefficiency in financial intermediation. The inefficiency of financial intermediation was caused by presence of weak government owned banks and they had a large portion of nonperforming loans (NPLs) (Cihak and Podpiera, 2005). For example, the National Bank of Kenya (sixth largest bank in Kenya) had become insolvent for many years and Kenya Commercial Bank suffered from a bad loan portfolio. Brownbridge and Harvey (1998) also found out that there was no clear evidence that the reforms improved the credit allocation in the presence of the widespread distortions. However, the reforms to some extent managed to introduce strong competition among the banks for deposits and providing services.

2.8 BANKING SECTORS REFORMS IN EAST ASIA AND LATIN AMERICA COUNTRIES- EMPIRICAL EVIDENCE

2.8.1 INDIA

The banking sector reforms were introducedin early 1992 as part of India's macro-economic structural reforms.In these reforms the banking sector reforms were the major component. These reforms addressed all the aspects of the banks' operation. A number of initiatives were taken by the Government of India through the Reserve Bank of India to improve the efficiency of the banking sector and to open up the banking sector (Walia and Jain, 2012). Prior, to the reforms, the banks operated in an environment that was heavily regulated and characterised by the following:

- Sufficient barriers to entry.
- Structured interest rates,
- Credit allocated to specific sectors,
- Banks that were mainly owned by the government,
- Restriction of privately owned banks from being set up in India.

All these characteristics hindered competition and growth in the industry as it protected the banks from too much competition.

The banking reforms were implemented based on the recommendations that were proposed by the Narsimham Committee report of 1992. The main reasons were to introduce an element of market discipline into the regulatory process and to address several distortions that had crept into the financial system. These distortions were characterised by low profitability, high and growing non-performing assets, low capital base and poor quality of loan assets. All this was caused by policy rigidnesswhich included excessive degree of central direction of the banks operation in terms of investments, credit allocations, branch expansion and internal management aspects. The banking reforms were meant to address the dismal levels of operational and allocation inefficiency that had entered the system.

2.8.2 PAKISTAN

Prior to the reforms, the activities of the financial sector in Pakistan was controlled and directed by the Government. The banks were given instructions on the allocation of credit to specific sectors and administrative interest rates and fees were regulated. Prudential regulation(capitalisation) and provisioning requirements were weak and banks were facing a high tax rate of 58% compared to the rest of the corporate sector which paid only 35 %(Hardy and Bonaccorsi di Patti, 2001). Thus, the financial sector suffered from political interference in making lending decision (Husain, 2005).

In 1988 Pakistan instigated banking sector reforms. The role of State Bank of Pakistan in the reforms was to ensure financial soundness, maintain price stability, prudent management of the exchange rates and strengthening the payment system. The reforms managed to:

- Loosen the system of administered interest rates starting 1989-1990.
- Reduce directed credit to particular sectors
- Eliminated bank to bank credit ceilings by 1992.
- Introduced new prudential regulations
- Reduced dominance of nationalised banks from 100% in 1991 to 20% by June 2004 and capital requirements were increased to Rs 2 billion by 31st December 2005(Husain, 2005).

Therefore, the banking sector reforms in Pakistan were successful because they managed to instill financial discipline and stability, improved the country’s economic growth, increased competition and bank efficiency and reduced lending rates significantly.

2.8.3 SRI-LANKA

Sri Lanka was the first country to introduce banking reforms in the South Asian region. The reforms were initiated around 1977s and there were in three (3) phases. First phase was from 1977 to 1988 and it focused on establishing a sound financial infrastructure (Rahman, 2012). Second phase started in 1989 and it aimed at stabilising and liberalising the economy and the third phase was around 1984(*ibid*). These reforms were part of the Structural Adjustment programme. Some of the reforms that were introduced included removal of restrictions on banking products such as interest rate and loans, exchange rate relaxation, opening financial markets for foreign and domestic competition and foster financial intermediation efficiency (Edirisuriya, 2007). These reforms were meant to relax regulatory measures and reduce the Government control over the banking sector. To some extent these reforms were successful because of the following:

- Banking sector contribution to GDP improved greatly.
- Institutional structures of banks were developed.
- There was an increase in the scope of the banking industry.
- Banking density significantly improved.
- Banks industry become more competitive (Edirisuriya, 2007)

However, the reforms failed to bring the expected benefits because of political interferences, corruption, bureaucratic rigidities, political ideologies, social ideologies, ethnic issues and illiteracy (Edirisuriya, 2007). They also created an ideal environment for terrorist linked organisations to move their funds to accounts in local and international banks due to relaxation of financial regulation *(ibid).* All these factors slowed down the benefits of the banking reforms significantly.

2.8.4 CHILE

The reforms were implemented as from 1974 to 1981.The pre-reform financial sector was comprised of twenty(20) domestic commercial banks (one being a foreign owned commercial bank) and a number of non-bank financial intermediaries. It was heavily regulated with interest rate ceilings, quantitative controls on banks, directed credit and restricted operations of financial institutions (Bisat *et al*, 1999). The main elements of the banking sector reforms are shown in Table 2.5 below:

TABLE 2.5: CHILE BANKING SECTOR REFORMS.

DESCRIPTION	1974	1975	1976	1977	1978	1979	1980
<u>Deregulation of the Financial Sector</u>							
Privatisation of most state commercial banks	✓						
Barriers to entry lowered	✓						
Selective and subsidised credit reduced		✓					
Quantitative credit controls removed		✓					
Interest rates liberalised		✓					
Foreign bank branches allowed			✓				
Commercial banks freed to borrow abroad			✓				
Dollar deposits and savings rates indexed		✓					
<u>Strengthening of regulatory, supervisory and legal system</u>							
Capital requirements raised	✓						
Limits on concentration of bank ownership	✓						✓
Limits on credit to a bank customer rationalised							
Reserve Requirement lowered and unified						✓	
Interest paid on reserve requirement		✓					
Interest payments on reserve requirement phased out					✓		
Introduction of non-compliance penalties	✓						

Source: Bisat *et al*, 1999.

The reforms in Chile resulted in an increase in the number of commercial banks from 21 in 1974 to 41in 1981 and 17 of the new banks were foreign owned, increase in the number of banks branches, decrease in the bank deposit and lending rates because of a reduction in reserve requirement and increase in competition from the new entry of foreign banks and increased growth of private credit and deposits (Bisat *et al*, 1999).

However,the reforms brought some negative effects to the banking sector. The post reform effects included some controversy on the privatisation of banks, a wide gap between bank deposits and lendingrates, excessive risk taking by banks, unsound lending practices, increase in the number of problem loans because of inadequate supervision and banking crisis in the 1980s. This was mainly caused by the weak supervisory framework (poorly designed and inadequately implemented), banks not being subjected to discipline by depositors and ownership structures which contributed to excessive lending to interrelated entities (Bisat *et al*, 1999). Therefore, all these consequences lead to the reversal of some of the reforms, strengthening of regulations and supervisory arrangements and transferring of problems loans to the central bank.

2.8.5 ARGENTINA

The financial sector of Argentina was mainly dominated by government owned commercial banks. The financial structure was constrained by the unfavourable central bank requirements for new banks and for closing and opening of branches (Bisat *et al*, 1999). In 1973 a Deposit Nationalisation law was enforced and it required banks to deposit all their financial savings with the central bank (100 percent reserve requirement). Banks had to lend from their capital, reserves and credit funds from central bank (*ibid*).

Bank lending was in the form of selective and subsidised credit to priority sectors. Also, interest rates on bank deposits and loans were set by the monetary authorities together with the fees commissions. This caused real interest rates to be negative during 1974 and 1976. This resulted in savings through the banks to decline, private sector credit to fall by 17 percent and central bank credit to banks to decline(Bisat *et al*, 1999).

The banking sector reforms were implemented as from 1977 to 1980. The reforms includedliberalisation of interest rates (on bank deposit and loan rates), removal of bank credit controls, reduction of the 100 percent reserve requirement to 45 percent and lastly to 10 percent, removal of selective credit practices except for export oriented loans, removal of minimum requirements for opening new bank branches and the introduction of new prudential regulation. The sequence of these banking sector reforms are shown in Table 2.6 below:

TABLE 2.6: SEQUENCE OF REFORMS IN ARGENTINA.

DESCRIPTION	**1977**	**1978**	**1979**	**1980**	**1981**
<u>Deregulation of the Financial Sector</u>					
All interest rates ceilings abolished	✓				
Lending autonomy to financial Institutions	✓				
Reserve Requirement of 100 percent eliminated	✓				
Approval requirement for new banks eliminated	✓				
Branching restriction erased	✓				
<u>Strengthening of regulatory , supervisory and legal system</u>					
Minimum Capital requirements established	✓				
Limits on Individual borrowing put in place	✓				
Deposit Insurance of 100% eliminated			✓		
Supervisory System reformed					✓
Reserve Requirement lowered	✓	✓	✓	✓	
Restructuring of financial Institutions including liquidation mergers and reorganisation				✓	✓

Source: Bisat *et al*, 1999.

These banking sector reforms did not have a major effect on financial sector efficiency. According to Bisat *et al* (1999), they failed to:

- Increase competition and efficiency.
- Reduce administrative costs that were too high averaging at about 8% of total loans.
- Reduce the gap between deposit and lending rates - Differential deposit and lending rates widened although they narrowed after reforms implementation but still remained high above the pre-reform level (Bisat *et al*, 1999).
- Increase deposits- Slow increase in deposits due to negative real interest rates that were caused by the inflation rate that averaged 153%.

On the other hand, the reforms managed to increase the growth of bank credit to the private sector. In conclusion, the reforms in Argentina were not successful because they exposed banks to risks due to the rise in nominal interest rates which resulted in problem loans, liquidation of about 62 financial institutions including a major bank due to inadequate implementation of bank prudential regulations (Bisat *et al*, 1999). This was because of the structural and macroeconomic policies that were inadequate to support these reforms.

2.8. 6 INDONESIA

Before the banking sector reforms from 1978 to 1982 the banking sector of Indonesia was comprised of five (5) state commercial banks and some private and foreign banks. The state owned commercial banks dominated the market and accounted for an average of 76 percent of total financial sector assets and private and foreign banks accounted for 7-9 percent each and non bank accounted for only about 4 percent (Bisat *et al*, 1999). The financial sector was heavily regulated and this resulted in a high degree of policy induced segmentation (*ibid*). Even Government owned banks were subjected to ceilings on deposit and lending rates although they had a couple of advantages over other financial institutions. The advantages included tax exemptions, easier and larger access to liquidity credits, guaranteed deposits and monopoly over government and public sector banking activities. The pre-reform era was characterised by rediscounted priority loans at highly subsidised rates, credit ceilings, weak prudential regulations and banking supervision, inadequate loan provisioning and interest accrual rules and regulations on capital adequacy loan concentration.

In 1982 the Indonesian authorities introduced the banking sector reforms. The first phase of the reforms was implemented in June 1983 by eliminating credit ceilings and interest rate controls on deposits and priority loans (Bisat *et al*, 1999). Other reforms that followed included the modification of the liquidity credit facility, indirect instrument of monetary control, discount window policy. The second phase of the reforms began in 1987-1988 and it was very robust. The reforms included:

- Relaxation on the ability of banks and non banks financial institutions to establish new branches.
- Allowing commercial banks to freely open new branches throughout the country.
- Introduction of joint venture banks.
- Reducing reserve requirements from 15 percent to 2 percent among various classes of the banks.
- Strengthening prudential regulations by restricting banks from concentration lending.
- Introducing a comprehensive supervisory monitoring system.
- Removal of credit ceilings.

- Introduction of lending limits to single borrowers
- Interest rate liberalisation.
- Relaxing controls on entry of new banks

According to Bisat *et al* (1999) the removal of credit ceilings, interest rate liberalisation and discriminatory regulations benefited the banks mostly. The private banks Statement of Financial Position (SFP) grew more rapidly than government owned banks, bank credit increased and the ratio of M2 and private bank credit to Gross Domestic Product increased substantially.In addition, competition increased among banks, interest margins narrowed and the commercial banks holding of excess reserves dropped from 7percent to 2 percent in between 1983 and 1988.All these positive effects of the reforms resulted in a rapid growth in financial intermediation. However, the rapid growth in money and credit between the period of 1988 to 1990 caused deterioration in the quality of many bank's assets.

In conclusion, the Indonesia banking sector reforms were asuccess. This was also supported by Pill and Pradhan (1997) who found out that after the implementation of the reforms the real interest rates became positive since 1983 , there was growth in financial deepening , larger proportion of banks were privatised and they was an increase in bank competition. Therefore, the reforms in Indonesia managed to mitigate some of the major risks encountered when implementing banking sector reforms.

2.8.7 KOREA

The Korean financial sector consisted of nationwide, local and specialised banks, branches of foreign banks, various non banks, capital market and an active informal credit. The sector was infested with high barriers of entry for new banks and this led to the number of domestic banks unchanged between the periods of 1975 to 1980Bisat*et al* (1999). It was highly regulated with bank credit ceilings, central discretion of credit to specific sectors (priority sectors were exports, heavy chemical and large manufacturing industry), varied reserve requirement ratio and deposit and loan interest rates were changed in response to inflation.

