

**DETERMINANTS OF DEPOSIT MOBILIZATION AND ITS ROLE IN ECONOMIC
GROWTH IN GHANA**

By

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DECLARATION

I hereby declare that this submission is my own work towards the Commonwealth Executive Master of Business Administration (CEMBA) and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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ABSTRACT

Over the past decade, planning in Ghana for investment has been a problem especially with policy makers due to over-reliance on sources of finance other than domestically generated funds. The sure solution therefore will be the need to mobilize domestic funds and channeling those funds to capital formation through prolific investments. The literature discloses a devastating agreement that a liberalized economy encourages increased savings and promotes capital amassing and economic growth. This study examined the determinants of savings mobilization and its role in promote economic growth in Ghana. Data for the analysis cover the period between 1980 and 2010. Time series characteristics of the data were investigated by applying unit root tests to examine the stationarity of each variable. To determine the robustness of the Ordinary Least Squares (OLS) regression coefficients, a test for serial correlation and heteroskedasticity was performed. The demand for real bank deposits was then modelled using the OLS technique. Results from the study show that exchange rate, inflation rate and money supply (M2) significantly affect the mobilization of financial savings (deposit) in Ghana. Deposit interest rate however, proofed to be a weak determinant of bank deposit mobilization. This is because of the lack of confidence that people had in the banking system. Successful mobilization of domestic resources requires a stable macroeconomic environment in which inflation is under control and possible currency substitution is tamed by a stable exchange rate. The functions performed by banks, especially their use of deposits to allocate credit to the private sector for investment, promote growth to an extent. However, government borrowing and other factors constrain the economy from realizing the full growth benefits of functions performed by the banks. Financial policies by government can also augment this development process by assuring greater amount of information on credit worthiness of businesses and households in the economy.

DEDICATION

This work is dedicated to my wife, Irene and daughter, Ujoti for their patience, encouragement and emotional support.

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List of Abbreviations

BBWA	British Bank of West Africa
BOG	Bank of Ghana
DMB	Deposit Money Banks
ERP	Economic Recovery Program
FINSAP	Financial Structural Adjustment Program
GDP	Gross Domestic Product
GNA	Ghana News Agency
GNI	Ghana National Income
HIPC	Highly Indebted Poor Countries
IEA	Institute of Economic Affairs
IFS	International Financial Statistics
IMF	International Monetary Fund
ISSER	Institute of Statistical, Social and Economic Research
LDC	Least Developed Countries
MDRI	Multilateral Debt Relief Initiative
MPR	Monetary Policy Rate
NDA	Net Domestic Asset
NDC	National Democratic Congress
NFA	Net Foreign Asset
NPP	New Patriotic Party
PNDC	Provisional National Defense Council
SAP	Structural Adjustment Program
SMC	Supreme Military Council

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

A solemn limitation to the development and economic growth of developing countries is the weak, under-developed and the relative undiversified financial systems. Frail fiscal and monetary policies coupled with inefficient financial intermediation have led to insufficient capitalization and volatile macroeconomic environment. Loayza, et al, (2000), stresses that restructuring is painful and slow; and successful financial deepening may still be a distant dawning. In other words, financial systems in developing countries have lacked in undertaking the necessary functions required to facilitate growth and to perform the essential economic development functions required for speedy growth and capital amassing efficiently.

Some African countries including Ghana are listed among the Highly Indebted Poor Countries (HIPC), and it is very important that policy makers of these countries adopt strategies to reduce their high dependence on external sources of funding for their own growth plans. One of the ways this is possible is by turning towards maximizing domestic savings. Agu (1994) posits that increasing domestic sources of capital requires a wide range of well-organized, independent and adapted financial institutions. It requires an institutional arrangement that encourages savings (deposits in banks) on the one hand, and channels the mobilized savings into capital formation for productive investments on the other. Financial institutions, especially banks have the responsibility of mobilizing these savings. The banks are the most capable institutions because of their capabilities

in their widespread branch networks, which gather unutilized funds in a form of savings. Fry (1997) emphasized that, banks as financial intermediaries bring savers and investors, and/or lenders and borrowers together. According to him, they create money and administer the payment system.

Consequently, banks in Ghana have been plagued with piles of problems hindering the mobilization of savings or deposits and distribution of credit among borrowers. This has particularly inhibited access to funds for investors requiring long-term finance and for small businesses that contribute to the recovery of the economy. Surplus funds of the majority of the populace are held in real assets like land and buildings, ornaments etc, which are unproductive. One major problem of developing economies seems to be the form rather than the amount of savings that can be mobilized. One way banks can solve this challenge is to encourage capital formation initiatives such as working capital financing and financial savings. In order to continue having a sustainable economic growth, the emphasis should be on the mobilization of domestic savings (Aryeetey and Udry, 2000).

1.2 Statement of the Problem

Ghana for the past decades has relied so much on external sources of funds for its budget. By the end of June, 2011 for example, Ghana's domestic debt increased by 9.7 percent to GHc11,841.1 million (20.0 percent of GDP), the external debt by 7.2 percent to US\$7,589.5 million (19.9 percent of GDP), and the total debt by 10.0 percent to GHc23,608.5 million (39.9 percent of GDP)¹. From a low post HIPC initiative and Multilateral Debt Relief Initiative (MDRI) level, Ghana's debt

¹ IMF, IFS Data files, 2011

has been rising as a result of more borrowing. Financial assistance from other donor agencies like the IMF and World Bank have also come with some conditionality attached to it. One problem is that these supports have been quite unpredictable and fluctuating making it difficult to plan for investment in the economy. The insinuation is that very little or no savings is made from domestic budget revenue to promote economic growth. This underscores an urgent need for raising the necessary financial support growth. The banks in this case have a major responsibility to mobilize domestic financial savings (deposits) to reduce Ghana's dependence on external resources of funds. In order to increase domestic sources of capital therefore, the banking sector of developing countries must increase their deposits, hence the need to know the factors, which determine deposit or financial savings. This study empirically investigates some macroeconomic determinants of mobilizing financial savings in Ghana and assesses the role of banks to economic growth through savings mobilization.

1.3 Objectives of the Study

The main objective of the study is to find out the determinants of deposit mobilization and its role in economic growth in Ghana.

The specific objectives of the study therefore are to achieve the following:

1. To identify and estimate a model that explains the factors, which determine bank deposit mobilization in Ghana.
2. To highlight the functional contribution of banks to economic growth through domestic savings mobilization in Ghana.

1.4 Hypothesis

The hypothesis of this study is to critically analyze if:

1. **H_a**: There is a relationship between inflation, exchange rates, money supply (M2) and deposit rates on bank deposits in Ghana.
2. **H₀**: There is no relationship between inflation, exchange rates, money supply (M2) and deposit rates on bank deposits.

Where H_a is the alternate hypothesis and H₀ is the null hypothesis.

1.5 Scope and Limitations of the Study

Though World Bank in 1989 defined financial savings as the currency in circulation and the demand and savings deposits at banks, this study did not consider, currency in circulation, but considered financial savings to mean demand, time and savings deposits at banks. Informal savings can take the form of real goods, which may include items like livestock, precious metals, ornaments or urban lands. The measurement of informal savings is therefore a tedious task since they diminish with the expansion and development of the formal financial sector.

Similar studies like Aryeetey (1991) focused on the mobilization of domestic resources in the informal sector for capital formation. He also researched in 2002 on the relationship between the formal and informal sectors of the financial market in Ghana. However, this study differs from previous ones because it focuses on financial savings in the banking sector. It also focuses on factors that determine the mobilization of deposits by banks and its economic implications.

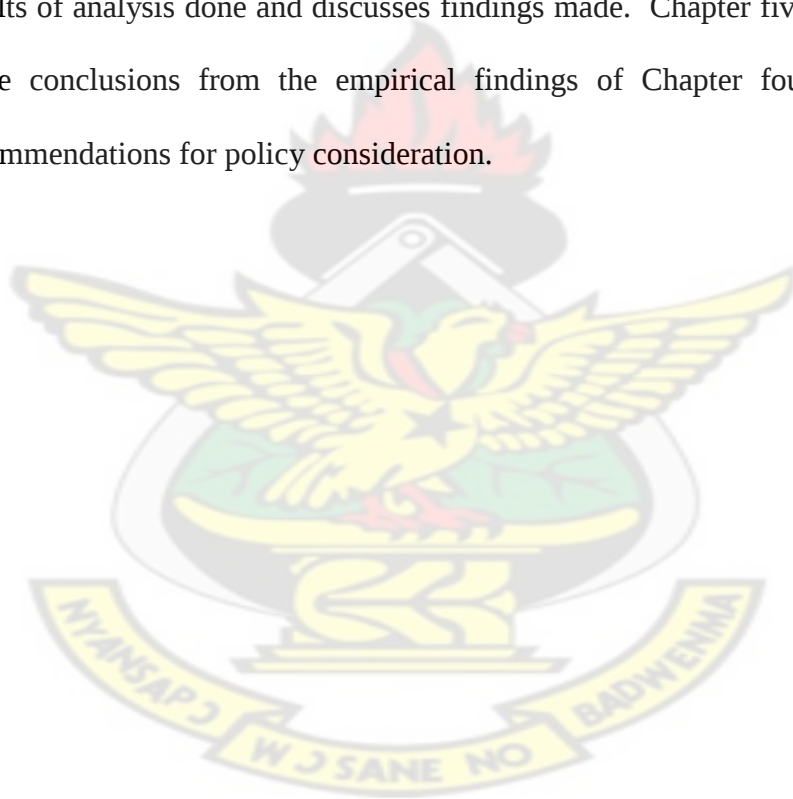
The scope of the study is also limited to the Ghanaian context and does not include an overview of individual banks. The study examines and quantitatively assesses factors that influence the mobilization of deposits by banks. However, its handling of the role of banks in capital formation is qualitative in approach. An analytical framework of existing theory has been done to explain the contribution of banks to economic growth through the mobilization of deposits. With possible methodological weaknesses and data inadequacy, conclusions drawn from the study, however, require caution and further qualifications.

1.6 Significance of the Study

Levine (1997) opines that the financial sector as a whole turns out to be indispensable to economic growth. Though savings accumulation enhances capital formation, it is regretting to state that much of government revenue is used to service debt in Ghana. Ghana and most African countries must turn towards raising finance from domestic sources due to the debt crises, which has bedeviled them. External sources of finance are highly unpredictable and it is therefore not reliable for any country to depend on. Countries, which therefore seek to sustain their growth, must not depend entirely on external sources. The ideal way is to mobilize domestic savings. This study will be useful for policymakers in efforts to increase financial deepening and promote capital formation. Academicians and researchers will equally find it handy in examining the relationship between growth in banking and economic development as well as factors, which are significant in promoting deposit mobilization.

1.7 Organization of the Study

The study was organized into five chapters. Chapter one dealt with the Introduction of the study. Chapter two reviews literature on both theoretical and empirical studies on the link between bank deposits and economic growth. It contains an assessment of researches done on savings and the variables that influence its mobilization. An overview of banking in Ghana and the methodology employed for assessing the quantitative significance of the determinants of savings mobilization is presented in Chapter three. Chapter four presents the results of analysis done and discusses findings made. Chapter five, finally, draws some conclusions from the empirical findings of Chapter four and suggests recommendations for policy consideration.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter deals with a review of both theoretical and empirical literature on the subject under study. It outlines a historical overview of banks in Ghana and discusses the effect of the financial sector reform and the structural adjustments on the Ghanaian economy. Different studies have offered different opinions on the contribution of the financial sector to economic growth. For instance, Lucas (1988) feels that the role of financial factors in economic growth has been grossly overemphasized, while Chandavarkar (1992) feels that it is insignificant. However, Levine (1997) presented adequate evidence in support of the importance of the financial sector for economic growth. The financial sector smooths the progress of mobilizing the necessary capital for technological advancements. This is because it mobilizes and effectively distributes resources for capital formation through productive investment. In view of this, existing literature explains several macro and micro determinants of the mobilization of these resources.

2.1 Theoretical Background on Financial Sector Development, Deposit Mobilization and Economic Growth

McKinnon (1973) argues that investment in a typical developing country is lumpy and self-financed and hence cannot be materialized unless adequate savings are accumulated in the form of bank deposits. Shaw (1973) on the other hand, posits that financial intermediaries promote investment, which, in turn, raises the level of output.

According to Fry (1997) and World Bank (1989), a positive real interest rate increases financial depth through the increased volume of financial saving mobilization and promotes growth through increasing the volume of productivity of capital.

According to Stiglitz (1996), the financial sector is the “brain” of the economy since it harnesses savings and reallocates resources to entrepreneurs. He noted that the financial sector plays an important role in a country’s economic growth and development process and in order to ensure macroeconomic stability, the sector ought to be strong. He analyzed growth in countries affected by crises in the banking sector to those that did not experience the crises using international data covering the period 1975 to 1994. He arrived at a conclusion that countries, which were not hit by financial crisis, experienced a proportionate increase in growth as compared to the countries, which experienced financial crisis. Those affected by the crisis had a slow growth of 1.3 percentage points in the five years following the crisis. According to him, in order to promote macroeconomic stability, building a strong financial system was very important, and that liberalization should not be confused to competitive market creation. Thus, institutional infrastructure including competitive markets and regulatory bodies should be in place while the sequencing and scope of privatization ensured before it is done.

The facts of existing theory support the conclusions that the increase in the number of financial institutions cannot be delinked from the economic

development process amidst varying opinions. This is consistent with Levine's (1997) statement that the level of financial development can predict future rates of economic growth, capital accumulation, and technological change.

Bhattarai (2000) observed that the overall growth and development of economies is enhanced by financial sector liberalization, which gives support to the distribution of income. The distribution then affects enterprise and business growth. He maintained that these financial resources advance general economic wellbeing, and favor households and small to medium scale enterprises for accelerated growth in developing economies, including Ghana.

Bhattarai (2005) again observed that countries with higher savings and investments ratios have grown faster than those with lower savings. He therefore proposed that countries seeking faster rate of economic growth should adopt and promote effective economic policies that have both home and international effects. These policies should include higher savings rate, the right technology development, the adoption and the promotion of effective economic policies that have both home and international effects, should countries desire a higher and faster rate of economic growth. Among these factors, include higher saving rate, development of the right technology, which is achieved through capital accumulation.

According to Hugh (1966), financial development leads to economic growth and economic growth in turn enhances financial development. He termed these phenomena as demand-following and supply leading respectively. When there is a

growth in the real sector, there is a consequential growth in the financial sector and eventually leads to the demand-following occurrence. Because stakeholders will demand better services from the financial sector in a real growing economy, there will be a phenomenal growth in competition among various financial institutions. This will lead to the establishment of more branches of banks and new entrants into the sector. There will also be a phenomenal growth in their assets and liabilities, hence a vibrant financial sector leading to a vibrant economy. Higher growth in the real economy will promote financial deepening as enterprises will need more of indirect than direct financing. Investment rationing whereby the financial institutions direct funds to more productive enterprises will also lead to efficiency in investments in the economy.

Robinson (1952) observed that economic growth necessitates particular types of financial arrangements, and the financial system responds automatically by creating products to meet demands.

Similarly, Gurley and Shaw (1967) analyzed the development of the financial sector in support of the demand-followed phenomenon been dependent on the growth of the real economy. According to him, any activity of the financial sector that accelerates savings, promotes the allocation of savings to investment and economizes costs in transmitting savings to investment implies that there has already been an increase in stocks of real output.

In a supply-leading occurrence, growth in the financial sector implies growth in the real sector. This occurs when the increase in the number of financial

institutions and the supply of financial services ahead of demand, leads to growth in the real sector. In other words, given that there are available resources, there is a transfer from the traditional (informal) to the formal sector. However, as sustained real growth gets underway, a supply-leading force gradually becomes less important and a demand-following financial development improves.

Greenwood and Jovanovic (1990) developed a model where the extent of financial intermediation and economic growth are exogenously determined. They believe in their model that, financial intermediaries can invest productively more than individual investors because of the ability of their operations in identifying investment opportunities. They stressed that financial intermediation induces growth because it allows a higher rate of return on capital, and growth, which in turn provides the means to put into practice costly financial structures. They further emphasized that developments in the financial sector in terms of improvements in their infrastructure, adherence to the rules of corporate governance and proper disclosure of financial information, reduces the spread between the cost of internal and external funds. The result is an improvement in funds inflows, which leads to growth, especially for firms relying heavily on external finance.

Hugh (1966, pp.174) observed that the lack of financial institutions in underdeveloped countries is simply an indication of lack of demand for their services. According to him, supply-leading financial development appears peculiar to developing countries while demand-following financial development is more associated with developed countries. This is because most African countries

including Ghana is still struggling to catch up with its developed counterparts, where sustainability in terms of growth has long been established.

Levine (1993) assessed the quantitative importance of the financial system in economic growth. His empirical evidence suggested a positive first-order relationship between financial development and economic growth. He stressed further that the level of financial development is a good predictor of future rates of economic growth, capital accumulation and technological change.

According to Hyuya (1991), financial intermediaries play key role in Least Developed Countries (LDCs) by encouraging development through the savings-investment process. He emphasized the fact that banks have specialization of labor as a core competence and must be encouraged to assist in the efficient allocation of resources by pooling funds together into reservoirs from which investment flows. He further emphasized that monetization of the economy leads to the disappearance of the backward sector at the expense of the modern sector. He wrapped up that financial institutions are essential for economic development.

Schumpeter (1934) started a classical work on the mobilization of scarce capital funds through domestic financial market institutions. He asserts that financial institutions are essential for economic growth. Similarly, Goldsmith (1969) argues that economic history and theory show that the existence and development of a superstructure of financial instruments and institutions is a necessary though not a sufficient condition for economic development.

According to Abdi (1977), the role of banks and other financial institutions in economic development could be understood from two main perspectives – the structuralists, and the repressionists. The literature suggests a strong positive relationship between financial sector development and savings mobilization. The structuralists believe that the number and mix of the financial system directly increase savings in the form of financial assets, thereby inducing economic growth through capital formation. The financial repressionists on the other hand, led by McKinnon (1973) and Shaw (1973) – popularly called the ‘McKinnon-Shaw’ hypothesis – holds that interest rate liberalization removes financial repression, deepens intermediation and causes higher interest rates on savings. An appropriate rate of return on real cash balances is a channel for promoting economic growth through the mobilization of savings. For McKinnon (1973) the relationship between capital and real money balances is one of complementarity and not substitutability. He was prompted by the fact to suggest that Least Developed Countries (LDCs) suffer underdevelopment because their capital markets are fragmented and beset with a large self-financed household sector. Thus, the corporate sector is imperfectly financed. Most entrepreneurs with potential productive ventures in most cases lack their own resources as well as access to external financing, whilst those with own capital endowments lack internal investment outlets with rates of return that match up to the prevailing scarcity of capital. This necessitates a critical role for financial intermediaries in capital formation. By effectively mobilizing resources for projects, the financial system may play a crucial role in permitting the adoption of better technologies and thereby encourage capital formation and hence, economic growth.

Shaw (1973) argues that LDCs are underdeveloped due to financial repression. According to him, their economies are subjected to domestic financial policies that miss the chance for financial deepening. Inept policies particularly affecting the financial, fiscal and international sectors interrupt the nerves to economic growth. Such repression sacrifices growth that could have been achieved through financial deepening, improved fiscal performance and closer integration with external markets. Instead of inducing growth in real amounts of money demanded, financial repression increases nominal money at an excessive pace and as a result uses the inflation tax to draw savings into investment. Inflation tax is the decline in the purchasing power of reserve money due to inflation. If money issued exceeds the willingness of the economy to hold money, the result is inflation, which operates like a tax. Asset holders pay the tax by losing the purchasing power of their money.

The financial system therefore matters in economic development. In Shaw's view, the removal of repression leads to a more efficient allocation of resources. This is because the removal results in an increase in the real interest rate, which provides greater incentives to save and invest.

The central theory of the McKinnon-Shaw is that lower or negative real interest rates discourage savings, which reduces the availability of loans for investment, which, in turn, slows down economic development. Thus, the model hypothesizes that financial liberalization increases competition and interest rates and that, in turn, cause savings and investment to increase. This promotes economic growth. The difference between the hypotheses of the two authors is in the transmission

mechanisms through which they believe this process would occur. According to Molho (1986), the hypotheses thus compliment rather than compete with one another.

2.2 Determinants of Deposits- An Empirical Review

In order to increase the quantity of deposits in the banking industry, Schmidt-Hebbel and Ozigbo (1999) recommend the dissemination of a banking habit. Agu (1994) impressed on the governments to create special institutions that can establish their presence in un-banked areas. Bhatt (1974) argued that the focus should not only be on spreading branch network. In his view, the real return on bank deposits should be attractive enough to induce savers to prefer this form of financial assets to other physical assets. In support of this, Mauri (1977) held the view that effective real interest rate will attract bank deposits.

In Rahman's (1968) view, an increase in foreign funds would cause government to relax revenue mobilization resulting in a decrease in average national savings rate. Using data from 31 LDCs, he tested his hypothesis by regressing average propensity to save against external aid/GDP ratio and supported his test with the substitution hypothesis that views foreign savings as a substitute for domestic savings. His inclusion of the substitution hypothesis tended to reduce savings and cause consumption expenditure to rise. Griffen and Enos (1970) supported this view when they found that foreign aid discourages savings and retards development.

Levine (1997) maintains that countries having larger banks enjoy faster growth and industries or firms that rely more on external financing grow disproportionately faster in countries with well-developed banks than in countries with weaker banking systems.

Zang and Kim (2007) used the ratio of liquid liabilities to GDP, ratio of deposit money bank domestic assets to deposit money banks domestic assets plus central bank domestic assets, and credit issued to private enterprise as a share of GDP in panel analysis to examine 74 countries over the period 1961-1995. The study found that economic growth precedes subsequent financial development. Guryay et al (2007) proved that there is negligible positive effect of financial development on economic growth of Northern Cyprus.

Giovannini (1985 and 1988) employed time series data and undertook cross-sectional studies to show that there is little empirical support for the existence of strong relationship between aggregate savings and positive real interest rates. Tybout and De Melo (1986) and Yusif and Peters (1984) supported Giovannini's view in their study on domestic resource mobilization in Korea from 1965 to 1982.

Gupta (1987) examined the effects of real interest rates on personal savings of rural and urban households in a survey of a group of Asian and Latin American countries, using per capita aggregate savings as the dependent variable in a cross-sectional model with alternate interest rates as independent variables. He concluded that though per capita income levels were low, incentives such as positive real interest rates could lead to higher savings especially from the urban

sector. Gupta further observed that real interest rates have an effect on the structure of savings. In his findings, financial savings as a percentage of total savings increases with increases in deposit rates. These findings support the financial repressionists' view that interest rate liberalization encourages savings.

Sowa (1994) found that money demand is a function of interest rate, exchange rate, income, inflation, and lagged money stock. Using data from 1960 to 1988, price index, which served as a proxy for inflation, was found to be statistically significant. However, exchange rate did not show any significant influence on money demand. He equally found that interest rate was significant and attributed its significance to the weak market in Ghana.

Kidane (1989) focused mainly on income and external capital flows as the independent variables in his study of aggregate savings behavior in Ethiopia. He regressed savings on GDP in the same study and concluded that contrary to theoretical belief, GDP had a negative sign. Taking the period of review into consideration, there was the implication that there were no savings from GDP and the national income level was not enough to meet the current consumption. Kidane also observed that one of the determinants of savings in the economy could be structural change. Such change could be a change in monetary policy, investment policy or interest rates. Such changes would constitute minor changes whilst major changes would comprise changes in government or the economic system. Ethiopia experienced the changes in 1974. Breaking the period into two parts – 1960 to 1973 and 1974 to 1985 respectively, Kidane tested for structural breaks using consumption instead of savings to test for the structural break. His

conclusion was that a stable government with consistent policies is essential for improving the savings rate.

Soyibo and Adekanye (1992) found a positive relationship between savings mobilization and financial liberalization in Nigeria. They argued that the apparent decline in some indices of financial liberalization during the era of relaxed deregulation is due mainly to conflict of policies rather than the policy of liberalization. Accordingly, they suggested that policy makers should attempt to avoid conflicting policies in order to minimize their negative consequences. They extended their research on financial liberalization and bank restructuring to cover some selected countries in Sub-Saharan Africa and found that government control of almost all sectors including the financial sector from the 1960s to the early 70s was due to the failure of the market mechanism in resource allocation. Controls stampeded growth of the private sector through financial repression, control of foreign exchange allocations, large state and parastatal borrowing, heavy taxation and government monopoly over foreign loans and grants.