The reforms were implemented as from 1980 to 1982 as part of the Economic Adjustment Programme (ESP) because of the imbalances that were in the economy which were caused by the misallocation of financial resources. The major objective of the reforms was to develop financial management systems that promoted effectively free enterprise and private initiatives Bisat *et al* (1999).However, Korean Government implemented these reforms slowly because:

- They were concerned that interest rate libelisation, if implemented quickly could lead to high expectations of inflation and raise interest rates sharply. This could damage the industrial sector.
- A too liberal banking sector could promote interrelated ownership of banks and concentration of lending to large conglomerates (Bisat *et al*, 1999).

The major reforms were limited liberalisation of interest rates and credit allocation. To some extent these reforms were successful because they managed to induce somepositive results to the Korean banking sector. The period between 1981 to 1983 five (5) nationwide government owned commercial banks were privatised and an approval was granted to establish two new nationwide commercial banks and one (1)specialised bank. Additionally, a number of bank branches and non banks were allowed to establish, annual and unannounced visits by the regulator were introduced, regulations that limited competition were eased, financial intermediation in the formal sector grew sharply although it was dominate in non bank intermediaries, ratio of M2 to Gross Domestic Product (GDP) increased from 33 percent in 1981 to 36 percent in 1987 and ratio of private financial assets to GDP increased from 39 percent to 48 percent. Therefore, the banking sector reforms were successful to some extent because they managed to bring more good than harm to the banking sector.

2.9 STYLISED FACTS ON THE BANKING SECTOR REFORMS IN AFRICA.

The following are some stylised facts on the banking sector reforms in Africa:

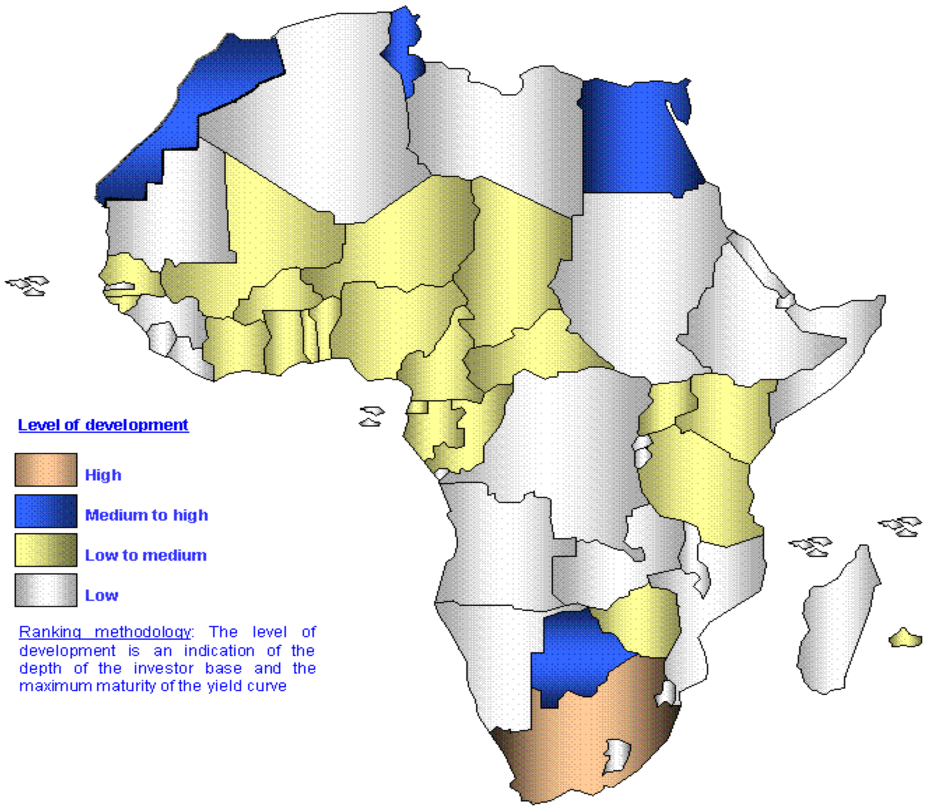
i. Most African countries began the implementation of banking sector reforms around 1980s as part of the broader financial sector reforms.
ii. Before the introduction of the reforms the African countries had narrow financial systems which were not equipped to sustain comprehensive banking reforms process over a short period of time (Moyo, 2001).
iii. The banking sector in many countries was oligopolistic in nature.
iv. Banking Sector was dominated by foreign owned banks. Beck et al (2011) estimated that an average local bank had total assets of USD220 million compared to the Statement of Financial Position of a foreign owned bank which had USD1 billion in total assets.
v. Most of the African countries were facing macroeconomic imbalances and financial system instability and this incited the introduction of the reforms.

vi. The objectives of the reforms were to build a robust and efficient banking sector.

vii. Reforms were introduced through Structural Adjustment Programmes.

viii. Inspite of the reforms there is still low level of development in the banking sector in approximately 34 countries. Except for South Africa, Botswana, Egypt Morocco and Tunisia have relatively developed sectors as show in figure 2.4below (Kasekende, 2007*)*.

FIGURE 2.4: LEVEL OF BANKING SECTOR DEVELOPMENT IN AFRICA



2.10 AN ANALYSIS OF BANKING PERFOMANCE IN AFRICA.

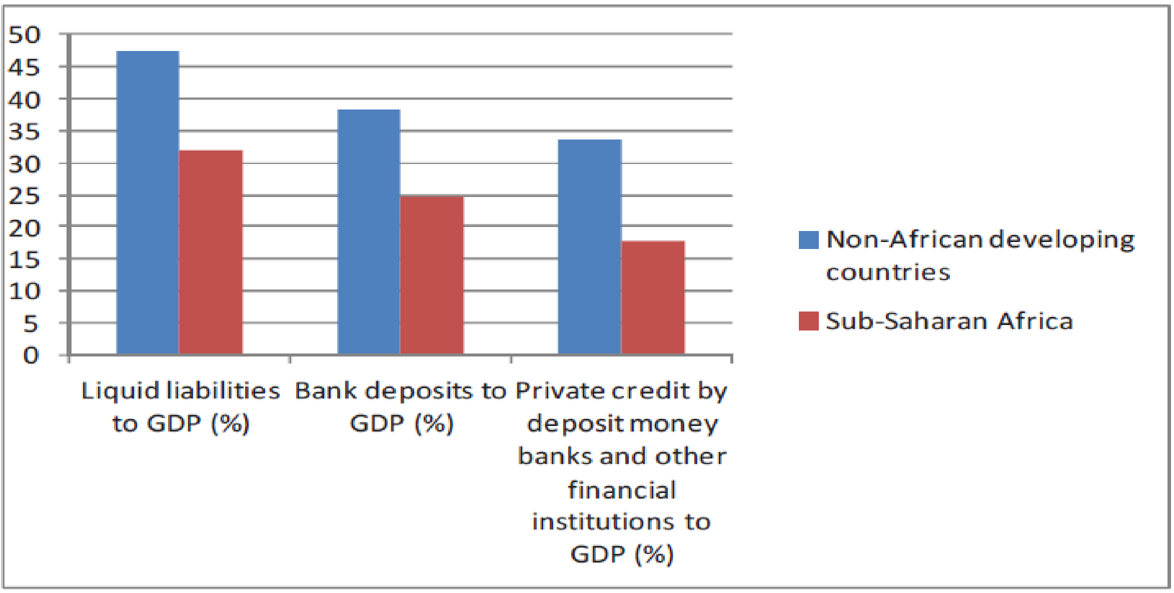
Banks are the most important element of the financial system in Africa (Kablan, 2010).It is characterised by small and underdeveloped banks.Thissector has been dominated by foreign and Government owned commercial banks (Brownbridge, 1998). Foreign owned banks had higher profit than the local banks (Cihak and Podpiera, 2005). This was because the local banks had been vulnerable to financial distress (technically becoming insolvent and illiquid) and a large number of banks have failed because of nonperforming loans (NPL) and poor loan quality. The poor loan quality has been caused by informational problems in particular moral hazard and adverse selection. Also, macroeconomic instability has fueled the banks failures. Some countries experienced periods of high and very volatile inflation. For example during the

1990s Zambia had an inflation rate reaching 191percent, Nigeria with 70 percent and Uganda had a 230 percent (Brownbridge, 1998). The high inflation rate increased volatility of business profits and made it very difficult for banks to conduct loan appraisals. Therefore, during the period between 1980s and 1990s most developing countries implemented the banking sector reforms in order to address these challenges.

Many studies have been carried out to assess the banking sector performance in Africa. According to Kablan (2010), he found out that most African banks were cost effective in producing their outputs (deposits and short term loans). However, theirefficiency could be improved by enhancing the credit environment through better legal process and accessibility of information on borrowers (*ibid)*. Hence, this might enable banks to play their financial intermediation role.

Beck and Cull (2013) also analysed the banking performance in Africa by comparing banking systems in Africa with non-African countries. They focused on how lower to middle income countries in Sub-Saharan Africa performed. They measured banking performance by using three standard financial development indicators. These indicators were liquid liabilities to GDP, Bank Deposit to GDP and Private Credit to GDP. In their analysis, they found out that the Sub Saharan countries had a significantly shallow banking sector than non African developing countries as shown in figure 2.5 below as at 2011.

FIGURE 2.5: BANKING PERFOMANCE IN AFRICA Vs NON AFRICAN DEVELOPING COUNTRIES.

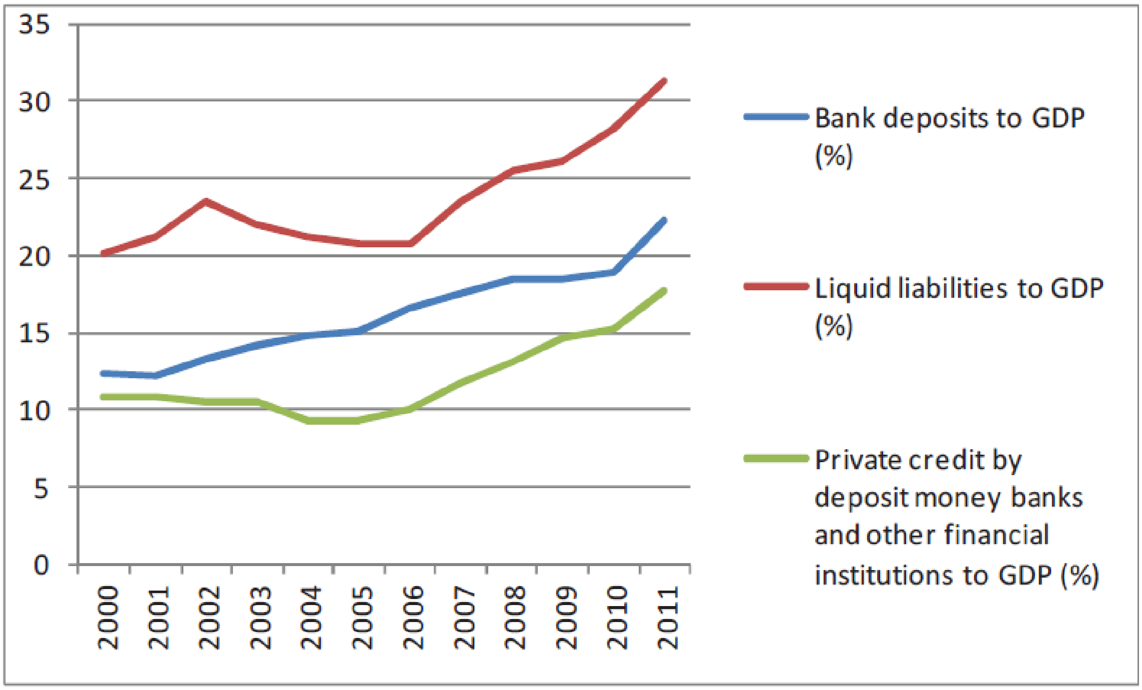


Source: Beck and Cull (2013): World Bank- Global Financial Indicators.

The figure above shows that non-African developing countries have liquid liabilities of 47 percent of GDP while the African country has 32 percent. Deposit to GDP ratio outside Africa had 38 percent compared to 25percent in Africa and Private Credit to GDP ratio was34 percent in non-African countries and only 18 percent in Africa (Beck and Cull, 2013). In addition, therewas a huge gap between the deposit and the credit data and this showed that African banks were less effective in intermediating society's savings.

In contrast, in the past decade there have been some remarkable positive changes in the African banking sector. According to Beck and Cull (2013), the three financial development indicators improved greatly during the period of 2000 to 2011.The figure 2.6 below shows the improvement. The bank deposits to GDP ratio increased from 12 to 22 percent and Liquid liabilities to GDP also increased from 20 to 31 percent. Lastly, Private credit to GDP increased by 7% from 11percent to 18 percent. However, regardless of all these improvement the African banking system is still considered to be shallow, less inclusive, inefficient and traditional

FIGURE 2.6: FINANCIAL DEEPENING IN AFRICA DURING THE PERIOD OF 2000TO 2011.



Source: Beck and Cull (2013); World Bank- Global Financial Indicators.

2.11 CHAPTER SUMMARY

Banks are the fundamental financial intermediaries in a financial system. They perform a very important role of financial Intermediation (linking surplus units with deficits units). It is very essential that the banking sector remains healthy and well regulated, supervised and efficient. For the past two decades most countries have implemented banking sector reforms in order to improve their banking sectors. Banking sector reforms have been implemented in a number of African, Asian and Latin America countries. In Africa the reforms were introduced as part of the International Monetary Fund (IMF) and World Bank (WB) structural adjustment policies and they focused on abolishing controlled credit allocation, interest rate liberalisation, bank restructuring, privatisation, prudential regulation and supervision. However, the major elements of the African countries banking sector reforms were interest rate liberalisation and removal of credit controls.

In Africa the economic environment has not been very conducive and favourable for the implementation of thereforms. The economies of these countries have been full of macroeconomic imbalances which have been persistent and they hindered the effectiveness of these reforms.As a result, the major post reform challenges that were faced by African countries were liquidity problems, inadequate implementation of new regulations, non-performing loans (due to lack of credit history), and banking crisis and bank failures. In contrast, in Asia and Latin America the reforms were implemented in more favourable macroeconomic environments and they managed to bring some positive results to the banking sector.

CHAPTER 3: DATA AND RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents an overview of the research methods employed in this study. Research requires a systematic approach to finding solutions to research problems (Saunders*et al*, 2009). The credibility of the research findings depends on the suitability and dependability of the methods used in data gathering and data analysis. This chapter describes the research design, research methods, target population, data collection, datasources and model specification.

3.2 RESEARCH DESIGN

The research was predominantly quantitative in nature. Quantitative research is empirical investigation of social phenomena via mathematical techniques (Welman et al, 2005). It generates numerical data or information that can be converted into numbers. This research adopted both statistical and econometric approaches in analysing the effectiveness of banking sector reforms on financial intermediation in Africa. The statistical approach categorised the analysis into "before and after" the reforms in order to compare the indicators of banking sector reform before and after the reforms.

3.3 TARGET POPULATION

The target groups of the research were African countries that implemented the banking sector reforms.Due to limitation in time, resources and data availability on some countries, the researcher selected only African countries that had available data. A probability sampling method was used in selecting the target population. This means that every country had equal chances of being selected if its data was available. The countries that were selected for this research were Algeria, Botswana, Cameroon, Ghana, Kenya, Nigeria, Malawi, South Africa, Uganda, Zambia and Zimbabwe.

3.4 DATA COLLECTION AND INFORMATION SOURCES

The data used in this research was obtained from secondary data sources. Secondary data is data collated by someone other than the researcher. Kothari (2004) defined it as data which have already been collected and analysed by someone else. It can be categorised into two classes which are published and unpublished secondary data. Published data was used in this research and the main sources were journals, books, peer-reviewed articles, InternationalMonetary Fund statistics (IMF), Global Banking (Center for financial markets Milken Institute) and World Bank Financial Development database. These sources of data are useful not only in the literature review but also assist in checking for the authenticity, reliability and suitability of data gathered before use. This reduces bias, oversimplification and unreliability associated with data gathering. The other advantage of secondary data is that it is inexpensive and easily accessible.

The data collected was used to create dataset in excel for the sampled countries and the variables for the research. Data was initially collected on 15 African countries that implemented substantive banking sector reforms for the period of 1980 to 2000. Due to data limitation some countries were removed from the analysis and these were Tanzania, Mauritius, The Gambia and Ethiopia. The final data set was also checked for accuracy and completeness before fitting the two models. Also, the country names were replaced with numeric identification numbers which were easily detected by STATA package but they were used interchangeably with the country names. Table 3.1 below lists each country's identification number and the number of years considered in extracting the banking sector reforms information.

TABLE 3.1: COUNTRY NAMES AND INDIFICATION NUMBERS.

COUNTRY NAME	COUNTRY NUMBER	NUMBER OF YEARS
ALGERIA	1	20
BOTSWANA	2	20
CAMEROON	3	20
GHANA	4	20
KENYA	5	20
NIGERIA	6	20
MALAWI	7	20
SOUTH AFRICA	8	20
UGANDA	9	20
ZAMBIA	10	20
ZIMBABWE	11	20

Source: Author's Compilation

3.5 MODEL SPECIFICATION AND DATA USED

3.5.1 DATA

The purpose of the research was to assess the effectiveness of banking sector reforms on financial intermediation in Africa. Annual time series and panel data which covered a period of 20years from 1980 to 2000 was used. Panel data was used because it's considered to be a better econometric technique when dealing with cross-country regression. Firstly, it exploits the time series dimensions of the data and controls any possible endogeneity of the regressors. This was also supported by Fowowe (2011), who concluded that panel data exploits the time series dimension of the data and hence giving greater degrees of freedom. Secondly, it gives more informative data, validity, less collinearity among variables and more efficiency. Thirdly, panel data detects better and measure the effects that cannot be observed in pure cross section or time series data. Fourth, it enables researchers to study more complicated behaviouralmodels. More advantages and also demerits of panel data were comprehensively discussed by Paul (2013), Hsiao (2003) and Gujarati (2004).

The research period under study was determined by the availability of data on banking sector reforms measures. In order to identify the dates of banking sector reforms in each selected country the researcher used the Abiad and Mody (2005) approach. This approach involves referencing to publications on banking sector reforms in countries that implemented them. Therefore, the works of Ofanson et al (2013), Simpasa (2013), Mwenda and Mutoti (2011), Yona and Inanga (2014), Browbridge and Grockel (1995), Moyo (2001), Ngugi and Kabubu (1998) and Inanga and Ekpenyong (2002) were used in identifying the country's reforms dates.

Additionally, other sources such as IMF occasional paper number 169 on Financial Sector Development in Sub Saharan African countries (IMF 1998) and Banking in Africa: The impacts on financial reforms since independence by Brownbridge (1998) were also used. These publications chronicled the important changes that occurred in the banking sector in African countries and assisted in identify the types of reforms and the dates they were implemented.

3.5.2 MODEL SPECIFICATION

The purpose of the analysis was to observe the way in which banking sector reforms influenced financial intermediation in Africa during 1980 to 2000. The models were based on the modification of the empirical models of Andries (2011), Azeez and Ojo (2012) and Fowowe (2011).

3.5.2.1RESEARCH MODEL

FI = f (banking sector reforms and macroeconomic variables)

= f (interest rate liberalisation, credit controlliberalisation, removal of entry barriers, banks privatisation, strengthening of bank prudential and supervision and inflation rate, income per capita and savings).

Financial Intermediation is measured by two (2) variables which would be analysed separately in the equations to measure the impact of banking sector reforms on financial intermediation. The two (2) equations are as follows:

$$II_{it} = \alpha_0 + \alpha_1 BSRINDEX_{it} + \alpha_2 INFL_{it} + \alpha_3 INC_{it} + \alpha_4 SAV_{it} + \varepsilon_t \quad \textbf{(3.1)}$$

$$PVTC/GDP = \lambda_0 + \lambda_1 BSRINDEX_{it} + \lambda_2 INFL_{it} + \lambda_3 INC_{it} + \lambda_4 SAV_{it} + \varepsilon_t \quad \textbf{(3.2)}$$

Where:

FI = Financial intermediation

II = Liquid Liabilities as a percentage to GDP

$PVTC/GDP_{it}$ = Private credit by money deposit banks as percentage of GDP

$BSRINDEX_{it}$ = banking sector reforms index (0 to 5)

$INFL_{it}$ = Inflation rate

INC_{it} = Income per capita

α_0, λ_0 = constant/Intercept

$\alpha_1 – \alpha_4$ = coefficient of parameters

λ_1 -λ_4 = coefficient of parameters

ε_t = error term

i = respective country

t = time period

3.5.3 DEFINITION OF VARIABLES

3.5.3.1 DEPENDANT VARIABLE

A dependant variable is a variable that is affected by an independent variable or responds to the independent variable (Kaur, 2013).The dependent variable in this research is financial intermediation. Many proxies have been used to measure the level of financial intermediation. Some researchers used monetary aggregates (M1, M2, and M3) as a percentage of Gross domestic products (GDP), ratio of liquid liabilities to GDP,bank lending to deposit spread and bank credit to bank deposits as shown in Table 2.1 in literature review.

Private credit by money deposit banks as a percent of GDP measures the degree of bank intermediation towards the private sector. It measures the level of financial resources provided to the private sector by domestic money banks (commercial banks) as a share of GDP. The domestic money bank refers to commercial banks and other financial institutions that accept transferable deposits such as demand deposits (Global Banking, 2011). An increase inprivate credit by money deposit banks shows a positive response of financial intermediation to banking sector reforms (the ability of the banks to increase lending).

Bank lending to deposit spread is defined as the difference between the interest rate charged by banks on loans extended to customers and interest rate paid by commercial banks on deposits from surplus units (demand, time and saving deposits). Global banking (2011) defined lending rate as the rate charged by banks on loans to the private sector and deposit interest rate as the rate offered by commercial banks on customer's deposits. A narrower gap between the interest rates indicates a positive influence on financial intermediation.

Liquid Liabilities is also known as broad money (M3).This measure of financial intermediation consists of currency, interest bearing liabilities of bank and non-bank financial intermediaries divided by GDP (Das, 2003).It is used as the broadest measure of the financial intermediary systembecause it covers all banks, central banks and other financial institutions intermediary activities. A higher percentage of liquid liabilities to GDP during the reform period would mean that the banking reforms increased the level of intermediation and the opposite would be true. However,liquid liabilities as a percentage of GDP have a limitation of double counting.

Bank credit to bank deposits as a percentage is the financial resources provided to the private sector by domestic banks as a share of total deposits (Global banking, 2011).Total deposits are demand, time and savings deposits that are held by commercial banks. A high percentage of bank credit to bank deposits means that banks are converting a large portion of their deposits into various loans (asset transformation). Therefore, this means that the level of financial intermediation would be high.

Researchers have failed to reach a consensus on proxies to use as a best measure of financial intermediation. In this research, financial Intermediation was measured using the proxies that were used by the following researchers, Rother (1999), Levine (2000), Mehl (2005) and Bhatia and Khatkhate (2011). Therefore, the two (2) proxies for the dependent variable (financial intermediation) are private credit by money deposit banks as a percent of GDP and Liquid liabilities as percentage of GDP.

3.5.4INDEPENDENT VARIABLES

The independent variables used in this research were derived from the literature review presented in the previous chapter. The explanatory variables are the banking sector reforms index, inflation rate, savings and income per capita. An independent variable is defined as a variable that causes some changes to the dependent variable (financial intermediation). The banking sector reforms index encompasses major banking reforms that were implemented by African countries. These are credit control liberalisation, interest rate liberalisation, removal of entry barriers, strengthening of bank prudential regulation and supervision and bankprivatisation.

Inflation rate was included as one of the explanatory variable acting as a controlling variable. It has a negative effect on financial intermediation. Darrat (1999), found out that inflation distorted prices, causes negative effects on real interest rates and economic growth. This was also supported by the works of Barro (1995) who investigated the relationship of inflation with deposits, savings and lending. He found out that inflation increased the prices of goods and services which then led to diminishing savings and decreasing deposits. Therefore, these would lead to a decrease in lending by the banks.

Income per capita is another control variable. It measures the level of income earned by a person in a country over a specified year. It is calculated by dividing the overall income of a population by the total population. The higher the income per capita the more people save with banks using various types of deposits. The banks would then convert these deposits into different types of loans. Also the lower the income per capita the less the people save and thus affecting financial intermediation negatively.

Lastly, gross savings as a percentage of GDP was included as a control variable. It is calculated as gross national income less consumption plus net transfers divided by GDP. An increase in gross savings causes an increase in bank lending and a decrease in gross savings reduces the bank's ability to intermediate. The banks convert the savings from surplus units into different loans.

3.6 CONSTRUCTION OF THE BANKING SECTOR REFORM INDEX.

The study employs a panel data analysis for the eleven(11) countries in Africa over the period from 1980 to 2000. The banking sector reforms index was constructed using the approach of Kaminsky and Schmukler (2003). Five banking sector reforms wereidentified as:

(i) Credit control liberalisation which covers the removal of directed credit allocation to specific industry sectors by the Government, credit ceilings and high reserve requirements.
(ii) Interest rate liberalisation which describes the extent to which the deposits and lending rates are market determined. This means itincorporates the removal of Government directed control on interest rates and interest rate ceilings.
(iii)The removal of entry barriers tracks the removal of entry restrictions into the banking sector, relaxation of licensing requirements, limits on the participation of foreign banks and branch expansion.
(iv)Privatisation of banks explains the extent to which banks could be privately owned rather than Government owned.
(v) Strengthening of bank prudential regulation and bank supervision which introducing new capital requirements and upgrading the supervisory and regulatory framework.