In a study by Ghani (1992), it was concluded that the relationship between policy and development of financial assets in some fifty developing countries using average annual data for the period 1965 to 1989. His correlation results confirm that repressive financial policies are associated with shallow financial markets and limited intermediation. The estimates of their cross-country long-run growth regression suggest that the initial levels of human capital stock are both positively related and individually significant in explaining a country's growth rate. Examining the link between policy change and growth, Ghani found that policy

reforms, which foster financial development, are positively associated with output growth. A country, which starts with a more developed financial market and fosters financial development, leads to faster growth.

The study by Ghani (1992) stressed that the ratio of central bank assets to GDP is smaller in more developed financial markets and that the ration is inversely-related to the importance of other financial institutions in the system. He arrived at this conclusion by using the ratio of central bank assets to GDP as an alternative for the structure of the financial system. He also identified indicators of financial sector development to include the structure of the financial system, the depth and size of financial markets and the extent of financial intermediation.

Asante (1992) identified in his study on financial reforms in Ghana, that there was relative improvement in the efficiency of credit allocation in the financial sector. According to him, real domestic savings rate has averaged about 7% over the period 1983 and 1992, which is lower than the Sub-Saharan African average of 22% for the same period. Dordunoo (1995) equally observed in his study that the financial institutional ratio (the ratio of sum of demand deposit, time, savings and investment) to GDP between 1983 and 1994 was lower than the period covering from 1970 to 1982. This was a study on the impact of interest rate reform on private savings and investment. This finding denied the fact that the rate of inflation was, on average, lower in the former period and comprehensive economic reforms were implemented in the period.

Maende (1992) examined the determinants of demand for commercial bank deposits in Kenya obtaining time series data between 1968 and 1991 and using Ordinary Least Squares, Two-Stage Least and the Granger test of causality. It was revealed that the number of branch network and national income levels and stability were the main determinants of deposits in the banking industry. He also observed that there is a uni-directional relationship between volumes of bank deposits and branch network expansion.

Baffour (1995) in his study on Ghana found that despite the measures undertaken to bring about financial liberation under the Economic Reform Program (ERP), both public and private savings have failed to respond positively. In his opinion, Ghana's financial depth, M2/GDP, was very low compared to countries like La Cote d'Ivoire, Zambia, Kenya and Senegal where ratios were over 30%.

Asele (1997) attempted to find the relationship between real deposit rates and financial savings in Kenya and found that real deposit rates do not significantly affect savings mobilization. This was in relation to government control in setting savings deposit rates below inflation. The country still had negative real savings deposits in the 1980's after the start of liberalization reforms. It was also revealed that nominal exchange rate had a significant effect on the mobilization of deposits by commercial banks. The period of devaluation resulted in currency substitution.

In their research, Mwega et al (1990) applied the money demand model of McKinnon-Shaw to test the effect of real deposit rates in Kenya. Their hypothesis was that real deposit rates increased aggregate financial savings significantly and

that the increase in financial savings was reflected in increased credit flow to the private sector. The results proved that real deposit rates do not significantly influence the demand for real money balances in Kenya.

In a survey of savings behaviour under repressive and liberalized periods in Ghana, Ayiku (1996) indicated that real deposit rates were negative for most of the post-independent period of repression. This resulted in low and declining savings rates throughout 1970-1993. He observed that the performance of savings after liberalization was not initially positive. The inference was that policy measures under the liberalization did not lead to positive real deposit rates for most of the period.

Conversely, to conservative belief, the efficiency of Nigeria's commercial banks tended to decline quite significantly during deregulation compared to the period before the Structural Adjustment Programme (SAP), (Sobodu and Akiode 1998).

Aghion and Howitt (1992), Grossman and Helpman (1994) etc., have developed models focusing on technological innovation in which functions of banks affect steady-state growth by influencing and/ or altering the rate of technological innovation. According to Schumpeter (1914), well-functioning banks are a catalyst for technological innovation.

In an attempt to investigate how financial sector reforms influenced bank performance in Ghana, Antwi-Asare and Addison (2002) argue that financial sector reforms have succeeded in enhancing financial development and causing an

expansion in the size and diversity of the banking sector. They proved that the specific policy reforms that improved the performance of the banking sector include interest rate liberalization, freeing of credit allocation and removal of non-performing assets.

The above literature review suggests the financial sector of any economy contributes immensely to economic growth of that economy, despite the difference in propositions among economist. The empirical review suggests that there are great contributions that a well-developed financial system makes to economic growth. Notwithstanding, Ghana's financial system is battled with numerous challenges, which have not allowed its liberalization policies to achieve expected results in economic growth through financial savings. There is therefore the need to assess the factors that determine savings mobilization and examine the role that banks must play in order to contribute tremendously to the growth and development of the economy.

2.3 Banking in Ghana- Brief Historical Perspective

Banking only works in a monetized economy. The British first attempted to monetize West Africa with the introduction of silver coins in 1825 but failed. The monetization of British West Africa succeeded five decades later and the first bank, the Government Savings Bank, was set up in the Gold Coast in 1888. Banks aid the circulation of financial resources that affect the volume of trade and overall economic growth and development. This they do by advancing short term and long-term loans to small traders. As these traders with access to financial

resources multiply, competition increases and the circle continues. That is more traders will demand financial resources to expand their business or trade.

Government Savings Bank was a branch of the British Bank of West Africa (BBWA), then headquartered in Lagos, Nigeria and still operates in Ghana under the new name of Standard Chartered Bank (Ghana) Ltd. In 1917, the monopoly BBWA enjoyed was broken with the entry of Barclays Bank. After monopolizing the banking environment for some time by these two banks, the Bank of Gold Coast, which later became Ghana Commercial Bank entered the banking system in 1953. By 2000, the number of banks grew to 17. Today, the number of banks in Ghana stands at 25.

2.4 Confidence in the Ghanaian Banking System

The banking sector in Ghana faced countless challenges in the late 1970's and early 1980's because of unstable policies around that time. The consequence was the loss of confidence by the populace in the banking system. Overtime, savings mobilization has improved especially from the 1990's.

The reasons for the loss of confidence in the banking sector was among the following: Firstly, there was high inflationary trends in the country, which coupled with low savings rates, de-motivated people to save their money with banks. In other words, most people preferred to invest their money in real assets rather than saving it with a bank. Again, high illiteracy rate created the barrier to the awareness of the useful role banks played in mobilizing savings and re-

channeling them into profitable ventures as investment or facilitating commercial transactions.

Another important reason for the loss of confidence in the banking system was the continuous government intervention in the banking system. A case can be made of March 1979, where there was a mop up excess currency in the system by changing the cedi notes by the government of the Supreme Military Council (SMC), which was led by Lt. General Fredrick Akuffo. The exercise was aimed at only those with cash outside the banking system. This exercise affected the citizens in the lower income brackets most. Nonetheless, the significance is the fact that generally, the 'poor' in most cases keep money more for transactional purpose than the rich hence the lost more than the 'wealthy' citizens.

One important principle in the code of ethics in banking is the oath of secrecy, which is sworn by staff of banks in order that they will not expose a customer's account information unless for purposes of national interest. Governments of Ghana, however, during military regimes 'forced' their way to obtain access to customer account details. This put fear into the public and tarnished the confidence the citizenry bestowed in the banking system. Though, confidence is building back into the public on the banking system, the government machinery has a major role to play in restoring it.

Ghana's financial sector operated within rigid regulations through monetary policies. This determined, interest rates charged by banks, and the volume of credit in the period preceding the Structural Adjustment Programme (SAP). The

Bank of Ghana (BOG) established interest rates administratively rather than allowing the forces of demand and supply to act. The outcome was that interest rates rose less rapidly than the rate of inflation. Not all, there was the establishment of credit ceilings, specified in the form of both bank-specific and sectoral limits on domestic asset creation by the banking system.

This policy limited credit and caused excess liquidity in the banking system. Very wide margins existed between lending and borrowing rates as banks strove cover costs and post passable profits. Banks were constrained by lack of investment opportunities and therefore they could not mobilize resources. The non-bank public increasingly held a higher proportion of money supply resulting in greater demand for goods and services and, hence higher rates of inflation.

2.5 Financial Liberalization Policy in Ghana

Against the background of superficial and exploitive financial measures, the Financial Sector Reform Program (FINSAP 1) was implemented between the periods 1988 to 1990. This was introduced to achieve the following: to restructure banks that were distressed; improve savings mobilization and enhance efficiency in credit allocation; reform banking laws; restructure the regulatory framework and improve banking supervision.; develop money, capital and securities markets; and establish a non-performing assets recovery trust.

Between 1990 FINSAP II was implemented to achieve the following agenda: to continue and complete any unfinished business under FINSAP I; to divest state-owned banks in accordance with financial liberalization and regulation; to reform

the institutional structure of the Bank of Ghana; to promote and strengthen non-banking financial institutions.

The financial sector reform saw the emergence of additional financial institutions especially, those in the non-banking sector. Private individuals to accommodate the rest of the unbanked in the economy established various categories of non-banking financial institutions. The period also saw the introduction of different products in the financial system such as equity finance, long-term credit for industry and real estate, and small-scale savings. Largely, the small-scale and medium-sized businesses still depend extensively on the bank intermediated debt finance though self-finance remains the ideal way.

One notable reform in the Ghana's financial sector is the passing of the Universal Banking Law in 2003, This law authorized banks to engage in all types of business including commercial banking, investment banking, merchant banking and developmental banking. The liberalization process is successfully entrenching a market-based financial sector. The central bank also abandoned direct monetary controls, reduced the minimum reserve requirements for banks, introduced new financial instruments, and managed the monetary policy to keep the liquidity in the economy. The central bank's requirement that every bank should raise its minimum capital requirement to GH¢60 million before the end of 2012 was a step to build more capital to finance the private sector and the oil business in Ghana.

2.6 Link between Money Supply, Bank Deposit, Inflation, Exchange Rate and Interest Rate

One key economic indicator that needs urgent attention for economic growth is money supply. This is because the quantity of money in circulation in the economy influences other economic indicators including bank deposits, inflation, exchange rate, deposit rates among others.

The quantity theory of money indicates that there is a direct relationship between the quantity of money in an economy and the level of prices of goods and services (Friedman, 1956). Money Supply in Ghana consists of M1, M2, M2+ and the M3, where M1 measures the coins, paper notes and cheques in the public. M2 measures M1 plus demand deposits and travelers cheques of non-bank issuers. Economist to quantify money in circulation in an economy normally uses M2. M2+ measures all currencies in circulation, demand deposits, quasi-money and foreign deposits at the banks, while M3 measures large deposits, institutional money-market funds, short-term repurchase agreements and other large liquid assets. The relationship between the various types of money is shown in the table below;

Table 2.0 The Categories of Money Supply in Ghana

Category	Explanation
M1	Currency coins and notes
M2	M1 plus demand deposits, traveler's cheques and OCD's
M2+	M2 plus foreign currency deposits
M3	M2+ plus large time deposits plus institutional money-market funds

Source: Researcher's Field Work, 2012

The quantity of money supplied into the economy determines the level of deposit mobilization, which is needed for capital accumulation. For example, the value for Money and quasi money (M2) in Ghana was GHS13,637,300,000 as of 2010. As the graph below shows, over the past 31 years this indicator reached a maximum value of 13,637,300,000 in 2010 and a minimum value of GHS198,795,055.00 in 1980². The growth was driven mainly by the Net Domestic Asset (NDA) of the banking system. The NDA increased by 45.1% while the Net Foreign Asset (NFA) increased by 23.1%.³ (See Table 2.1 below).



² Source: IMF, International Financial Statistics, 2011

³ Source: BOG Statistical Bulletin, Feb. 2011

Table 2.1: Monetary Survey (Millions of Ghana cedis) in Ghana

Net Foreign Assets	2007	2008	2009	2010
BOG	2,466.50	1,926.20	3,260.20	5,292.53
DMBs	62.40	254.8	664.07	513.05
Net Domestic Assets				
Claims on Govt	3,517.40	4,795.20	4,853.98	6,480.43
Govt. Deposits	2,413.50	2,397.47	1,684.76	2,217.87
Claims on private Sector	4,170.70	6,007.90	7,045.94	8,055.47
other Items(net)	-2,052.76	-2,525.46	-3,906.81	-4,348.15
Total Assets	5,750.60	8,061.20	10,233.08	13,775.46
Money supply M2+				
Currency outside Banks	1,302.20	1,663.80	2,084.44	2,925.85
Demand Deposits	1,628.90	2,137.80	2,075.18	3,513.42
Savings & Time deposits	1,826.60	2,442.70	3,409.28	4,587.21
Foreign Currency Deposits	992.90	1,816.80	2,664.17	2,748.97
Total Liabilities	5,750.60	8,061.20	10,233.08	13,775.46
Money Supply M2+				
Currency outside Banks	1,302.20	1,663.80	2,084.44	2,925.85
Demand Deposits	1,628.90	2,137.80	2,075.18	3,513.42
Savings & Time deposits	1,826.60	2,442.70	3,409.28	4,587.21
Foreign currency Deposits	992.90	1,816.80	2,664.17	2,748.97
Total Liabilities	5,750.60	8,061.20	10,233.08	13,775.46
Memorandum Items				
Reserve Money	1,788.20	2,226.80	3,031.70	4,413.70
Currency/Deposit Ratio	0.29	0.26	1.26	1.21
Currency/M2+Ratio	0.23	0.21	0.20	0.21

Source: Bank of Ghana Statistical Bulletin, 2011

Inflation is a major economic indicator that is considered by economic partners in dealing with a particular country. It is defined as the persistent increase in the general prices of goods and services within an economy over a given period. Consumer price index is used as a proxy for inflation. Inflation may influence savings through several channels. First, theory postulates that greater uncertainty should raise savings since risk-averse consumers set resources aside as a precaution against possible adverse changes in income and other factor. Hence,

inflation may increase precautionary savings by individuals. Second, inflation can influence saving through its impact on real wealth. If consumers attempt to maintain target level of wealth or liquid assets relative to income, saving will rise with inflation. Finally, savings may rise in inflationary period if consumers mistake an increase in the general price level for an increase in some relative prices and refrain from buying (Deaton, 1991). The CIP is divided in Food and Beverages and Non-Food items. The table below (Table 2.2) shows the breakdown of the various components of CPI for the period 2007 to 2010.

Table 2.2 National Consumer Price Index and Inflation. (2002 Average = 100)

	2007	2008	2009	2010
Overall Index	229.8	271.46	314.83	341.83
Food and beverages	211.3	246.68	274.98	288.33
Clothing and Footwear	173.2	202.43	239.89	273.8
Housing and utilities	351.78	386.11	392.64	451.87
Household Goods, Operations & Services	174.4	213.13	275.01	305
Medical Care and Health Expenses	308.8	385.85	513.91	571.21
Transport	397.29	441.11	487.2	499.75
Communications	257.03	261.2	273	272.95
Recr, Enter, & Cultural Services	227.35	266.51	498.26	533.51
Education	234.24	271.67	279.81	282.51
Hotels, Cafe and Restaurants	249.1	395.43	465.29	534.94
Miscellaneous Goods and services	208.67	244.32	260.67	289.32
COMBINED				
Monthly change(%)	1.8	2.42	1.59	1.13
Year-on year	12.7	18.13	15.97	8.58
Annual Average (%)	10.7	16.52	19.25	10.71
Minimum Daily Wage(GH ¢)	1.9	2.25	2.65	3.11

Source: Bank of Ghana Statistical Bulletin, 2011

A large volume of money is remitted to Ghana by Ghanaians working abroad, but the banks have not provided adequate facilities to attract this business. Private

transfer payments into Ghana from abroad were estimated at \$271 million in 1994.⁴ Banks are reluctant to give recipients of these foreign currencies with those currencies and the rate at which they exchange these funds domestically is sometimes very high. Money remitted into the country is preferable through other means other than the banks. The activities of investors in Ghana also affect the liquidity position in the economy. This is because most foreign investors repatriate their earnings to their home countries, hence increasing the demand for foreign currency. These activities push the exchange rate higher and therefore influence the willingness of depositors to deposit their monies in the bank. The below table (Table 2.3) indicates the relationship that exist between deposit in banks, inflation, exchange rate, deposit rate, and M2 as a percentage of GDP.

Table 2.3: Deposit in Banks, Inflation Rate, Exchange Rate, Deposit Interest Rate and Money Supply-M2 (% of GDP) in Ghana- 1980-2010.

Years	DEP (in banks) GHS	INFL (%)	EXC RATE (USD/GHS)	DEP RATE (%)	M2 (% of GDP)
1980	186,360.00	50.005	2.74	11.50	16.21
1981	261,553.00	116.504	2.74	11.50	13.76
1982	363,449.00	22.296	2.74	11.50	15.54
1983	408,629.00	122.875	30.00	11.50	9.68
1984	511,300.00	39.665	50.00	11.50	9.75
1985	841,020.00	10.305	59.98	11.50	11.47
1986	1,395,650.00	24.565	90.00	15.00	11.32
1987	2,180,000.00	39.815	176.05	15.75	11.73
1988	3,298,000.00	31.359	229.88	17.00	12.41
1989	5,336,000.00	25.224	303.03	17.58	13.93
1990	6,520,000.00	37.259	344.82	16.50	13.31
1991	14,204,500.00	18.031	390.62	21.32	13.38
1992	21,462,830.00	10.056	520.83	16.32	17.00

⁴ Source: Bank of Ghana, Annual Report 1994, p29)

1993	30,670,160.00	24.96	819.67	23.63	17.35
1994	47,826,180.00	24.87	1,052.63	23.15	18.63
1995	75,236,630.00	59.462	1,449.28	28.73	18.38
1996	111,676,700.00	44.357	1,754.39	34.50	17.70
1997	158,565,900.00	24.838	2,272.73	35.76	20.19
1998	180,218,500.00	19.215	2,325.58	32.05	21.16
1999	246,801,300.00	12.446	3,535.14	23.56	21.65
2000	420,628,200.00	25.151	7,047.65	28.60	23.21
2001	275,229,600.00	32.906	7,321.94	30.85	25.77
2002	359,671,000.00	14.815	8,438.82	16.21	29.30
2003	542,010,000.00	26.677	8,852.32	14.32	28.12
2004	689,668,000.00	12.629	9,054.26	13.63	29.22
2005	962,240,000.00	15.113	9,130.82	10.16	29.49
2006	1,389,373,000.00	10.151	9,174.80	8.89	19.98
2007	1,986,126,000.00	10.733	0.9500	8.90	22.26
2008	2,756,439,000.00	16.522	1.1000	11.29	23.60
2009	3,954,718,000.00	19.251	1.4090	17.06	25.45
2010	4,998,265,000.00	10.709	1.4290	8.60	25.93

Source: IMF Economic Outlook, 2011,

The deposit rates on savings and fixed deposit facilities of banks account facilities of banks are considered financial variables in the literature and have always been featured as one of the important considerations in explaining the savings behaviour of individuals. Savings, according to classical economists, is a function of the rate of interest. The higher the rate of interest, the more money will be saved, since at higher interest rates people will be more willing to forgo present consumption. Based on utility maximization, the rate of interest is also at the centre of modern theories of consumer behaviour, given the present value of lifetime resources. However, the results of a change in the rate of return, is theoretically ambiguous because of potential offsetting substitution and income effects. For a net saver, an increase in the rate of interest will have an overall

effect, which is composed of two partial effects: an income effect leading to an increase in current consumption and a substitution effect leading to a reduction in current consumption. Since net lender (net saver) receives more in investment income than he has to pay to service his debt, high interest rates increases net investment income, thus encouraging present consumption and lessening the need to save in order to finance future consumption. However, if the substitution effect is stronger, an increase in rate of return tends to encourage consumers to postpone consumption and increase savings in the present period in order to achieve higher consumption levels later.

The benchmark interest rate in Ghana was last reported at 15 percent. Historically, from 2002 until 2012, Ghana Interest Rate averaged 16.7 Percent reaching an all time high of 27.5 Percent in March of 2003 and a record low of 12.5 Percent in December of 2006. In Ghana, the Monetary Policy Committee of the Bank of Ghana takes interest rates decisions. The official interest rate is the Monetary Policy Rate (MPR).⁵ The Monetary Policy Rate trended downwards from 18% in December 2009 to close the year at 13.5%. Subsequent to these developments, the interbank weighted average rate shed off 486 basis points to 11.65% at the end of 2010, to stay within the Bank of Ghana corridor (11.50%-14.50%). The average money market rates also declined during 2010. The 91-day and 182-day Treasury bills settled at 12.28% and 12.68% at the end of 2010.⁶

⁵ Source: www.tradingeconomics.com/ghana/interest-rate

⁶ Source: Bank of Ghana Statistical Bulletin, 2011.

2.7 Savings Mobilization in Ghana

Most savings in Ghana are in the form of real assets largely due to information asymmetries, personal preferences for ownership of real assets and a confidence crisis in the political and hence financial system (Aryeetey and Gockel, 1991). The role of domestic savings in national resource mobilization for development financing cannot be over-emphasized. However, very little has been done over the years to encourage a culture of savings in Ghana. Bank charges have been very high, and have constituted a major disincentive to savings.⁷

Whilst the huge disparity between lending and savings rates may have resulted in the relatively low levels of private savings in Ghana, there appears to be a shift from savings and time deposits to money market instruments in recent times (ISSER 2004). The share of money market instruments consistently grew from 49% in 1995 to 63% by 2003, while the share of savings deposits in total private savings dropped steadily from 27% in 2001 to 23% in 2003. Time deposits declined from 16% in 2001 to 13% in 2002, and then increased to 14% in 2003. Money market instruments dominated total private savings, accounting for 63% in 2003 (ISSER 2004).

It is obvious that financial sector reforms under the Structural Adjustment Programme (ERP) have since reversed a lot of the rigidity and repression that existed in Ghana over the period 1980-1985. Credit ceilings have been abolished and market forces amid standard regulation by the bank of Ghana now determine interest rates and volume of credit. Moreover, with the passage of the Universal

⁷ Source: Public Agenda, Accra (26 April, 2010). [www. http://allafrica.com/stories/201004260879.html](http://allafrica.com/stories/201004260879.html)

Banking Law competition is now realistic though more intense. The banking industry has grown both in numerical strength and asset size. Banks have regained their health and momentum to embark on the mobilization of financial savings.

Unpredictable and unfavorable behaviors in other macro economic indicators have affected Ghana's savings potential necessary for accelerated economic growth and development. Ghana's economic growth suffered severe setbacks during the early 1980s due to famine and the devastating bush fires that engulfed the whole nation destroying both food and cash crops worth millions of dollars. These and many others affected the level of savings in Ghana over the period under review.

Even though the country made modest recovery, it was not large enough to offset the economic difficulties over the period. The high demand for goods and services relative to their availability in the early 1980 caused an upward movement in prices and hence inflation.

The economy grew by a meager 4% on average between 1980 and 2005. Changes in the exchange rate, and constraints imposed by quota restrictions also affected the country's export earnings. High cost of capital made it unattractive for persons and business to take advantage of investment opportunities, if any existed. Whilst the prime rate over the period grew by an average of 24%, deposit rate was 14%.

Changes in the exchange rate affect the country's competitiveness or otherwise and hence export earnings, which are further constrained by quota restrictions.

The problem is compounded when the cedi appreciates against the dollar, which makes Ghana's export prices go up and vice versa. Even in situations where Ghana must take advantage of increasing world demands for her exports, she is unable to respond due to low productivity. Moreover, most of the products are in their raw state thus unable to attract high value.

There are a couple of studies on the activities of banks in Ghana as well. Available ones include Obben (1992), Aryeetey and Gockel (1991) whose study was focused on the mobilization of domestic resources for capital formation in the informal sector in Ghana and Aryeetey (1992) whose research emphasized on the relationship between the formal and informal sectors of the financial market in Ghana.

In conclusion, this study is different from previous works done by others, because it examines three determinants of savings mobilization by banks in Ghana and then assesses the quantitative importance of these determinants. Attention is drawn to the need to generate and mobilize scarce capital funds through the development of domestic financial institutions. Because of specialization, banks in particular assist in the efficient allocation of resources from surplus units to where they are most needed thus improving investment and bringing about economic growth. The focus is on deposits in banks, and its mobilization of these deposits and how the banks use these savings for capital formation. Attention is drawn to banks because of their activities aimed at providing capital. Added to this are two other reasons – the increasing number of banks in the country has contributed in restoring the confidence of depositors in the banking system.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the sources of data and the research design. It explains the type of data used for the study and the techniques employed in identifying the factors that influence the mobilization of savings and describing the channels through which banks in Ghana contribute to economic growth through savings mobilization.