Appendix C shows the starting dates of the five banking sector reforms measures that were implemented by the countries under study. Interest rates and Credit control liberalisation were the first reforms that all the countries implemented mainly because they have a huge effect on financial intermediation which is the core activity of the banks.The analysis was structured into two (2) phases which are "before and after" the reforms. Before the reforms is a period where the government intervened in the banking industry through controls and any other restrictions. Post reform represents the period after the reforms were fully implemented. Each of the reform measures was allocated a value of zero (0) before the reforms and one (1) after the reforms as shown in the table 3.2 below:

TABLE 3.2: DUMMY VARIABLES FOR BANKING SECTOR REFORMS

BANKING SECTOR REFORM S	DUMMNY VARIABLE
Pre –Reform	0
Post-Reform	1

A matrix of five (5) variables measured over a 20 year period was produced with each reform having a value ranging between 0 and 1. In order to obtain a summary index of banking sector reformvarious methods were considered. Some of the methods used by various scholars includes the adding up of all the reforms measured in any given year and the resulting sum becomes an index of banking sector reforms, principal component analysis(Bandiera et al , 2000) and multiplying the eigenvectors of the first component with each reform measure. In this research the method of Laeven (2000) was used which involves the summing up of all the five (5) reforms in a given year to obtain the banking sector reform index for that particular year.Thus, the total value of the index ranged between 0 to 5 and the higher the index, the higher the number of reforms that were implemented in a particular year. Appendix A shows the summary of these reforms in the eleven countries under study.

This method showed the total number of banking sector reforms that were in existence in a particular year as shown in Appendix A. Some countries such as Botswana, Kenya, Malawi and Zambia implemented their banking sector reforms gradually as different measures were executed in different years. This was in line with the findings of Fowowe et al (2011)in their study on financial liberalisation policies and economic growth in sub Saharan Africa. On the other hand countries such Algeria,Ghana,Nigeria, Uganda and Zimbabwe had multiple banking reforms in the same year and implemented their reforms gradually except for South Africa which implemented the banking reforms as early as 1980. However, by 1996 all the eleven countries had undergone major banking sector reforms as evident by five (5) banking sector reforms that were in place for each country.

3.6.1 DATA ANALYSIS

The data collected was analysed using regression analysis on the panel data to estimate the equations (3.1) and (3.2). Aregression analysis is aneconometric analysis that shows how multiple independent variables are related to a dependent variable (Gujarati, 2004). The data set for this research was imported into STATA 10.0 to assess the impact of banking sector reforms, inflation rate, income per capita and savings on financial intermediation. The coefficients of the model were used to determine and explain theimpact of each independent variable on financial intermediation.

Before fitting the model, the variables were tested for stationarity using Levin Lin Chu unit root test. All the variables were not stationary at level and this non stationarity was corrected by differencing.Also correlation analysis was conducted on the variables so that any multicollinearity problems could be detected. In order to select the most efficient model to fit between the fixed and random effects, the Hausman test was used. This test checks for a more efficient model against a less efficient but consistent model in order to make sure that the efficient model results are consistent.

3.7 CHAPTER SUMMARY

This chapter explained how the research was conducted particularly in collecting the secondary data from the targeted population and in specifying the model used. The data was then analysed using Statistics and Data statistical software package (STATA).

CHAPTER 4: PRESENTATION AND DISCUSSION OF RESULTS

4.1 PRESENTATION OF RESULTS

This chapter presents the findings of this research and analysis of these findings. Tables and graphs were used to present, analyse and illustrate data findings. Through the techniques of regression and correlation analysis, the impact of banking sector reforms onfinancial intermediationwas analysed and its strength assessed. The empirical analysis and results were based on the data set for the eleven (11) African countries which is tabulated in the Appendix A and B. Appendix A shows how the banking sector reforms index was calculated while Appendix B shows the data of the dependent and independent variables extracted from International Monetary Fund Statistics (IMF), Global Banking.org and World Bank Financial Development Database. The data set was tested for stationarity before it was used to fit the models to ensure that the variables used in the regressions were not subject to spurious correlation.The Levin Lin Chu test showed that the variables had a unit root and the variables were transformed by differencing.

4.2 DESCRIPTIVE ANALYSIS

4.2.1 DESCRIPTIVE STATISTICS.

The analysis of the findings of this research starts with descriptive analysis of the data used in the study.Descriptive statistics are used to describe the basic features of the data in study, giving simple summaries and measures about the sample.Table 4.1 below shows the descriptive statistics and the distributionof both the dependent and independent variables.The descriptive statistics considered weremean, standard deviation, minimum, maximum, skewness and kurtosis. Mean was used to establish the average value of the data and standard deviation measured the variability or dispersion in the data. Skewness defined the shape of the distribution of the data and measures the extent to which it is not symmetric about its mean value (Brooks, 2014).Lastly, kurtosismeasures the fatness of the tails of the distribution of the data (*ibid*).

TABLE 4.1 DESCRIPTIVE STATISTICS FOR DEPENDENT AND INDEPENDENT VARIABLES - (1980-2000).

Variable	Obs	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
pcdm	231	17.7165	16.7368	1.1000	68.2900	1.4941	4.3459
infl	231	24.0967	31.6268	-3.2000	190.0000	2.8255	11.7456
inc	231	994.0761	1024.3950	99.1700	3973.9000	1.3638	3.4874
sav	231	17.5455	10.2438	-4.0000	50.0000	0.7112	3.3520
ll	231	28.5729	15.2533	4.5900	78.5500	0.8793	3.4629
ref	231	2.6450	2.2774	0.0000	5.0000	-0.1178	1.1758

Source: Author’s Compilation:

Notes**:** ref= measure of banking sector reforms;pcdm = private credit by money deposit banks as percentage of GDP; infl = inflation rate; inc = income per capita; sav = gross savings as a percentage of GDP; II =liquid liabilities as percentage of GDP.

4.2.2. CORRELATION ANALYSIS AMONG THE TEST VARIABLES.

Table 4.2 below examines the correlation between the two different proxies of financial intermediation and the explanatory variables, inflation rate, income per capita, savings and banking sector reform index.Correlation measures the degree of association or strength of the relationship between two variables. The correlation is bound to lie between (-1, 1) interval. A correlation of 1 indicates a perfect positive association between the variables and a correlation of -1 indicates a perfect negative correlation (Crooks, 2014).

TABLE 4.2: ESTIMATED CORRELATION MATRIX OF VARIABLES (1980-2000).

Variables	ref	pcdm	infl	inc	sav	LIL
ref	1.0000					
pcdm	-0.0070	1.0000				
infl	-0.2072	-0.2717	1.0000			
inc	0.1659	0.6893	-0.2611	1.0000		
sav	0.0969	0.3215	-0.3348	0.5724	1.0000	
ll	-0.1098	0.7898	-0.3120	0.6230	0.3612	1.0000

Source: Author’s Compilation:

Notes**:**ref= measure of banking sector reforms;pcdm = private credit by money deposit banks as percentage of GDP;infl = inflation rate;inc = income per capita; sav = gross savings as a percentage of GDP;II =liquid liabilities as percentage of GDP.

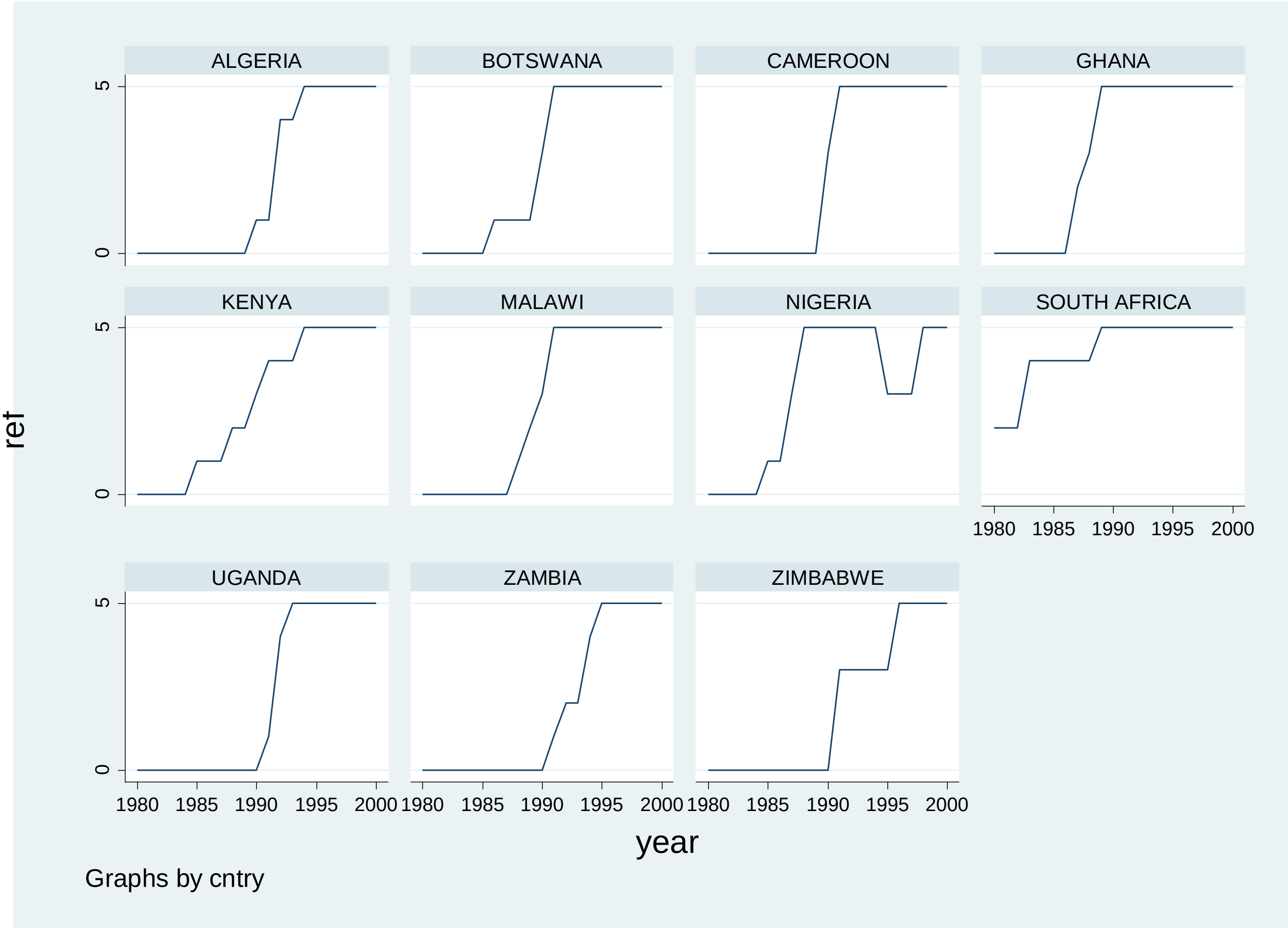
The correlation matrix shows that the correlation between the variables ranges between -1 and 1 interval. For instance there is a negative correlation between the two measures of financial intermediation (pcdm and ll) and banking sector reform index. This suggests that banking sector reform had a negative effect of financial intermediation. There is also a moderate to high positive correlation between the two measures of financial intermediation with income per capita and savings.Thus, income and savings can increase the level of financial intermediation as supported by the Boyd et al (2000) in the literature review.

The analysis also reveals that there is a negative relationshipbetween inflation rate and other variables such as income per capita, savings, liquid liabilities as percentage to GDP and private credit by money deposit banks as percentage of GDP.All these results suggest that financial intermediation failed to increase significantly during the banking sector reforms period.Therefore, the correlations matrix managed to show the correct signs among the variables under study.

4.2.3 BANKING SECTOR REFORM INDEX TREND AMONG THE 11 AFRICAN COUNTRIES.

The banking sector reform database covers different countries in terms of their location and level of economic development. There are eleven countries in the database with 1 from North Africa, 1 Central Africa, 5 Southern Africa, 2 East Africa and 2 from West Africa. The database covers a period of 20 years mainly from 1980 to 2000. Figure 4.1 below shows that countries gradually implemented the five components of the banking sector reforms index and the implementation process was not uniform.For example countries such as Botswana, Kenya, Nigeria, Ghana and Malawi started the reform process between 1984 and 1987. Algeria, Cameroon, Uganda, Zambia and Zimbabwe implemented their banking sector reforms between 1989 and 1990 except for South Africa which implemented the banking reforms as early as 1980.

FIGURE 4.1: GRADUAL IMPEMENTATION OF BANKING SECTOR REFORMS AMONG THE 11 AFRICA COUNTRIES BETWEEN 1980 -2000.



Source: STATA 10

4.3 REGRESSION ANALYSIS

Sometimes the correlation matrix is able to anticipate the results from regression analysis. Thus,further test were conducted using econometric approach in order to check for the robustness of the correlation matrix findings. To achieve this firstly Levin Lin Chi unit root test was conducted. This is crucial since most macroeconomic variables have been proven by recent econometric modeling that they are non stationary in their levels. To correct for non stationarity the variables were then differenced. The regression analysis of the impact of banking sector reforms on financial intermediation for period 1980 to 2000 was performed using the panel regression analysis. The regressions were carried out using STATA 10.

Firstly, both the fixed effects and Random effects models were used for fitting the model before selecting the most efficient model for the research. Generally the method used for choosing between fixed effects and random effects is by running the Hausman test. The Hausman test checks for a more efficient model against a less efficient but consistent model so that the more efficient model gives consistent results (Reyna, 2007). The null hypothesis for the test is the preferred model is random effects and alternative hypothesis was the fixed effects. The test was run for all the two equations as shown by the figure 4.2 and 4.3 below.The results favored random effect model over the fixed effects since the Pro>chi2 was greater than 0.05 (insignificant).