3.1 Sources of Data

The research relied on mainly secondary sources of data.

3.1.1 Secondary Data

The study used annual time series data published by various organizations and institutions. Specifically, data was collected from various bulletins of Bank of Ghana and publication of Ghana Statistical Service. Other data was collected from the IMF International Finance Statistics Economic Survey and publications of the United Nations Statistics Division. The Internet and professional journals including Indexmundi were also searched for critical assessments and valuable conclusions.

3.2 Research Design

The study combines both qualitative and quantitative techniques in analyzing data.

3.2.1 Qualitative Data

The qualitative technique involves a functional and systematic approach to appreciating the role banks play in capital formation. It focuses on the theoretical relationships between the functions of banks and capital formation, and hence, economic growth in Ghana. These functions include mobilizing savings, allocating capital, facilitating the trading of risk, monitoring managers, and easing the trading of goods, services, and other financial contracts. This approach provides an analytical framework for understanding the contribution of the functions of banks to economic growth in Ghana. Each function is examined in the light of theories on how it may affect capital formation or technological innovation using savings. The functions performed by banks affect steady-state growth by influencing the rate of capital formation through the change of savings rate and reallocating savings gathered to more efficient capital formation technologies. This process has been developed to growth models by researchers including Rebelo (1991) and Romer (1990).

3.2.2 Quantitative Data

The quantitative approach takes after the mathematical models of earlier economists like Shaw (1973), and McKinnon (1973) who focus on money. It involves the use of regression analysis in estimating the relationship between deposits and variables that emerge as its determinants or explanatory variables. The bank deposit is the dependent variable, while inflation rate, deposit interest, exchange rates and money supply (M2) represent the independent variables. The choice of regression analysis is ideal because Koop (2006, p.49), argues that it is the most important tool applied economists use to understand the relationship

among two or more variables particularly in the case where there are many variables and the interactions between them are complex.

3.3 Target Population and Sampling Methods

The target population under review is the economy of Ghana over a thirty-one (31) year period spanning the time 1980 to 2010 using time series data.

3.4 Model Specification

The theoretical literature discussed above suggests that bank deposit, inflation rate, exchange rate and deposit interest rate are related. McKinnon (1973) for example, argues that investment in a typical developing country is lumpy and self-financed and hence cannot be materialized unless adequate savings are accumulated in the form of bank deposits.

Following these theoretical views and based on Ang and McKibbin (2005), the study estimated the linear regression equation by calculating the log values of the variables in the following equation:

$$y_t = \beta_0 + \beta_1 INF_t + \beta_2 EXCR_t + \beta_3 DEPR_t + \beta_4 MS_t + \mu_t$$

Where y_t is the dependent variable and represents the total amount of deposits held by all banks for period t , INF_t represents the rate of inflation for period t , $EXCR_t$ represents the exchange rate for period t , $DEPR_t$ represents deposit interest rate for period t and MS_t represents the broad money supply for time t . μ_t represent the stochastic error term of the linear regression model. It also represents all the relevant variables, which were omitted from the model as well as the random errors from the estimation process. This may include variables like

investment income, Gross Domestic Product (GDP), which is likely to influence the study. This is because some of these error variables can be influential as well as correlated to the variables under study. β represent the estimated parameters or represent the slope co-efficient to the dependent variable.

3.5 Estimation Procedure

This study used deductive approach as it tried to find the relationship that exist between real deposit, inflation, exchange rate, money supply and deposit rate within the Ghanaian economy. The multiple regressions is used to statistically establish the model for the study by expressing, testing operationally fit and examining the outcomes.

For time-series analysis, the variables are expected to be stationary with a mean of zero and constant variance. In order to examine their stationarity, the Augmented Dickey-Fuller test is used to test the null hypothesis of non-stationarity or unit root. A rejection of the null hypothesis indicates that the series is not stationary at level and therefore requires differencing either in the first order or second order to achieve stationarity. Under the ordinary least squares estimation (OLS) of regression models, the assumptions of no serial correlation of the error terms as well as a constant variance of the error terms are held. The Breusch-Godfrey test for serial correlation and the Breusch-Pagan / Cook-Weisberg were used to test for heteroskedasticity. If both tests fail, a robust estimator of the covariance will be applied to correct for the presence of serial correlation and heteroskedasticity.

The logarithm values of the time series data was taking before Ordinary Least Square (OLS) techniques are used for estimating a model for bank deposits. The logarithm is used in the model in order to transform the non-linear data into linear form. An econometric analysis of the determinants of financial savings (deposits) in banks is carried out with data covering 1980 to 2010.

3.6 Analytical Tools and Techniques

The data gathered from the various secondary sources are presented in tables, charts, and graphs. The analytical techniques used are regression and correlation analysis. Dickey and Fuller (1981) establishes that correlation and regression techniques are employed to address measurement problems often associated with estimation using time series data.

3.7 Data Analysis Methods

Multiple regression analysis is conducted using STATA data analysis software to determine the exact nature of the relationship that exist between deposits, inflation, exchange rates, money supply(M2) and deposit rates in Ghana over the period under study. Prior to the estimation of the regression line, descriptive analysis is used to describe the behaviour of the individual variables over the period under review. The descriptive analysis also inculcated a brief assessment of the general macroeconomic variables in the country over the period.

3.8 Validity and Reliability of Data

This study is threatened by the fact that the data used was mainly from secondary sources and therefore any error from that data collection process will definitely

affect the outcome. The methodology used for this study was selected because of its suitability in its dependence on certified information from recognized institutions other than subjective opinions, which would have been associated with primary sources. The F test and the coefficient of determination were used to test the validity and reliability of the relationship established by the regression analysis.



CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter consists of the analysis of the annual time series data identified in the previous chapter. It presents the descriptive statistics for the variables as well as the test for stationarity for the series, co-integration test, the vector autoregressive results and the causality test results.

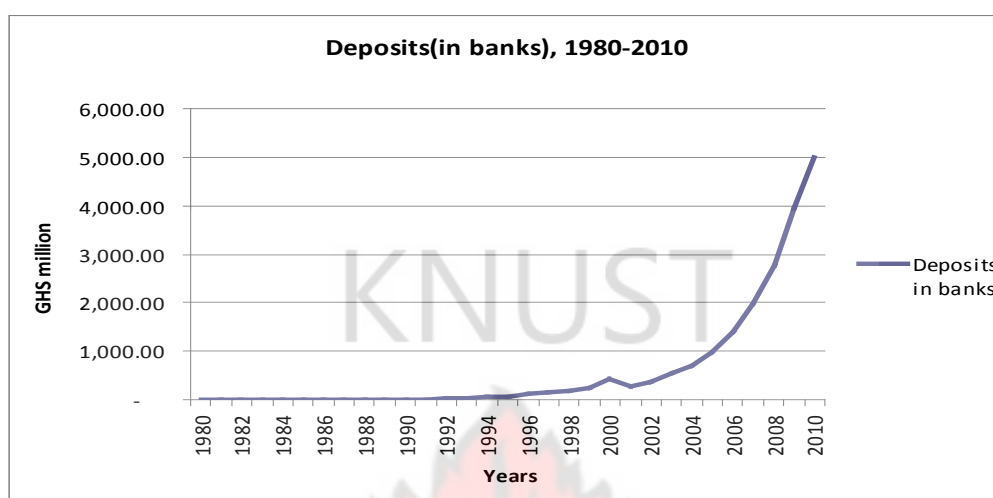
4.1 Descriptive Analysis

4.1.1 Bank Deposit in Ghana

During the late 1970's and early 1980's, a series of measures were taken by the government of Ghana, which eroded public confidence in keeping their monies in the banks. For example, two currency appropriations in 1979 and 1982 started the process of reducing money supply, hence inflation. The public was also discouraged to deposit money in the banks because the government of the day requested information of depositor's (customers) from the banks. In 1982, bank accounts containing money in excess of ₵50,000.00 (now GH₵5) were frozen pending investigation for fraud or tax liabilities. There was also the restriction on withdrawal in excess of ₵1,000.00 except by cheque. The diagram below (Figure 4.0), reveals that deposit increased over the years with 1980 having the lowest of GHS186, 360.00 while the value for 2010 is GHS4, 998,265,000.00. Despite this consistent increase in deposits, it is realized that the year 2001 experience a slow growth and this may be because of the high inflation in the economy during this

period and change in government in Ghana. Speculations among the citizenry therefore slightly affected bank deposit mobilization.

Figure 4.0: Deposits (in banks) in Ghana from 1980-2010 (GHSmillion)



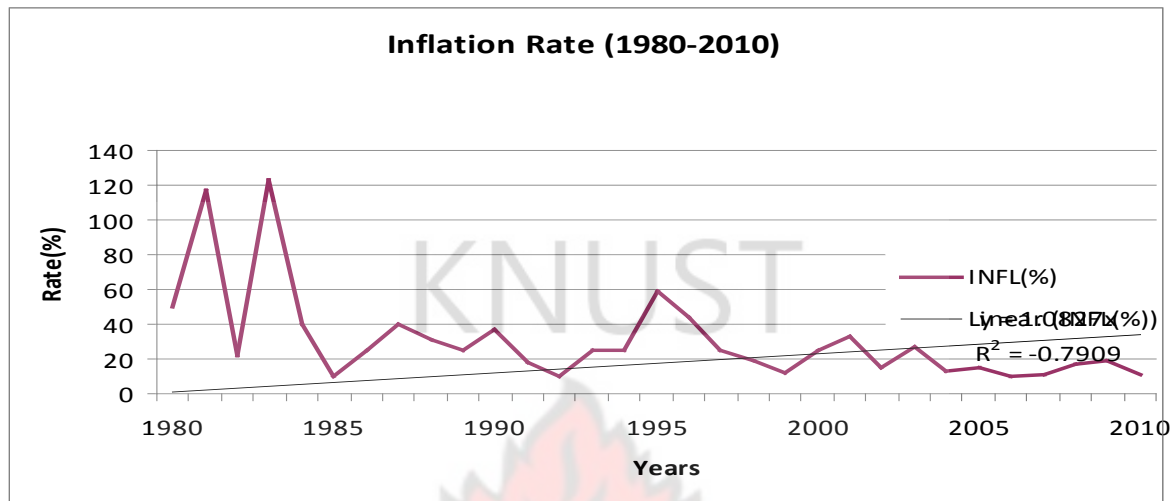
Source: IMF, IFS and data files, 2011

4.1.2 Inflation Rates in Ghana

High rates inflation has hindered the attainment of positive real deposit rates. In 1983 the highest inflation rate was recorded with 122% preceded by 116% in 1981. This could be explained by relating the inflation to the political instability and famine, which hit the economy during these periods. The economy was also characterized by poor financial and banking systems. The Economic Recovery Program (ERP) started in 1983 by the then Provisional National Defense Council (PNDC) contributed to the decline in the inflation rate to 39.67% in 1984 and eventually to 10.31% in 1985. The transition of political power from the National Democratic Congress (NDC) to the New Patriotic Party (NPP) in 2000 witnessed an increase of inflation from 12.45% to 25.15%. The implication is that the fluctuation nature of Ghana's inflation has affected bank deposits because people

prefer to invest in physical assets rather than depositing cash into banks. Below is Fig. 4.1 showing the inflation rate of Ghana since 1980 to 2010.