FIGURE 4.2 HAUSMAN TEST FOR EQUATION 3.1.

	Coefficients			
	(b) fixed2	(B) random2	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
infl	-.0736485	-.0741079	.0004595	.0012857
inc	.0050968	.0054935	-.0003967	.0003229
sav	-.0345634	-.029406	-.0051574	.0108582
ref	-1.402756	-1.408674	.0059182	.0139925

```
                   b = consistent under Ho and Ha; obtained from xtreg
    B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test:  Ho:  difference in coefficients not systematic

              chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                      =        1.68
            Prob>chi2 =      0.7947
```

FIGURE 4.3 HAUSMAN TEST FOR EQUATION 3.2.

	Coefficients			
	(b) fixed1	(B) random1	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
ref	-1.236456	-1.227678	-.0087783	.0248223
infl	-.0325428	-.0344922	.0019494	.0025333
inc	.0093466	.0099148	-.0005682	.0007475
sav	-.0351744	-.0420149	.0068405	.0249531

```
                   b = consistent under Ho and Ha; obtained from xtreg
    B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test:  Ho:  difference in coefficients not systematic

              chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                      =        1.84
            Prob>chi2 =      0.7644
```

4.4 DISCUSSION OF REGRESSION RESULTS.

The findings of the impact of banking sector reforms on financial intermediation are discussed.Table 4.3 presents the results from the regression with private credit by money deposit banks as percentage of GDPas the dependent variable.

TABLE 4.3 REGRESSION RESULTS WITH PRIVATE CREDIT AS THE DEPENDENT VARIABLE – (EQUATION 3.1).

Variables	Coefficient	t- value
Constant	12.680**	
	[0.040]	(3.38)
Infl	-0.034	
	[0.020]	(2.64)
Inc	0.009**	
	[0.000]	(6.71)
Sav	-0.042**	
	[0.013]	(2.14)
Ref	-1.228**	
	[0.000]	(4.75)
R^2	0.50	
rho(fraction of variance)	0.574	
Wald Test of joint significance	[0.000]	
Number of countries	11	
Number of Observations	231	

Notes: Dependent variable is private credit. Figures in parenthesis ( ) are absolute t statistic valuesand figures in [ ] are p-values. All coefficients have been rounded to 2 decimal places. ** indicates that a coefficient is significant at the 5% level.

The regression equation is:

PVTC/GDP = 12.680-1.228ref-0.034infl+ 0.009inc-0.042sav.

The above results indicate that inflation, savings and banking sector reforms had an adverse impact on financial intermediation during the reform period. The banking sector reform index had a negative impact on private credit. A percentage change in banking sector reform index decreased private credit by 122.80%, while a percentage change in inflation and savings lead to a decrease in private credit by 3.4% and 4.2% respectively. In contrast, a percentage change in income caused a 0.9% increase in private credit by banks. All these variables have a significant impact on financial intermediation and theircoefficients are all statistically significant at 5% level. According to the results of regression analysis as shown in Table 4.3 banking sector reforms , inflation , savings and income per capita explains 50% variation in financial intermediation (R^2 = 0.50).

TABLE 4.4REGRESSION RESULTS WITH LIQUID LIABILITIES AS THE DEPENDENT VARIABLE – EQUATION 3.2.

Variables	**Coefficient**	**t- value**
Constant	29.140**	
	[0.001]	(7.52)
infl	-0.074	
	[0.02]	(5.19)
inc	0.005**	
	[0.000]	(5.11)
sav	-0.029**	
	[0.007]	(3.84)
ref	-1.409**	
	[0.000]	(8.03)
R^2	0.47	
rho (fraction of variance)	0.81	
Wald Test of joint significance	[0.000]	
Number of countries	11	
Number of Observations	231	

Notes: Dependent variable is liquid liabilities. Figures in parenthesis ( ) are absolute t statistic values and figures in [ ] are p-values. All coefficients have been rounded to three decimal places. ** indicates that a coefficient is significant at the 5% level.

The regression equation is:

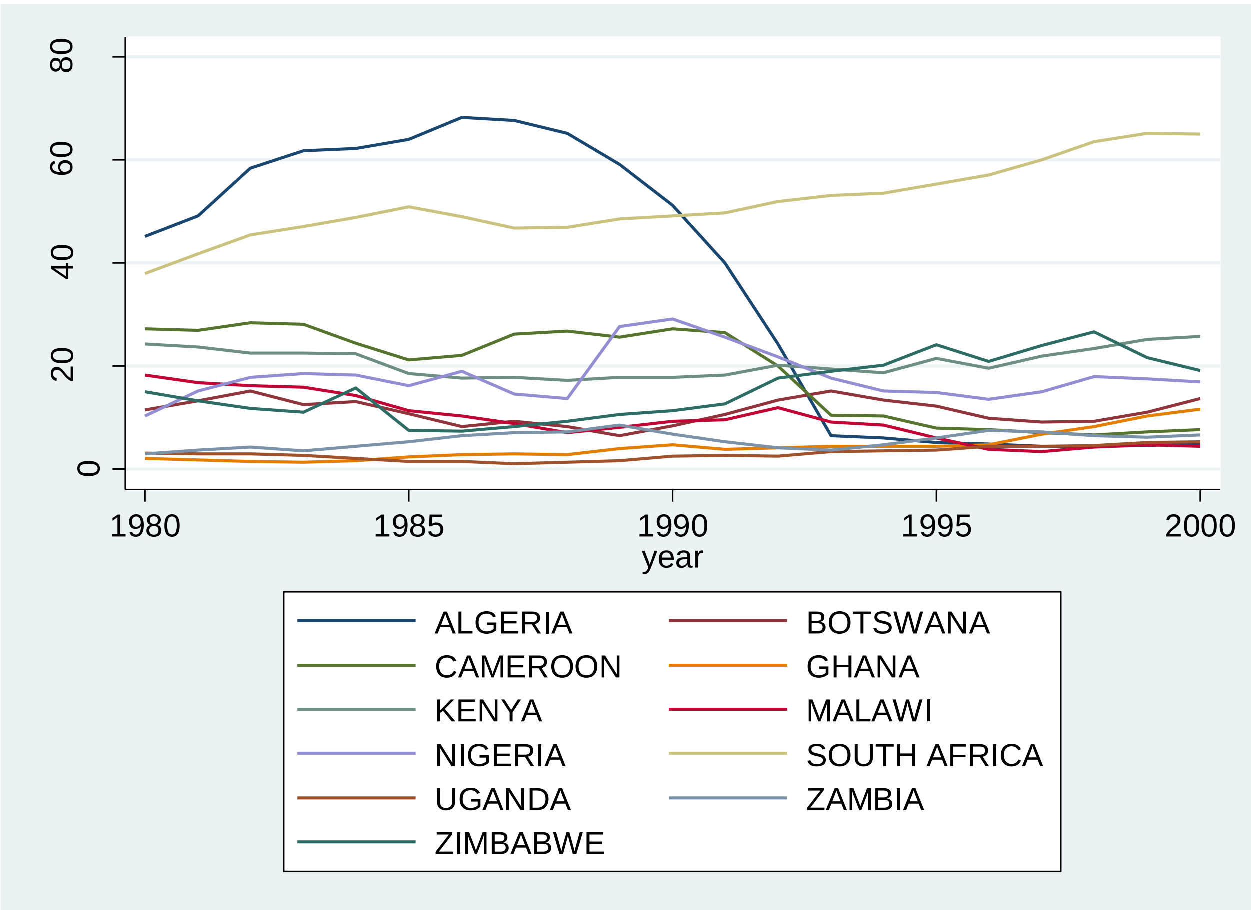
II_{it} = 29.140 – 1.409ref – 0.074 infl+ 0.005inc-0.029sav.

The above results indicate that inflation, income, savings and banking sector reforms had an impact on financial intermediation during the reform period. The banking sector reform index, inflation and savings had a negative impact on liquid liabilities. A percentage change in banking sector reform index caused a 140.9% decrease in liquid liabilities, while a percentage change in inflation and savings decreased liquid liabilities by 7.4% and 2.9% respectively. On the other hand, a percentage change in income caused 0.5% increase in liquid liabilities. All the coefficients of the variables are statistically significant at 5% and the R- squared for the model is 0.47. This means that the variables explains 47% of variation in financial intermediation (R^2 = 0.47).

4.4.1 BANKING SECTOR REFORM INDEX

Banking sector reform index has the expected sign in both the two models. The results show that there is an inverse relationship between banking sector reforms and financial intermediation. The proxies for financial intermediation were private credit by money deposit banks as a percentage of GDP and liquid liabilities as percentage of GDP. In both models the banking sector reform index had a negative impact on private credit and liquid liabilities as shown in Table 4.3 and 4.4. This means that the African countries in the study did not benefit much from the banking sector reforms. Financial intermediation remained weak because of the high interest spreads between the deposit and lending interest rates. This led to a passive behaviour by commercial banks towards performing their intermediation role. This was also supported by Senbet (2005) who found out that the desired effects of banking sector reforms on credit allocation failed to materialise in most African countries. The private credit and liquid liabilities as percentage of GDP failed to show a clear upward trend in most Africa countries. Figure 4.3 and 4.4 below show the levels of private credit and liquid liabilities before and during the reforms.

FIGURE 4.4: PRIVATE CREDIT BY MONEY DEPOSIT BANKS AS A PERCENTAGE OF GDP.

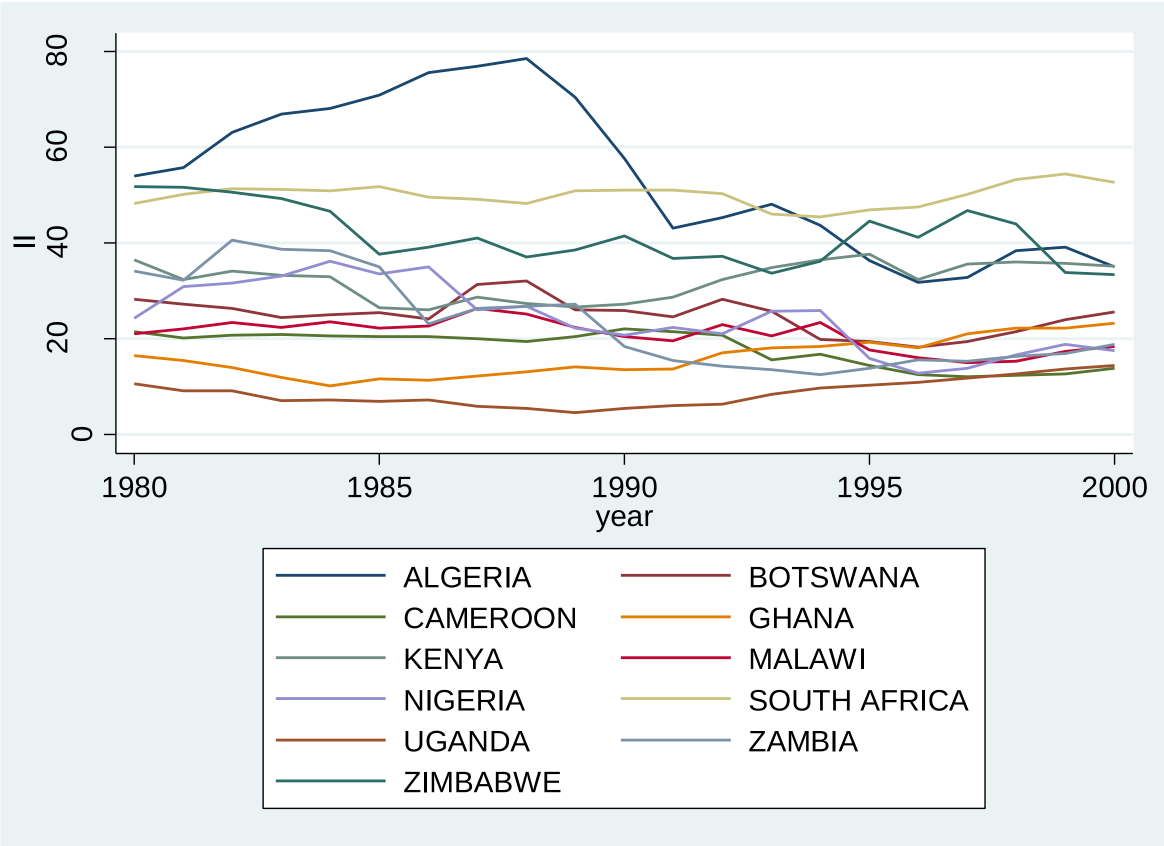


Source: STATA 10.

The figure 4.4 shows that private credit levels decreased after the banking sector reforms were implemented. For example in Algeria the level of private credit decreased drastically after the reforms were implemented between 1989 and 1990. The levels fell from as high as 65.17% to 5.01 % after the implementation of the reforms. Also in Cameroon the levels fell from 27.24% to 7.72% after the implementation of the reforms. In a nutshell figure 4.3 above shows that after the reforms were implemented ten (10) countries except for South Africa experienced a lot of fluctuations in the level of their private credit by banks and no clear upward trend could be seen. However, for South Africa it was a different story from the other ten (10) countries. The private credit level continued to increase after the implementation of the reforms in 1980 with minor fluctuations because of its financial system which was more developed than the other African countries. South Africa had a much more mature, well established and sophisticated financial system than the other African countries (Odhiambo, 2011).