Figure 4.1: Inflation Rate (%) in Ghana from 1980-2010

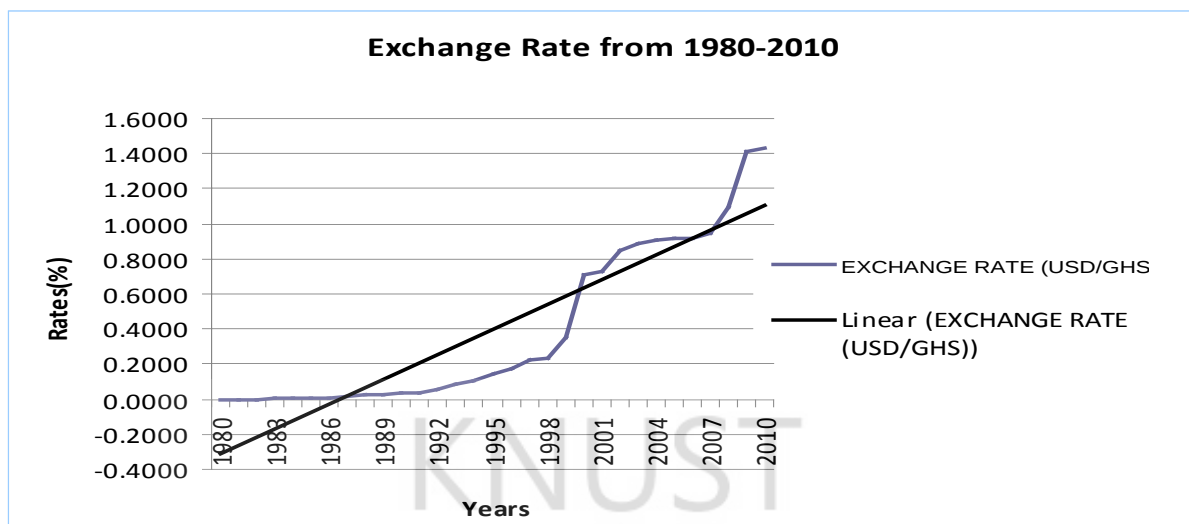


Source: IMF, IFS and data files, 2011

4.1.3 Exchange Rates in Ghana

One of the key indicators that influence the vibrancy of an economy is the foreign exchange rate. The fluctuating nature of Ghana's inflation rate has affected the exchange rate. The variations in exchange rate may well be explained by the fluctuations in other macro-economic indicators. Higher inflation turns to weaken the currency which supports the economy's balance of payment as export value increases relative to imports, and vice versa. The value for official exchange rate (GH¢ per US\$, period average) in Ghana was 1.429 as of 2010. As the graph below shows, over the past 31 years, this indicator reached a maximum value of 1.429 in 2010 and a minimum value of 0.0003 in 1980 (converted to New Ghana Cedis).

Figure 4.2 Exchange Rate in Ghana from 1980-2010 (in GHS)

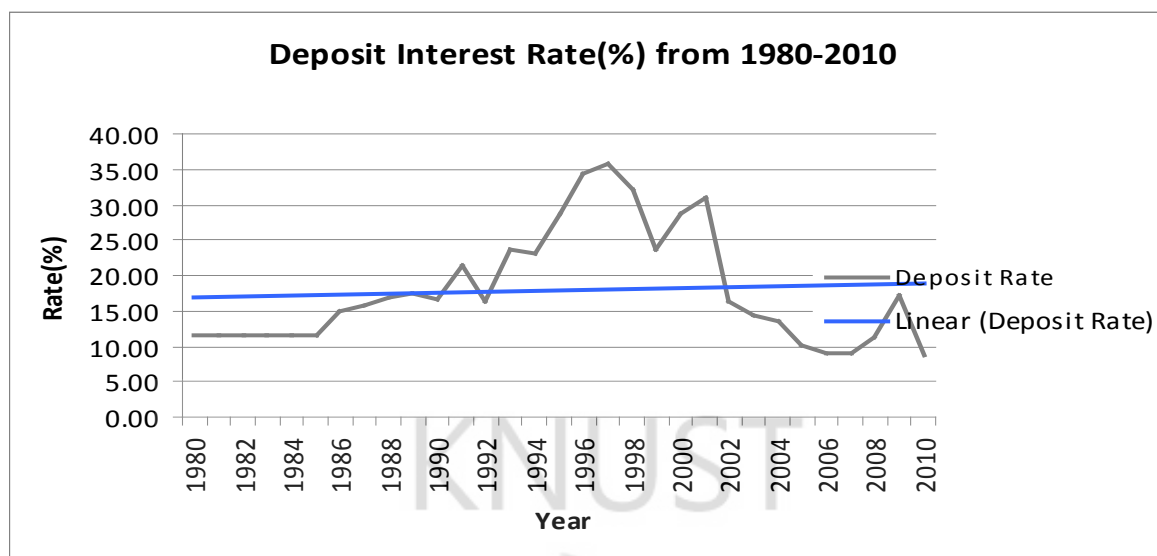


Source: IMF, IFS and data files, 2011

4.1.4 Deposit Interest Rates in Ghana

The level of inflation has influenced the rate of interest that banks give to their depositors. The Deposit interest rate in Ghana was 17.06% in 2009, according to a World Bank report, published in 2010. Inflation during this period reported as 19.25%. That of 2008 was reported at 11.29, but the inflation for 2008 was 16.52% according to the World Bank. This means the level of inflation influences that of deposit interest rate, while deposit interest rate in turn influences bank deposits. Again, inflation been higher than deposit interest rate is a recipe for not holding money especially in banks. Deposit interest rate is the rate paid by commercial or similar banks for demand, time, or savings deposits. As the graph below shows, over the past 31 years this indicator reached a maximum value of 35.76% in 1997 and a minimum value of 8.89% in 2006.

Figure 4.3: Deposit Interest Rate in Ghana from 1980-2010



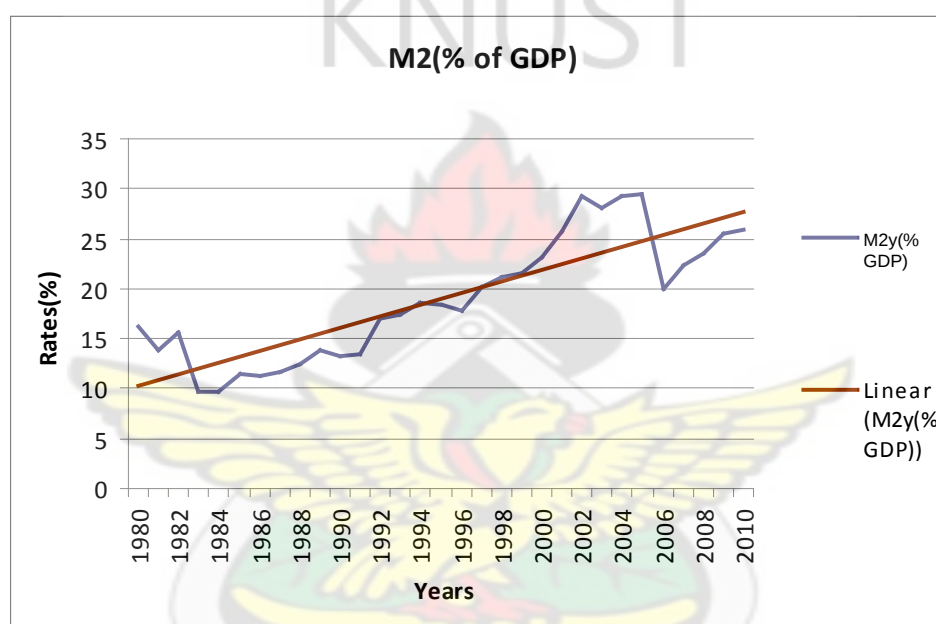
Source: IMF, IFS and data files, 2011

4.1.5 Money Supply (M2) in Ghana

Money supply or M2 is one of the tools used by the government in managing its monetary policy. Changes in M2 can have a major impact on economic conditions. An increase in M2 makes loanable funds cheaper, thus reducing cost of borrowing for corporate and individual customers. Hence, it is expected that people will increase consumption and reduce savings. Therefore, M2 is presumed to have an inverse relationship with deposits. The growth in the economy is represented by GDP. Most empirical literature has shown an ambiguous relationship between savings and growth. Similarly, the direction of causality between these variables is still under much debate. The simple permanent-income theory postulates that higher growth reduces current savings because of higher anticipated future income. Thus, urging people to dissave against future earnings. But in the life-cycle model, growth has an ambiguous effect on savings, depending on which age cohorts benefit the most from the growth, how steep their earning profile are, and the extent to which borrowing constraints apply.

Money and quasi money (M2) as % of GDP in Ghana was 25.93 as of 2010. Its highest value over the past 31 years was 29.49 in 2005, while its lowest value was 9.68 in 1983. The below graph shows the trend of money supply (M2) for the 31 years period from 1980 to 2010.

Figure 4.4: Money and quasi money (M2) as % of GDP from 1980-2010



Source: IMF, IFS and data files, 2011

4.2 Empirical Findings

4.2.1 Descriptive Statistics

The summary statistics of the variables used is presented in table 4.0. Over the study period, total industry deposit grew by 7.607 percent whereas the average inflation rate was 30.736 percent. The cedi depreciated against the US dollar by an average of 5.46 percent whilst the average rate for attracting deposits was 18.011

percent. The growth of broad money supply over the 31 year period studied indicates a yearly growth of 18.931 percent.

Table 4.0: Descriptive Statistics

Variable	Mean	Std. Dev.	Minimum	Maximum	Observation
Deposit Ratio	7.606835	1.382954	5.2703527	9.698819	31
Inflation	30.73581	26.82382	10.06	122.88	31
Exchange	5.463706	3.161526	-0.05129	9.124216	31
Deposit Rate	18.01161	8.060246	8.6	35.76	31
M2+	18.93161	6.145042	9.68	29.49	31

Source: Research Data, 2012.

4.2.2 Test for Stationarity of Series

Under time series analysis, the series is assumed stationary, which means that it has a common trend or a mean. However, macroeconomic variables like GDP do not always exhibit stationarity. A line plot of the series; deposit ratio, inflation, exchange rate, deposit rate and M2+ as a percentage of GDP depicts the nature of the series as attached in the appendix.

As can be observed, all but inflation series do not exhibit stationarity. A unit root analysis is used to test stationarity of time series. For this reason, the Augmented Dickey Fuller (ADF)) tests is used to determine whether the series has a unit root. Below is a detailed description of the analysis conducted for each variable. If the ADF test fails to reject the test in levels but rejects the test in first differences, then the series contains one unit root and is of integrated order one I (1). If the test fails to reject the test in levels and first differences but rejects the test in second

differences, then the series contains two unit roots and is of integrated order two I (2).

Table 4.1: ADF Test

AUGMENTED DICKEY FULLER					
		t-Statistic	Mackinnon z(t)	t-Statistic	Mackinnon z(t)
Deposit Ratio	Z(t)	0.347	0.9794 I(0)	-4.925	0.0000 I(1)
Inflation	Z(t)	-4.479	0.0002 I(0)		
Exchange	Z(t)	-1.473	0.547 I(0)	-8.840	0.0000 I(2)
Deposit Rate	Z(t)	-1.497	0.535 I(0)	-5.586	0.0000 I(1)
M2+	Z(t)	-0.887	0.7923 I(0)	-9.766	0.0000 I(1)

Source: Research Data, 2012.

As shown above, at the integration order zero, I(0) only inflation was stationary as depicted by the Mackinnon probability of 0.0002 whereas all the other variables do not pass the stationarity test by the non-rejection of the null hypothesis as shown by the Mackinnon probabilities greater than 0.1. Additionally, only exchange rate was stationary at order 2, I(2) whilst the orders were integrated at order 1, I(1).

4.2.3 Test for Serial Correlation and Heteroskedasticity

In order to ensure a robust ordinary least squares regression coefficients, the assumption of no first order serial correlation and heteroskedasticity must be met. Table 4.2 shows the test results for the two assumptions under the null hypothesis of no first order serial correlation and homoskedasticity.

Table 4.2: Diagnostic Test

Autocorrelation	chi2(1)= 0.105	Prob > chi2= 0.7459
Heteroskedasticity	Chi2(2)=29.52	Prob > chi2=0.0000

Source: Research Data, 2012.

As shown in table 4.2 above, the Breusch-Godfrey test for serial correlation does not reject the null hypothesis of no first order serial correlation as indicated by the probability greater than χ^2 of 0.7459. The Breusch-Pagan / Cook-Weisberg test for heteroskedasticity rejects the null hypothesis of homoskedasticity, hence the presence of heteroskedasticity.

4.2.4 Test for Multicollinearity

Table 4.3 shows the correlation matrix for the variables under review. There is a negative correlation between deposits ratio and the exchange rate between the US dollar and the cedi. However, the correlation with deposit rate is positive. This demonstrates a deterioration in the Ghanaian currency with respect to the US currency resulting in a higher deposit mobilization whereas increasing the interest paid on customers' deposits enables banks to mobilize more deposits in the form of customer savings. The negative correlation coefficient between the inflation rate and bank deposits also indicates that increasing rate of inflation leads to a reduction volumes of customer deposits that banks are able to mobilize. The broad money supply was found to be negatively related with bank deposits. This may be explained by the intermittent tightening of monetary policy aimed at mopping up excess liquidity.

With regards to the correlations between the independent variables, low correlation coefficients as shown in table 4.3 indicates that in order to avoid potential problems associated with multicollinearity all the variables are included in the regression model.

Table 4.3: Correlation Matrix

	Deposit Ratio	Exchange Rate	Deposit Rate	M2+	Inflation
Deposit Ratio	1				
Exchange Rate	-0.4004	1			
Deposit Rate	0.0285	-0.1345	1		
M2+	-0.299	-0.0649	-0.1081	1	
Inflation	-0.3829	-0.2297	0.2128	-0.4507	1

Source: Research Data, 2012.

4.2.5 Regression Results

A diagnostics results to test the robustness of the regression estimates is also included in table 4.4. An F statistics of 3.97 (with Probability $>F= 0.0125$) indicates the significance of the model in explaining the factors that influence the accumulation of bank deposits from customers. The coefficient of determination, R-squared of 0.3885 indicates that the model explains 38.85 percent of the variation in bank deposits. From the model three variables, exchange rate, inflation rate and money supply were the significant factors that influences the volumes of deposit banks are able to mobilize.

Table 4.4 Regression Results

DEPENDENT VARIABLE: DEPOSITS RATIO				
	Coefficients	Std. Err.	t	P>t
Constant	0.0121	0.0034	3.61	0.001
Exchange Rate	-0.0012	0.0004	-2.99	0.006
DEPOSIT RATE	0.0000	0.0003	0.06	0.952
M2 RATE	-0.0165	0.0063	2.63	0.010
INFLATION	-0.0001	0.0001	-2.48	0.020
R-squared	0.3885			
Adj. R-squared	0.2907			
F(4, 25)	3.97			
Prob > F	0.0125			
Root MSE	0.0065			

Source: Research Data, 2012.

The exchange rate between the Ghanaian cedi and the US dollar was found to negatively significantly influence bank deposit accumulation meaning a rise in exchange rates (depreciation of the cedi) might lead to lower levels of deposit. This implies that there might have been the phenomenon of currency substitution over the period of estimation. In this instance, people substitute domestic currency for foreign currencies as a means of financial savings. Two main reasons among others account for this. Firstly, financial repression especially in the form of fixing exchange rates, as was the policy in Ghana in the 70s and early 80s, is one such possible cause. The other is the devaluation or depreciation of the cedi. The effect of exchange rate on mobilizing bank deposits in Ghana confirms McKinnon's (1973) position that under repressive financial regimes, policies such as the pegging of exchange rates in LDCs reduce the incentive to save among people.

The result also indicate that banks ability to mobilize more deposits from fixed and saving account customers is reduced when there is an increase in inflation rate. These results imply that Ghanaians are not bound by the precautionary savings concept. Instead of saving more, they will continue to spend because history had thought them that the Government will always maintain good monetary and fiscal policy in managing the country's economy. This relationship had a coefficient of -0.0001 indicating that a percentage rise in inflation leads to a 0.01 percent reduction in bank deposit at a significant level of 5 percent. This conforms to the findings of Haron and Azmi (2008), who conducted a similar study on Malaysian banks. Frequent fluctuating of inflation rates, defeats the function of money as a store of value. Inflation been negative is also an indication

that policy makers must work at keeping inflation at its barest minimum if it wants to increase capital accumulation through savings or deposit mobilization. With an average annual rate of inflation of 30.73% for the period 1980-2010, real money balances are negatively affected- real income distribution is affected and financial resources misallocated.

In the case of M2, evidence is found in support of the negative relationship between M2 and bank deposits in the form of fixed and saving account in the Ghanaian banking system. An increase in M2 makes loanable funds cheaper and hence reduces the cost of borrowing for corporate and individual customers. Bank customers therefore will increase consumption and reduce savings. This therefore explains the negative relationship between broad money supply and deposit mobilization and supports the conclusions by Haron and Azmi (2008). The coefficient of this relationship of -0.0165 indicates that a percentage increase in broad money supply will lead to a 1.65 percent reduction in bank deposit mobilization at a significant level of 5 percent.

Deposit interest rate was found to have a positive relationship with bank deposit mobilization but the relationship is however insignificant according to the model in Table 4.4 above. This could be attributed to the fact that in Ghana interest rates hardly reflect market conditions thus the effects of other macroeconomic indicators in determining bank deposits.

4.3 Contributions of Banks to Economic Growth in Ghana

In Ghana, there are remarkable differences in the quality of financial services and in the types of financial products across banks and time. Banks contribute to economic growth in Ghana through two major channels – capital formation and technological innovation. They ameliorate risk by trading, hedging, and pooling it. Most high-return projects that promote economic development require a long-run commitment of capital. Nevertheless, savers do not like to give up their savings for long periods. In this way, failure of the financial system to enhance the liquidity of long-term investments will mean that most high-return projects may not succeed. However, savers can hold bank deposits and easily access their savings within shorter periods and banks can simultaneously transform these deposits into long-term capital investments in long-term projects.

Financial institutions mobilize funds from risk-averse savers to risk taking investors. Banks in Ghana undertake a mixture of short and long-term investments. By so doing, they are able to satisfy savers' liquidity demands of on their deposits and at the same facilitate investment in long-term high-yielding projects. This increases investment in high-return projects, which accelerates economic growth. Bencivenga and Smith (1990) have elucidated this process. It must however be mentioned that banks in Ghana are generally lukewarm to investments in long-term projects especially when they are start-ups. They hardly make long-run commitments of resources to initiating new capital investments that promote technological innovation. What they rather often do is commit resources as working capital to firms and that, in one way or the other, simply amounts to reallocating investment into purchasing claims on ongoing projects.

Their role in providing long-term capital is therefore not remarkable in Ghana and may continue to diminish as impediments to equity markets in the country are cleared.

Nonetheless, banks, in addition to reducing liquidity risk, also provide risk diversification services that affect resource allocation and saving rates and thereby promote long-run economic growth. The banks collect and process vast amounts of information on a wide selection of enterprises, managers, and economic conditions. They then select and allocate capital to where it returns the most value. After financing, they also monitor firm managers and exert corporate control. Monitoring and corporate control enhance the mobilization of more savings from diverse individual savers which brings about efficient investment. Better savings mobilization has a direct positive effect on capital accumulation and consequently long-run economic growth (Levine 1997).

An examination of the proportion of domestic credit to the various sectors of the economy will clarify further whether banks in Ghana have actually contributed to development through the mobilization of financial savings. Domestic credit to private sector (% of GDP) in Ghana was 15.23 as of 2010. Its highest value over the past 50 years was 15.88 in 2008, while its lowest value was 1.54 in 1983.

The share of credit to agricultural sector, one of the main sources of growth and welfare in Ghana grew consistently between 2007 and 2010 from GHS182.80 million to GHS489.76 respectively. Equally, bank credit to manufacturing, another potential source of accelerated growth went up from GHS528.30 million

to GHS1,060.29 million between 2007 and 2010 respectively. Over the four years, credit to the mining and construction sectors has also inclined. Bank credit to other sectors has grown consistently. Other sectors comprise electricity, gas, water, import, export, domestic trade, transport, storage, communications, and cocoa marketing. These industries are unfortunately not prominent among the engines of growth in Ghana (see appendix A1.1).

It is remarkable that for a country like Ghana, which stands in dire need of technological or scientific innovations to propel growth, credit to the industrial or manufacturing sector has been dwindling. One reason that comes up immediately is the practice of successive governments in financing budget deficits through borrowing from the domestic banking system. Even where they may be willing to finance capital formation through private sector investments, Ghanaian banking institutions are constrained by the attractiveness of the less risky treasury bills and therefore prefer to lend to the government instead of the private sector. Moreover, most private sector borrowers, especially those engaged in agricultural and manufacturing, find the cost of loans too expensive.

Savings or deposit rates has been in the region of 9% and 24% since 1990, and lending rates on the average ranged between 17.5% and 39% giving a ridiculous spread of about 10% (i.e. between savings and lending rate). Ironically, the banks are cushioned by the sale of securities. These increases the cost of doing business whiles weakening the banks financial intermediation function.

Low per capita income, poverty and the high illiteracy rate are affronts to savings mobilization in Ghana. This problem is compounded with the level of ignorance, which is reflected in an adult literacy rate where very few are thus left to appreciate the role of the financial sector and investment opportunities. In addition, it must be noted that poverty, lack of collateral and the absence of a buoyant economy increases the risk of default or repayment- banks are thus reluctant to advance loans. Households' savings are not directed at productive ventures but rather future consumption on needs such as school fees and medical expenses.

World Bank figures in 2010 for classification, middle-income nations have been grouped from \$1006 to \$3975; \$3976 to \$6285 and \$6286 to \$12785. This represents lower middle income, middle-middle income and upper-middle income respectively. Ghana currently falls under lower middle income and it is believed that production of oil will propel the nation into middle-middle income status by the next four years.⁸ In order to achieve this target, it is very prudent that we build a strong financial system.

⁸ Keynote address by Prof. Kodwo Ewusi at the 1st Annual Economics Conference at the Kwame Nkrumah University of Science and Technology on September 19, 2011. Source: <http://www.ghanaweb.com/GhanaHomePage/NewsArchive>

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the study and discusses the conclusions drawn from the study, and provides recommendations for policy makers and for future research.

5.1 Summary of the Findings

The study used the case of the banking system in Ghana and sought to investigate some of the determinants of mobilizing financial savings (deposits). The study again sought to examine the contribution of banks in the growth of the economy of Ghana. This is necessitated by the fact that the growth and expansion in the financial system in the country has not resulted in a proportionate increase in savings. The importance of financial savings, however, cannot be exaggerated.

Though there have been studies on savings mobilization, the difference between financial and non-financial savings is that with financial savings financial institutions re-direct surplus funds into deficit, but profitable ventures. Funds receivable from external sources like foreign donors are highly unpredictable and fluctuating, but unfortunately, most African countries including Ghana heavily depend on these external sources to finance the chunk of their budgets. These funds mostly from IMF and World Bank come with conditionality, which sometimes impedes national policies. The safest and surest way therefore, rest with the efforts policy makers and the banking sector to mobilize the necessary funds through savings to meet the domestic needs of the country. In order to

achieve, policy makers must ensure stability in the banking sector and banks must also create a wider network to reach the unbaked areas in the country.

The theoretical basis for this study is that if liberalization in the financial sector has the potential of increasing participants in the financial system thereby increasing competition, then interest on savings will increase, hence increase in Ghana's savings mobilization since the liberalization reforms of the 1980's. The study has given an overview of banking in Ghana and a review of both theoretical and empirical researches conducted on the subject. Concentration is drawn to the need to mobilize scarce capital through the development of domestic financial institutions. Due to the specialized nature of their operations, financial institutions like banks have the necessary capabilities to channel surplus funds to investment sectors efficiently.

The study empirically ascertained the determinants of savings mobilizations, and collected data using periods from 1980 to 2010. From the preferred model regression results, the study finds that the main determinants of mobilizing bank deposits in Ghana are exchange rate and inflation and money supply. Inflation, exchange rate, money supply emerged as been significant and inversely related to bank deposits, while deposit rate is insignificantly positively related to bank deposit in Ghana. Some of the causes for the insignificant relationship included underdeveloped financial system, low monetization, dominant informal sector, poverty, low per capita income, high dependency ratio, literacy rate, and the large spread between lending and borrowing rates are the many reasons given to the country's slow adjustment to changes in macroeconomic indicators of which

interest rate is one. Again, the study finds that banks have the capacity and willingness to contribute to economic growth, but are constrained by other factors such as government domestic borrowing attitude and non-bankable or non-profitable businesses.

Results from the study reveal that inflation, exchange rate and broad money supply contribute significantly to financial savings in Ghana. While exchange rate stability is necessary for combating currency substitution, the Bank of Ghana should avoid propping up the cedi by drawing on its reserves without addressing fundamental economic ailments and the lurking back of confidence in the banking system. Sound fiscal and financial policies that assure cedi-denominated assets acceptable real rates of return may be more effective in bringing down inflation than the practice of forcing interest rates to catch up with or overtake inflation.