Figure 4.5 below also shows the negative impact that the banking sector reforms had on liquid liabilities a measure of financial intermediation.

FIGURE 4.5 LIQUID LIABILITIES AS A PERCENTAGE OF GDP.



Source: STATA 10.

Most African countries experienced a decrease in the level of their liquid liabilities after the implementation of the banking sector reforms. In Algeria a sharp decrease was experienced from as a high as 54.02% to 31.82% while in Cameroon the levels fell from 32.04% to 18.28% except for South Africa where an upward trend was experienced. The results from figure 4.4 concur with the results from 4.3 which show that the banking sector reforms had a negative impact on financial intermediation. Therefore, this agrees also with the works of Brownbridge and Harvey (1998), Mehran (1998), Bisat *et al* (1998), Moyo, (2001) and Cihak and Podpiera (2005).

4.4.2INFLATION RATE

The coefficient of inflation rate is negative and statistically significant. This means that inflation rate has a negative relationship with financial intermediation.A percentage change in inflation caused a decrease in private credit and liquid liabilities by 3.4% and 7.4% respectively in the two models. This is because increasing inflation rate tends to reduce financial intermediation, drives down the real rate of return on money and exacerbates credit market frictions.Hence, Inflation rate interfere with the ability of the financial sector to allocate resources effectively.This finding supports the works of Boyd et al(2000) and Rother (1999).

During the reform period the inflation rate increased drastically in many African countries. For example in Zimbabwe inflation increased by 23.4 %, Zambia by 37.3% and Malawi by 46.1% after the implementation of banking sector reforms except for South Africa. An increase in inflation rate acted as a disincentive to savers who expected a fall in their real wealth (Ogun and Akinlo, 2011).Banks started rationing credit as inflation rates increased leading to fewer loans being offered and intermediary activity diminishing.Also, in order to cover for inflation increase, banks started increasing their lending rates and this limited credit.

4.4.3 INCOME PER CAPITA

Income per capita was found to be positive and statistically significant in both models.A percentage change in income per capita caused an increase in private credit and liquid liabilities by 0.9% and 0.5% respectively. Income has a positive impact on financial intermediation because as income per capita increase the more people tend to save with banks using various types of deposits. As a result the banks would then convert these deposits into different types of loans. Also the lower the income per capita the less the people save and thus affecting financial intermediation negatively.

4.4.4 GROSS SAVINGS AS PERCENTAGE OF GDP

The results from the two model show that gross savings as a percentage of GDP has a negative impact on financial intermediation. A percentage change in gross savings caused a decrease in private credit and liquid liabilities by 4.2% and 2.9% respectively. This relationship is contrary to the anticipated positive sign because banking sector reforms were introduced with the objective of mobilising and allocating savings efficient. The banking sector reforms were expected to increase savings and ultimately financial intermediation. The possible explanation for this is because of high interest spread (difference between deposit and the lending rates) which discouraged surplus units from savings. The low deposit rates failed to stimulate savings and this resulted in lesser funds in the coffers of the banks for intermediation activities (Azeez and Ojo, 2012). This was also supported by the works of Ogun and Akinlo (2011).

4.5 CHAPTER SUMMARY

This chapter explained the regression results for the two models from Statistics and Data Statistical Software Package (STATA). The results showed that the banking sector reforms had a negative impact on financial intermediation on the eleven countries under study. Thus, the reforms failed to achieve their objectives of mobilising savings and increasing intermediation activities (lending). In addition,the results also revealed that the control variables which were inflation and gross savings had an inversely relationship with financial intermediation except for income per capita which had a positive relationship. The main causes of the failure of the banking sector reforms in Africa were the macroeconomic imbalances, financial system instability and wrong sequencing of the reforms.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 INTRODUCTION

The aim of the study was to analyse the effectiveness of the banking sector reforms on financial intermediation in Africa. There were three main objectives which were to identify the different banking sector reforms that have been implemented by African countries. Secondly, was to evaluate the effectiveness of these reforms on financial intermediation. Thirdly, to examine whether there is a positive significant relationship between banking sector reforms and bank performance in general.The main purpose of this chapter is to summarise the major findings of this research, followed by conclusions. The conclusions presented then culminate into policy recommendations in line with the research findings.

5.2 SUMMARY OF RESULTS

Financial intermediation involves the process of mobilising deposits from the surplus units of the economy and channeling these funds to deficits units in form of loans and advances. The major financial intermediaries in a financial system are the banks. They enable the efficient allocation of financial resources in the financial system and make profits from interest rates spread. Obamuyi (2013) found out that for banks to be able to grant more loans and advances they must be efficient in mobilising more deposits (savings) from the surplus units. This was also supported by the works of McKinnon (1973) and Shaw (1973) who advocated for liberalisation of the financial sector as a good policy in enhancing mobilisation of savings and raising the level of savings. This means that there is a positive correlation between deposits mobilisation and bank lending. Therefore, most African countries implemented banking reforms in order to improve the operations of banks in Africa.

The major focus of this research was to investigate the effectiveness of banking sector reforms on financial intermediation in Africa. The research was quantitative in nature and involved some stochastic econometric approach (regression analysis) using panel data. The Hausman test was used in determining which model between fixed and random effects was appropriate for the analysis. The random effects model was found to be the most appropriate and efficient.

The regression results shows that banking sector reforms had a negative impact on financial intermediation for the African countries under study. From the two models, apercentage change in banking sector reform index caused a 140.9% decrease in liquid liabilities and 122.80%

decrease in private credit.During the reform period the lending rate increased faster than the deposit rates causing narrow interest rate spread.This caused the dysfunctional financial intermediation. In addition, there were many bank failures and financial distress in many African countries after the banking sector reforms. All this inhibited the ability of banks to increase lending to the financial sector (Aryeetey and Sebnet, 2004).The banks ended up having high non performing loans and excess liquidity. This was supported by the works Brownbridge and Harvey (1998), who found out that banking sector reforms led to insignificant improvements in financial intermediation.

From the two models inflation and savings had a negative impact on financial intermediation as from1980 to 2000. This is because most African countries are still developing and are characterised by poor households who do not have savings habits.Lack of saving by the households was due to low income, lack of access to adequatebanking services and unattractive deposit interest rates. Thus, the desired banking sector reforms effects of savings mobilisation failed to materialize during the reform period. Furthermore, Inflation rate also increased drastically preventing positive real interest rates from being attained. This discouraged savings and affected the intermediary activities of banks as fewer loans were offered by banks during and after the reform period.Last but not least, the results showed that income per capita had a positive impact on financial intermediation in both models.

In conclusion the banking sector reform failed to increase financial intermediation in Africa. According to World Development report (World Bank 1994), the reforms in many African countries had limited success. The financial intermediation measured by liquid liabilities and private credit remained very low after the implementation of the reforms. The main reasons for these limited achievements were:

Wrong sequencing of the reforms – Before implementing the reforms Government should have ensured macroeconomic stability in their countries. However, this was not done and this resulted in adverse consequences to the economy and the financial sector.

Speed at which the reforms were implemented in Africa –The banking sector reforms were implemented in Africa because of the pressures from the World Bank (WB) and International Monetary Fund (IMF). According to Mkandawire and Soludo ((2003), World Bank announced that it was high time Africa began to adjust and it was a matter of take it leave it. Therefore, most African countries never evaluated these reforms before they implemented them.

Lack of supportive legal and regulatory framework to the reforms – African countries had not developed effective structures to support reforms at the time of the implementation.

Macroeconomic instability –broad economic framework remained weak in most African countries. For example the level of inflation remained high during and after the implementation of the banking sector reforms, budget deficits. Thus, macroeconomic stability remained very poor or fragile.

Unconducive political environment – Government persistently reversed policies or adopted a 'stop-go' approach in implementing banking sector reforms and this caused confusion in the financial sector. Hence, this hindered the effectiveness of the banking sector reforms.

Although the banking sector reforms failed to increase financial intermediation, it managed to bring some positive effects to the banking sector. These are an increase in the number of banks, increased competition, reduced the dominant market share of the major state owned banks, increased number of new bank branches, increased a variety of financial products, improved customer service just to mention a few.

5.3 RECOMMENDATIONS

Based on the research findings some recommendations for improving the effectiveness of banking sector reforms were made to African countries. These recommendations are aimed at enhancing the effectiveness of banking sector reforms on financial intermediation and bank performance in general. These are as follows:

- Countries should do proper planning before implementing reforms.
- Macroeconomic stabilisation – Policy makers must ensure that macroeconomic stability in a country.
- The political environment should be stable as this affect the effectiveness of the banking sector reforms.
- Develop effective financial infrastructure that is conducive for the implementation of banking sector reforms.
- Reforms should be adequately supported by legislative framework, prudential regulation and banking supervision.
- Pace of the reforms must be adjusted according to the country's characteristics andeconomic conditions. Mkandawire and Soludo ((2003), proposed that the idea

sequence could be establishment of macroeconomic stability, development of financial markets and reforms.

- Banking sector reforms should be implemented gradually while maintaining a balance between excessive speed and undue delay.

5.4 CONCLUSIONS OF THE STUDY

Banking sector reforms were implemented by most African countries in order to address the challenges that were faced by their financial sectors. However, the banking sector reforms caused unintended effect of destabilising the financial sector, increasing macroeconomic instability, bank failures, weak prudential regulation and supervision framework, high non performing loans, financial distress, failed to mobilise savings , low levels of financial intermediation just mention a few. To a larger extent these reforms brought more harm than good to the financial sector. The banking systems in Africa still remain severely affected even after the banking sector reforms (Senbet, 2005).Thus, the banking sector challenges that were meant to be solved by these reforms still remained unresolved. This has remained as an African puzzle.

REFERENCES

Abiad, A. and Mody A. (2005). Financial Reform: What shakes it? What shapes it/ American Economic Review, vol 95, pp 66-88.

Adams, S. and Agbemade, J. (2012). Financial liberalization and banking sector performance in Ghana, African Journal of Business Management, vol. 6, no. 47, pp. 11598-11608.

Allen, F. and Santomero, A. (1999).What do financial intermediaries do? Journal of Banking and Finance, vol 25, pp271-294.

Andries, A. M. (2009). What Role Have Banks in Financial Crises? Review of Economic and Business Studies (REBS), (3), 149-159.

Ajayi, M. (2005). Banking Sector Reforms and Bank Consolidation: Conceptual Framework, CBN Bullion, Vol. 29(2), April - June 2005.

Aryeetey, E. and Senbet, L. (2004). Essential financial market reforms in Africa. Technical

Publication No. 63, Institute of Statistical, Social and Economic Research, Ghana.

Auerbach, D. (1988).Money, Banking and Financial Markets, New York McMillan.

Azeez, B. A. and Ojo, O.M. (2012). A Time Series Analysis on The Effect of Banking Reforms on Nigeria's Economic Growth, The International Journal of Economics , vol 314 , pp24 -37.

Barro, R. J (1995). Inflation and Economic Growth, Working paper, National Bureau of Economic Research.

Bandiera, O., Caprio, G., Honohan, P and Schiantarelli, F. (2000). Does Financial Reform raise or reduce savings? Review of Economics and Statictics,vol.82,no.2, pp 182-211.

Beck, T., Cull, R. (2013). Bank privatization and performance: Empirical evidence from Nigeria. Journal of Banking and Finance 29, 2325-2379.

Beck, T., Maimbo, S., Faye, I. and Triki, T. (2011). Financing Africa through the crisis and beyond, Washington DC , World Bank.

Benhabib, J and Spiegel, M.M. (2000).The role of financial development in growth and investment, Journal of Economic growth, no 5, pp 341-360.

Benston, G .J and Smith, Jr C.W. (1976). A transactions cost approach to the theory of financial intermediation, Journal of finance, no 31, pp 251-231.

Bhatia, R.J and Khatkhate, R. (2011). Financial Intermediation, Savings Mobilization, and Entrepreneurial Development: The African Experience, International Monetary Fund.

Bisat, A., Johnston, B. and Sundararajan, V. (1999). Sequencing financial reforms and liberalisation in five developing countries, International Monetary Fund, Washington, DC, pp 95-185.

Brooks, C. (2014). Introductory Econometrics for Economics, 2ndJohns Hopkins University Press.

Brownbridge, M. and Gockel, A. F. (1995).The Impact of Financial Sector policies on Banking in Ghana, DS, Sussex.

Boyd, J. H., Levine, R. and Smith B.D, (2001). The impact of inflation on financial sector performance, Journal of Monetary Economics, vol 47, pp 221-248.

Cartel, H. and Partington, L. (1981).Applied Economics in Banking and Finance, Oxford University Press, United Kingdom.

Calomiris, W. C. (2013). What Is Meaningful Banking Reform, Why Is It So Necessary…and So Unlikely? The Journal of Economics, Vol 34, 2012, pp 26 – 37.

Casu, B., Girardone, C. and Molyneux, P. (2015). Introduction to Banking, 2nd, Person Education Limited Edinburgh Gate United Kingdom.

Cihak, B. and Podpiera, C. (2005). Bank Behaviour in Developing Country. Evidence from East Africa, Johns Hopkins University Press.

Das, S. K. (2003). Financial Liberalisation and Banking Sector Efficiency in India, International Business Management, vol2 , pp 42-58.

Darrat, A.F. (1999). Are Financial Deepening and Economic Growth Causality Related? International Economic Journal, vol 13, pp 19-35.

Diamond, D.W.(1984). Financial Intermediation and delegated monitoring, Review of Economic Studies, no 51, pp 393-414.

Dogarawo, A. B. (2011), Chronology of banking reforms in Nigeria, The Journal of Financial Regulation and Compliance, Vol 19 No 4, 2011, pp 370 – 382.

De Gregorio, J. and Guidotti, P.E., (1995). Financial Development and economic growth, World Development23:3, pp 433-448.

Edirisuriya, P. (2004). Financial Deregulation in South Asia: The Banking Sector, The Journal of Banking, Information Technology and Management, Vol. 1, pp. 46-64.

Fama, E.F. (1980). Banking in the theory of Finance, Journal of Monetary Economics no 10, pp10-19.

Fry, M. J. (1988). Money, interest, and banking in economic development. Johns Hopkins University Press.

Fowowe, B. (2011).Financial liberalization Policies and Economic Growth: Panel Data Evidence from Sub-Saharan Africa, University of Ibadan.

Glen, J. (1994). An introduction to the microstructure of emerging markets International Finance Corporation Discussion Paper, 24, World Bank.

Gockel, A.F. (1995).The role of Finance in Economic Development. The Case of Ghana Unpublished Thesis, University of Manchester USA.

Gorton, G. and Winton, A. (2002). Financial Intermediation, NBER Working Paper 8928, Cambridge.

Global Banking (Center for financial markets Milken Institute) (2011).org.

Gurley, J. G. and Shaw, E.S. (1960).Money in a Theory of Finance, Washington, DC, Brooking Institution.

Gujarati, D.N., (2004). Basic Econometrics, 4thEdition , Tata McGraw Hill Edition.

Hardy, D.C. and Bonaccorsi di Patti, E.(2001). Bank Reform and Bank Efficiency in Pakistan, IMF Working Paper, WP/01/138, Middle Eastern Department.

Haynes, L., Pyle, D. E (1997).Information Asymmetries, Financial Structure and Financial Intermediation, Journal of Finance, 32 (2) (1977), pp. 371–387.

Harvey, C. (1996). The limited impact of financial sector reforms in Zimbabwe(No. 36).Institute of Development Studies London.

Hsiao, C. (2003). Analysis of Panel Data, 2nd Edition, Cambridge University Press, Cambridge: (Econometric Society Monograph no.34).

Husain, I. 92005). Banking Sector reforms in Pakistan,Intermediation, Journal of Finance, 50 (1980), pp. 71–87.

Inyang, B.J., Enuoh, R. O. and Ekpenyong, O. E. (2014). The Banking Sector Reforms in Nigeria: Issues and Challenges for Labour Management Relations, Journal of Business Administration Research, vol 3, no 1, pp 82-90.

Inanga, E.L. and Ekpenyong, D.B. (2002).Financial Liberalisation in Africa: Legal and Institutional Framework and Lessons from other less developed Countries.

IMF Global Financial Stability Report (2002).

Johnson, B.R. and Brekk, P.O. (1993). Monetary Control Procedures and Financial Reforms: Approaches, Issues and Recent Experiences in Developing Countries, Economic Development Institution, Washington D C World Bank.

Kablan, T. (2010). Banking Efficiency and Financial Development in Sub-Saharan Africa. Pearson Education, 50 1 Boylston Street, Suite 900, Boston.

Kasekende, L. (2007). Developing a sound banking system in Sub-Saharan countries, African Finance in the 21st Century.

King, R.G. and Levine, R. (199). Finance and Growth: Schumpeter might be right, Quarterly Journal of Economics, no.108, pp 717-737.

Laeven, L. (2000). Does financial Liberalisation reduce financial constraints? Journal of Financial Management, vol32, pp 5-35.

Levine, R. (2005). Law, Endowments and Property Rights, Journal of Economic Perspectives, vol.19, No. 3, pp. 61–88.

Levine, R. (2000). Financial Intermediation and growth: Causality and Causes, Journal of Monetary Economics, vol 46, pp 31-77.

Leland, H.E. and Pyle, D.H., (1997). Information Asymmetries, Financial Structure and Financial Intermediaries, Journal of Finance, vol 32, pp 371-387.

Lizwa, D.R.B. and Nwankwo, S. (2002).Market Transformation of the banking Sector in Tanzania, The International Journal of Bank Marketing, vol20, no 1; pg. 38-49.

Mkandawire, T. and Soludo, C. (2003). African Voices on Structural Adjustment, Africa World Press Inc.

Mehran, H. (1998). Financial Sector Development in Sub-Saharan African Countries, Washington D C International Monetary Fund.

Mishkin, F. S. (2013). The Economics of Money and Banking, and Financial Markets, 10th Edition, Pearson Education, 50 1 Boylston Street, Suite 900, Boston.

Moyo, J. (2014).Financial Sector Reforms, Competition and Banking System Stability in Sub-Saharan Africa Paper presented at the IMF/DFID Conference on "Macroeconomic Challenged Facing Low-Income countries" International Monetary Fund, Washington DC, January 30 – 31, 2014.

Munene, D. (2005).Financial Reforms and Interest Rates Spreads in the Commercial Banking Sector in Kenya. Unpublished Thesis, Rhodes University, South Africa.

Mwenda, A. and Mutoti, N. (2011). Financial Sector Reforms, Bank Performance and Economic Growth: Evidence from Zambia,African Development Review, vol. 23, no. 1, pp. 60-74.

Ngugi, R. and Kabubo, J. (1998).Financial Sector Reforms and interest rate liberalization. The Kenya Experience, African Economic Research Consortium, Paper No 72, Nairobi March 1998.

Ofanson, E. J. (2013).Assessing the Impact of Banking Reforms on the Performance of the Banking Industry in Nigeria, Indian Journal of Commerce and Management Studies, vol IV, no 2 , pp 1- 11.

Obamuyi, T. M. (2013). An analysis of the deposits and lending behaviours of banks in Nigeria. International Journal of Engineering and Management Sciences, 46–54.

Obadeyi, J. A.(2014).The effect of Financial Reforms on Banking Performance in an Emerging Market : Nigeria Experience, The Research Journal of Finance and Accounting , Vol 5, No 23, pp57 – 66.

Odedokun, M.O (1996). Alternative Econometric approaches for analysing the role of the financial sector in economic growth: Time series evidence from LDCs, Journal of Development Economics, vol 50, pp 119-146.

Odhiambo, N.M (2011). Financial depth, savings and economic growth in Kenya: a dynamic casual linkage, Economic Modeling, vol 25, no 4, pp 704-713.

Olajide, T. O. Obafemi, T. A., Jegede, C. A. (2011).The impact of Financial Sector Reforms on Banks Performance in Nigeria, The International Journal of Business and Finance , Vol 5 , no 1 , pp 53 – 63.

Ogun, T. P., and Akinlo, A. E. (2011). Financial Sector reforms and the performance of the Nigerian Economy, The Review of Finance and Banking, vol 03, pp 47-60.

Paul, F. (2013). The financial Regulation reform Agenda International Monetary Fund Working paper 95.

Pill, H. and Pradhan, M. (1997). Financial liberalisation in Africa and Asia, International Monetary Fund Working paper 95.

Rau, N. (2004). Financial Intermediation and Access to Finance in African Countries South of the Sahara, South African Reserve Bank, Development Policy Research Unit.

Reserve Bank of Zimbabwe Quarterly Economic and Statistics Review (September – December 1998).

Rother, C.P (1999). Explaining the behavior of Financial Intermediation: Evidence of Transition Economies, International Monetary Fund Working Paper 99/36.

Scholtens, B., van Wensveen, D., (2000). A critique on the theory of financial intermediation. Journalof Banking and Finance, 24 (8), 1243 -1251.

Schumpeter,J.(1911).Theory of Economic Development, HarvardUniversity Press,Cambridge,MA.

Senbet, L W. (2005). Financial Sector Reforms in Africa: Perspectives on issues and policies, Annual World bank Conference on Development Economics.

Sheng, A. (1996). Bank Restructuring: Lessons from 1980s, Washington DC, World Bank.

Shaw, E. M. (1973). Financial Deepening in Economic Development, New York, Oxford University Press.

Simpasa, A.M. (2013).Increased foreign bank presence, privatisation and competition in the Zambian banking sector, Managerial Finance, vol. 39, no. 8, pp. 787-808.

Sologoub, D. (2006). The Determinants of Bank Interest Margin and Profitability: Case of Ukraine.

Swary, I. and Topf, B. (1992), Global Financial Deregulation; Commercial Banking at the Crossroads, The Journal of Financial Regulation and Compliance, Vol 14 No 23, 2011, pp 400–412.

Walia, K. and Jain, M. (2012). Financial Sector reforms and their impact on banking sector, International Journals of Marketing and Technology, vol 2, issue10, pp 52-61.

World Bank (1989). World Development Report 1989: Financial Systems and Development. New York: Oxford University Press.

Yona, L. and Inanga, E. L. (2013). Impact of Financial sector Reforms in bank ownership on service quality of commercial banks in Tanzania, European Journal of Business and Management Vol.6, No.2, 2014.

APPENDICES

APPENDIX A: THE CONSTRUCTION OF BANKING SECTOR REFORMS INDEX BY YEAR AND COUNTRY.

COUNTRY	YEAR																				
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Algeria	0	0	0	0	0	0	0	0	0	0	1	1	4	4	5	5	5	5	5	5	5
Botswana	0	0	0	0	0	0	1	1	1	1	3	5	5	5	5	5	5	5	5	5	5
Cameroon	0	0	0	0	0	0	0	0	0	0	3	5	5	5	5	5	5	5	5	5	5
Ghana	0	0	0	0	0	0	0	2	3	5	5	5	5	5	5	5	5	5	5	5	5
Kenya	0	0	0	0	0	1	1	1	2	2	4	4	4	4	5	5	5	5	5	5	5
Nigeria	0	0	0	0	0	1	1	3	5	5	5	5	5	5	5	5	5	5	5	5	5
Malawi	0	0	0	0	0	0	0	0	1	2	3	5	5	5	5	5	5	5	5	5	5
South Africa	2	2	2	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
Uganda	0	0	0	0	0	0	0	0	0	0	0	1	4	5	5	5	5	5	5	5	5
Zambia	0	0	0	0	0	0	0	0	0	0	0	1	2	2	4	5	5	5	5	5	5
Zimbabwe	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	5	5	5	5	5

The table above shows a summary of the banking sector reforms for the eleven countries. Each cell gives a total number of reforms that have been implemented out of a total of 5 banking sector reform measures. The banking sector reforms measures are:credit control liberalisation, Interest rate liberalisation, removal of entry barriers, Privatisation of banks and prudential regulation and bank supervision. The index for each year ranges between 0 to 5. Zero (0) indicating before reforms were implemented and 5 indicating that all the 5

APPENDIX B: DATASET FOR DEPENDENT AND INDEPENDENT VARIABLES.

country	year	banking sector reform Index	Private credit by deposit money banks/GDP (%)	inflation rate	income per capita / GDP PER CAPITA ($)	Savings/GDP%	Liquid Liabilities to GDP %
1	1980	0	45.13	9.7	2268.6	30	54.02
1	1981	0	49.16	14.7	2223.7	39	55.82
1	1982	0	58.47	6.5	2197.1	37	63.09
1	1983	0	61.84	6	2298.9	38	66.95
1	1984	0	62.30	8.1	2452.7	31	68.21
1	1985	0	64.09	10.5	2567.5	29	70.98
1	1986	0	68.29	12.4	2740.7	22	75.58
1	1987	0	67.63	7.4	2790.5	22	76.93
1	1988	0	65.17	5.9	2402.8	18	78.55
1	1989	0	59.20	9.3	2202.06	24	70.51
1	1990	1	51.18	16.7	2394.6	33	57.69
1	1991	1	39.97	25.9	1721.6	35	43.19
1	1992	4	24.29	31.7	1766.1	30	45.31
1	1993	4	6.53	20.5	1797.5	26	48.06
1	1994	5	5.99	29	1500	26	43.73
1	1995	5	5.15	29.8	1444.9	25	36.38
1	1996	5	4.81	18.7	1596	25	31.82
1	1997	5	4.40	5.7	1612	29	32.83
1	1998	5	4.41	5	1588.4	30	38.37
1	1999	5	4.62	2.6	1581	26	39.12
1	2000	5	5.01	0.3	1757	42	34.97
2	1980	0	11.57	13.6	1063.51	27	28.33
2	1981	0	13.30	16.4	1039.4	29	27.3
2	1982	0	15.13	11.1	948.6	27	26.34
2	1983	0	12.58	10.5	1058.8	29	24.38
2	1984	0	13.06	8.6	1084	25	24.99

2	1985	0	10.73	8.1	942.4	32	25.45
2	1986	1	8.27	10	1139.9	36	24.21
2	1987	1	9.33	9.8	1558.8	39	31.4
2	1988	1	8.32	8.4	2034.1	50	32.04
2	1989	1	6.54	11.6	2301.7	47	26.1
2	1990	3	8.37	11.4	2747.2	42	25.91
2	1991	5	10.56	11.8	2776.4	45	24.54
2	1992	5	13.42	16.2	2839.2	41	28.28
2	1993	5	15.11	14.3	2772.7	44	25.76
2	1994	5	13.38	10.5	2767.4	30	19.9
2	1995	5	12.17	10.5	3001.4	33	19.49
2	1996	5	9.94	10.1	3007.6	39	18.28
2	1997	5	9.12	8.7	3050.2	38	19.49
2	1998	5	9.30	6.7	2854.7	42	21.57
2	1999	5	11.06	7.7	3210.2	37	24
2	2000	5	13.78	8.6	3333.2	39	25.62
3	1980	0	27.24	9.6	754.66	5	21.5
3	1981	0	26.95	10.7	829.9	11	20.22
3	1982	0	28.44	13.3	772.4	23	20.7
3	1983	0	28.14	16.6	755.5	21	20.92
3	1984	0	24.47	11.4	774.7	25	20.65
3	1985	0	21.28	8.5	784.9	23	20.49
3	1986	0	22.15	7.8	992.5	24	20.46
3	1987	0	26.22	13.1	1115.2	19	20.08
3	1988	0	26.74	1.7	1098.8	20	19.46
3	1989	0	25.58	-1.7	950.08	18	20.49
3	1990	3	27.29	1.1	923.9	16	22.09
3	1991	5	26.53	0.1	1000.3	15	21.53
3	1992	5	20.07	0	890.6	11	20.79
3	1993	5	10.49	-3.2	1027.6	9	15.67
3	1994	5	10.26	35.1	680.6	11	16.81
3	1995	5	7.96	9.1	627	14	14.39

3	1996	5	7.73	3.9	679.8	14	12.57
3	1997	5	7.02	4.8	669	12	12.15
3	1998	5	6.66	3.2	637.4	16	12.34
3	1999	5	7.29	1.9	675.9	16	12.73
3	2000	5	7.72	1.2	583.1	15	13.92
4	1980	0	2.11	50.1	411.5	6	16.55
4	1981	0	1.78	116.5	379.8	6	15.46
4	1982	0	1.52	22.3	351.3	6	14.04
4	1983	0	1.39	122.9	341.1	7	11.92
4	1984	0	1.69	39.7	358.4	4	10.16
4	1985	0	2.44	10.3	354.2	8	11.63
4	1986	0	2.81	7.8	437.1	7	11.28
4	1987	2	2.97	13.1	376.5	8	12.18
4	1988	3	2.84	1.7	375.2	10	13.06
4	1989	5	4.05	-1.7	369	11	14.21
4	1990	5	4.69	1.1	402.6	11	13.53
4	1991	5	3.92	0.1	438.5	12	13.75
4	1992	5	4.08	0	414.6	7	17.13
4	1993	5	4.40	-3.2	375.1	13	18.17
4	1994	5	4.39	35.1	333.2	19	18.44
4	1995	5	4.51	9.1	385.7	18	19.31
4	1996	5	4.77	3.9	403.9	18	18.08
4	1997	5	6.73	4.8	392.3	10	21
4	1998	5	8.31	3.2	416.3	18	22.24
4	1999	5	10.27	1.9	419.9	9	22.25
4	2000	5	11.66	1.2	264.7	15	23.22
5	1980	0	24.30	13.86	446.6	17	36.48
5	1981	0	23.65	11.6	405.6	20	32.33
5	1982	0	22.54	20.7	366.3	15	34.18
5	1983	0	22.54	11.4	327.8	18	33.22
5	1984	0	22.36	10.3	326.9	14	32.99
5	1985	1	18.51	13	312	20	26.57

5	1986	1	17.61	2.5	355	17	26.1
5	1987	1	17.82	8.6	377	18	28.64
5	1988	2	17.30	12.3	381.5	20	27.41
5	1989	2	17.79	13.8	365.4	19	26.72
5	1990	3	17.79	17.8	365.6	19	27.2
5	1991	4	18.33	20.1	336.4	19	28.75
5	1992	4	20.22	27.3	328	15	32.35
5	1993	4	19.46	46	227.1	37	34.88
5	1994	5	18.66	28.8	268.6	33	36.51
5	1995	5	21.45	1.6	330.5	23	37.74
5	1996	5	19.58	8.9	428.4	16	32.43
5	1997	5	21.94	11.4	454.7	15	35.6
5	1998	5	23.39	6.7	476.7	18	36.1
5	1999	5	25.12	5.7	425.6	22	35.83
5	2000	5	25.79	10	409	14	35.16
6	1980	0	10.31	10	871.15	23	24.27
6	1981	0	15.21	20.8	806.5	27	30.92
6	1982	0	17.77	7.7	661.2	25	31.63
6	1983	0	18.55	23.2	444.6	21	33.1
6	1984	0	18.26	17.8	348.5	16	36.17
6	1985	1	16.27	7.4	344.1	16	33.62
6	1986	1	18.95	5.7	240.6	11	34.98
6	1987	3	14.65	11.3	272.5	15	26.13
6	1988	5	13.66	54.5	256.4	18	26.76
6	1989	5	27.75	50.5	260	31	22.29
6	1990	5	29.22	7.4	321.7	23	20.76
6	1991	5	25.56	13	279.3	26	22.39
6	1992	5	21.79	44.6	291.3	19	21.06
6	1993	5	17.68	57.2	153.1	13	25.8
6	1994	5	15.17	57	171	7	25.88
6	1995	3	14.86	72.8	263.3	14	15.98
6	1996	3	13.56	29.3	314.7	10	12.86

6	1997	3	15.08	8.5	314.3	14	13.87
6	1998	5	17.95	10	273.9	-2	16.71
6	1999	5	17.54	6.6	299.4	19	18.8
6	2000	5	16.91	6.9	377.5	29	17.53
7	1980	0	18.30	19.19	198.44	8	21
7	1981	0	16.85	16.4	195.6	10	22.03
7	1982	0	16.22	9.7	182	13	23.35
7	1983	0	15.92	11.2	183.7	13	22.45
7	1984	0	14.33	12.8	175.3	13	23.57
7	1985	0	11.37	8.9	157	11	22.26
7	1986	0	10.34	13.5	155.4	9	22.62
7	1987	0	8.82	16.7	145.9	14	26.35
7	1988	1	7.07	31.1	160.1	18	25.23
7	1989	2	8.06	22.5	175.3	17	22.35
7	1990	3	9.35	10.7	199.9	16	20.53
7	1991	5	9.64	10.7	229.4	17	19.57
7	1992	5	12.01	13.3	185.8	5	22.96
7	1993	5	9.17	28.2	213.5	5	20.59
7	1994	5	8.60	26.2	121.5	5	23.4
7	1995	5	5.99	77.2	142.3	8	17.62
7	1996	5	3.91	52.3	227.9	7	16.02
7	1997	5	3.47	20.8	259.6	1	15.01
7	1998	5	4.29	19.5	165.7	13	15.28
7	1999	5	4.71	39.7	163.2	4	17.39
7	2000	5	4.51	30.5	155.8	10	18.38
8	1980	2	37.97	14.24	2920.78	34	48.2
8	1981	2	41.86	9.9	3073.1	27	50.14
8	1982	2	45.48	13.9	2764.3	21	51.41
8	1983	4	47.10	16.6	2893.7	24	51.19
8	1984	4	48.89	11.5	2792	23	50.86
8	1985	4	50.99	16.8	2142.2	25	51.85
8	1986	4	49.04	17.1	2475	23	49.59

8	1987	4	46.82	14.5	3158.6	23	49.21
8	1988	4	46.98	15.2	3398.6	23	48.2
8	1989	5	48.56	17.3	3621.5	22	50.97
8	1990	5	49.13	15.5	3182.2	19	51.1
8	1991	5	49.70	15.7	3345.8	19	51.03
8	1992	5	51.92	14.6	3557.1	16	50.41
8	1993	5	53.18	16.5	3584.1	17	46.11
8	1994	5	53.52	9.6	3650.5	18	45.42
8	1995	5	55.40	10.2	3973.9	18	46.96
8	1996	5	57.06	7.9	3690.2	17	47.6
8	1997	5	60.04	8	3728.3	16	50.22
8	1998	5	63.55	7.8	3288.2	16	53.28
8	1999	5	65.17	7	3183.1	17	54.43
8	2000	5	64.99	8.8	3099.1	18	52.7
9	1980	0	3.10	99.2	99.17	18	10.65
9	1981	0	3.00	100	103.5	10	9.12
9	1982	0	2.98	100	163.5	4	9.18
9	1983	0	2.65	45.9	163.2	5	7.12
9	1984	0	2.12	25.3	255.3	8	7.16
9	1985	0	1.52	120.3	240.6	7	7.01
9	1986	0	1.49	137.3	259.2	7	7.2
9	1987	0	1.10	181	400.1	3	5.91
9	1988	0	1.30	190	401.1	5	5.49
9	1989	0	1.70	115.4	314	6	4.59
9	1990	0	2.52	44.4	247.6	6	5.43
9	1991	1	2.66	26	184.8	9	6.08
9	1992	4	2.57	45.1	153.9	14	6.39
9	1993	5	3.38	30.1	167.9	11	8.44
9	1994	5	3.56	6.8	201.6	15	9.72
9	1995	5	3.71	9.4	282	13	10.26
9	1996	5	4.41	4.6	287.3	20	10.94
9	1997	5	4.51	3.1	289.2	21	11.73

9	1998	5	4.62	8.8	294.8	19	12.64
9	1999	5	5.23	-0.1	260.5	17	13.7
9	2000	5	5.31	11.1	260.7	14	14.45
10	1980	0	2.89	11.73	664.34	11	34.2
10	1981	0	3.69	7.2	653	1	32.2
10	1982	0	4.25	6.1	609.4	1	40.6
10	1983	0	3.55	18.6	505.4	8	38.7
10	1984	0	4.45	18.3	400.3	5	38.4
10	1985	0	5.30	41.1	321	1	35
10	1986	0	6.45	82	229.8	3	23.1
10	1987	0	7.03	62	303.3	1	26.37
10	1988	0	7.28	34.5	484.5	8	26.81
10	1989	0	8.57	80.9	504.3	-4	27.18
10	1990	0	6.78	106.4	403.8	20	18.38
10	1991	1	5.30	92.7	403.9	4	15.46
10	1992	2	4.15	165.5	371.1	7	14.25
10	1993	2	3.69	143.7	372.2	11	13.55
10	1994	4	4.66	80.7	405.5	13	12.51
10	1995	5	6.09	30.6	411.4	8	13.9
10	1996	5	7.55	24.3	378.6	10	15.6
10	1997	5	7.23	25.4	440.7	7	15.31
10	1998	5	6.57	16.9	352.6	0	16.36
10	1999	5	6.18	17.9	330.2	2	16.88
10	2000	5	6.69	32.6	340.2	2	18.88
11	1980	0	14.98	8.51	916.29	9	51.75
11	1981	0	13.29	8	1058	13	51.64
11	1982	0	11.85	18.2	1084.2	11	50.59
11	1983	0	11.05	27.5	947.1	9	49.36
11	1984	0	15.79	10.6	744.8	17	46.72
11	1985	0	7.58	9	636.1	16	37.63
11	1986	0	7.34	14.4	675.9	18	39.12
11	1987	0	8.28	9.4	706.9	15	41.1

11	1988	0	9.24	8.4	792	20	37.08
11	1989	0	10.60	17.2	813.6	15	38.51
11	1990	0	11.29	17.1	837.8	16	41.51
11	1991	3	12.67	32.5	802.9	13	36.8
11	1992	3	17.69	45	612.7	11	37.21
11	1993	3	18.98	18.5	583.1	20	33.7
11	1994	3	20.20	20.8	600.4	18	36.18
11	1995	3	24.21	28	608.7	15	44.58
11	1996	5	20.84	15.8	720.1	16	41.22
11	1997	5	23.94	24.2	707.3	11	46.77
11	1998	5	26.65	44.1	523.6	20	44.07
11	1999	5	21.70	55.9	554.2	18	33.92
11	2000	5	19.20	57	535.2	15	33.45

APPENDIX C: STARTING DATES FOR BANKING SECTOR REFORMS FOR THE ELEVEN AFRICAN COUNTRIES.

Name of the Country	Credit Controls	Interest Rate Controls	Entry Barriers	Bank Privatisation	Bank Prudential Regulation and Supervision
Algeria	1992	1990	1992	1994	1992
Botswana	1991	1986	1990	1990	1991
Cameroon	1991	1990	1990	1991	1990
Ghana	1988	1987	1987	1989	1989
Kenya	1991	1990	1994	1988	1985
Nigeria	1985	1987	1987	1988	1988
Malawi	1991	1988	1990	1991	1989
South Africa	1980	1980	1983	1989	1983
Uganda	1992	1992	1991	1992	1993
Zambia	1994	1992	1991	1995	1994
Zimbabwe	1991	1991	1991	1996	1996

Source: Various articles on banking sector reforms for the above countries.