Inflation is also found to have a significant influence on bank deposits. High inflation rates may cause low savings as people are forced to hoard cash in other currencies rather than deposit it in banks. In addition, during times of high inflation, people may prefer to invest their money elsewhere to saving it in a bank. A stable macroeconomic environment in which inflation is brought under control and maintained within targets is important in aiding the mobilization of financial savings in Ghana. Over the years, governments have consistently missed inflation targets and this has produced a negative effect on bank deposits as it often renders real deposit rates negative and may discourage saving even though deposit rate does not emerge from the analysis as a significant determinant of bank deposits. Policies aimed at reducing fiscal and avoiding government borrowing could

ensure that government meets inflation targets and stays within them. Policies that reduce inflation also add to the importance of deposit rates in determining financial savings.

5.2 Conclusions

Ghana since the 1980's has struggled to stabilize its economy amidst challenging and difficult times. This period witnessed the rampant overthrow of government regimes, acute famine, low exports earnings, low confidence in the economy, etc. The private sector during this period was dysfunctional when it came to contributing to national developments partially because of ideological differences held by the different governments. Banks could do very little in promoting economic developments because savings was low due to the lack of confidence in the banking system and upswing of inflation that time almost led to the collapse of the economy. However, the late 1980's upwards saw some remarkable improvements in the economy after the Structural Adjustment Program (SAP) though inconsistent. Further programs implemented including the FINSAP 1 and 11 promoted liberalization in the financial sector thereby restoring some confidence back into the financial system. Factors, which affected savings mobilization in Ghana from 1980, are identified and include; poverty/low income, literacy rate, inflation, exchange and interest rates etc. Interest rate is considered as less significant in savings mobilization due to the underdeveloped financial market, rate of adjustment and low monetization. makes interest rates a less significant determinant in savings mobilization in Ghana.

Any action or inaction of policy makers that will affect savings mobilization adversely or impede private sector development through capital provision will result in backwards growth of the economy. The banking system plays a key role in improving savings mobilization, but unfortunately, much is still needed to be done by these banks in order to develop the economy.

The survival of every economy depends on financial sector because it fuels the other sectors of the economy. Both the public sector and the private sector have a role to play in mobilizing savings and investing the mobilized funds in profitable ventures. The public sector must establish policies to promote financial savings mobilization, while the private sector must make good use of the surplus funds raised by financial system by investing in profitable ventures, which will develop the economy.

5.3 Recommendations for Policy Makers

The insolvency of a bank in Ghana will put fear into depositors therefore, reducing the mobilization of savings. In lieu of this, it is recommended that Bank of Ghana should tighten its checks on the various banks in order that they follow due diligence in their operations. For example, Bank of Ghana should ensure that all the banks in Ghana meet the requirements of Anti-Money Laundering guidelines established to check terrorist financing, drug trafficking, illegal smuggling and other crimes perpetrated through the banking system. This will build the confidence in the banking system both locally and internationally.

Again, this study recommends that banks in Ghana should employ the necessary technologies and products in banking in order to meet the standards of their counterparts in the developed countries. With the current spate of globalization, it is dependent on banks to make banking easy and comfortable using up-to-date technologies. The comfort of the customer determines the relationship with the bank hence increase in deposit mobilization. Attractive products and means must also be used in raising the necessary capital needed for the growth of the economy.

An important factor to consider in the growth of the economy through savings mobilization is the efforts made by policy makers to making frantic efforts to check inflation and other macroeconomic indicators, which may distort the stability of the economy. High inflation is a disincentive to savings and hence weak financial system. A strong financial system will support and finance government budget without resorting to external sources. This can be achieved through proper management of the monetary and fiscal policy.

Governments support and participation in some of the commercial banks in Ghana does not create a fair playing ground for all the banks. In order that there will be efficiency in the financial system, there must be competition, which intends leads to innovation. The Bank of Ghana must play its supervisory role with fairness and firmness in order to protect depositors.

The unemployment level in Ghana is very high and as a result, there pressure on the government to provide jobs for the people. Securing funding from the banks to

develop entrepreneurial skill or develop private business requires collateral, which is very difficult for most Ghanaians to come by. Government should provide some assurance to banks for them to grant loans to profitable private sectors, which will be monitored strictly. This will create employment and contribute to economic growth.

Banks should increase their network to all regions in Ghana in order to increase deposits and increase private investment in certain areas. Majority of Ghana's population remain unbanked and it is reliant on the various banks to increase their branch network system. This will also educate the unbanked on the essence of the banking system.

The increased investments in Ghana means that banks in Ghana must be ready to finance most of these investments. For example, the discovery of oil in Ghana requires huge investments and financing, which is currently financed externally. Banks in Ghana must therefore take this opportunity to increase the capital base to be able to meet the capital outlay of these investments. This is possible by listing on the Ghana Stock Exchange to increase their capital base.

Ghanaians as a whole should depend on more products made in Ghana other than those imported from other countries. By so doing, the pressure on the Ghana Cedis will reduce as against major foreign currencies. This will also improve the exchange rate, hence, favorable balance of payment with other trading partners.

5.4 Recommendations for Future Research

A further study into this area of research should take into consideration, an analysis of macroeconomic indicators on savings mobilization in different African countries. An extended research into this area of study, which will consider a cross-section of developing countries at both regional and household levels, will support the robustness or otherwise of the findings and conclusions drawn from this study; and for future policy direction for individuals, businesses, institutions of state, and other countries which share similar economic conditions. It will help in the in-depth understanding of the nature and determinants of aggregate national savings and mobilization particularly in developing economies.

Significantly, it will be useful for the academia and persons who may be interested in appreciating the dynamics of the role macroeconomic indicators play in developing economies vis-à-vis determinants of financial savings and mobilization, their impact on economic growth and development; and the contributions of deposit banks through the financial intermediation process.

Considerably, further research will be deemed appropriate if other variables are populated and regressed to test for a higher R-squared, considering the fact that the variables chosen could explain a somewhat less than significant 39% of the variation in deposit rates over a 31-year period in Ghana.

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Appendices

A.1.1 Interest Rate Range (%) in Ghana from 2007-2010

1.CENTRAL BANK (END PERIOD RATES)	2007	2008	2009	2010
a.Prime Rate	13.50	17.00	18.00	13.50
BANK OF GHANA BILLS				
a.14-Day Discount Rates	12.15	18.50	18.37	11.70
b.14-Day Interest Rate Equivalent	12.21	18.63	18.50	11.75
c.28-Day Discount Rate	12.47	19.4	18.50	11.97
d.28-Day Interest Rate Equivalent	12.59	19.69	18.77	12.08
e. 56-Day Discount Rate	12.5	15.25	15.25	12.00
f. 56-Day Interest Rate Equivalent	12.75	15.62	15.62	12.23
TREASURY BILLS, NOTES & BONDS				
a.91-Day Discount Rate	10.33	23.24	22.38	11.91
b.91-Day Interest Rate Equivalent	10.61	24.67	23.7	12.28
c.2-year Fixed Rate Note	12.8	21	24.75	12.7
d.3-year Fixed Rate Note	12.08	16	16	13.67
e.5-year Fixed Rate Note	13.67	13.67	13.67	13.67
INTER-BANK MARKET				
a.Inter-bank weighted average	11.98	19.03	16.51	11.65
2. COMMERCIAL BANK				
A.Borrowing Rates.(%).				
i.Demand deposits	0.25-14.00	0.25-7.50	0.25-7.00	0.25-7.00
ii.Savings Deposits	0.10-9.00	2.00-16.00	2.00-18.00	0.25-18.00
B. Time Deposits				
1 month	1.00-11.00	4.50-23.50	5.25-30.50	5.25-23.00
3 months	3.00-15.00	6.25-26.50	10.00-28.0	10.25-25.75
6 months	3.00-15.00	6.25-27.50	11.00-30.00	10.00-27.00
12 months	3.50-18.00	3.50-24.50	9.50-27.50	9.50-26.00
24 months	9.00-12.00	10.00-21.50	10.00-22.00	10.00-22
36 months	Na	11.00-22.00	11.00-18.00	14.00-18.00

Certificates of Deposits	7.00-8.00	12.00-16.00	15.00-26.00	13.00-26.00
v. Bearer Bonds				
iv. Call Money	1.00-9.50	1.00-16.00	4.50-23.00	4.50-19.00
vii. Any other	2.50-10.50	2.50-22.59	8.00-23.84	10.00-15.42
B.Lending Rates.(%)				
i. Agricultural, Forestry & Fishing	14.00-33.50	19.50-44.00	25.75-40.00	24.75-40.00
ii. Export Trade	15.00-33.50	19.50-44.00	25.75-40.00	25.00-40.00
iii. Manufacturing	15.00-33.50	19.50-44.00	25.75-40.00	25.00-40.00
iv. Mining & Quarrying	15.00-33.50	19.50-44.00	25.75-40.00	25.00-40.00
v. Construction	15.00-33.50	19.50-44.00	25.75-40.00	25.00-40.00
Others	15.00-33.50	19.50-44.00	25.75-40.00	25.00-40.00

Source: Bank of Ghana Statistical Bulletin, 2011

A.1.2: Reserve Requirement of Deposit Money Banks (Millions of Ghana Cedis) from 2007-2010

	2007	2008	2009	2010
Liquidity Reserves				
Primary Reserve				
Domestic	366.3	426.5	486.8	820.7
Foreign	214.50	337.30	486.8	366
Total	580.8	763.8	972.9	1,186.80
Deposits				
Domestic	3,670.80	4,551.90	6,017.00	8,409.80
Foreign	1,076.80	1,546.10	2,262.30	2,734.50
Total	4,747.60	6,098.00	8,279.30	11,144.30
Reserve Ratios (%)				
Requirements				
Primary Reserve Ratio (Domestic)	10	9.4	8.1	9.8
Primary Reserve Ratio (Foreign)	19.9	27.6	21.5	30

*Primary Reserve Minimum Ratio Requirement is 9%

For Domestic Deposits= 9%

For Foreign Deposits = 9% in their respective currencies

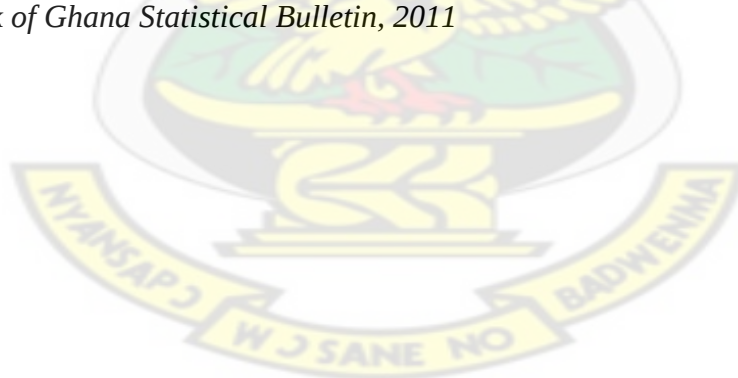
Source: Bank of Ghana Statistical Bulletin, 2011

A.1.3. National Consumer Price Index and Inflation Rates.

Monthly Changes (2002 Average = 100)

	2007	2008	2009	2010
Overall Index	229.8	271.46	314.83	341.83
Food and beverages	211.3	246.68	274.98	288.33
Clothing and Footwear	173.2	202.43	239.89	273.8
Housing and utilities	351.78	386.11	392.64	451.87
Household Goods,Operations & Services	174.4	213.13	275.01	305
Medical Care and Health Expenses	308.8	385.85	513.91	571.21
Transport	397.29	441.11	487.2	499.75
Communications	257.03	261.2	273	272.95
Recr,Enter,&Cultural Services	227.35	266.51	498.26	533.51
Education	234.24	271.67	279.81	282.51
Hotels,Cafe and Restaurants	249.1	395.43	465.29	534.94
Miscellaneous Goods and services	208.67	244.32	260.67	289.32
COMBINED				
Monthly change(%)	1.8	2.42	1.59	1.13
Year-on year	12.7	18.13	15.97	8.58
Annual Average (%)	10.7	16.52	19.25	10.71
Mininum Daily Wage(GH ¢)	1.9	2.25	2.65	3.11

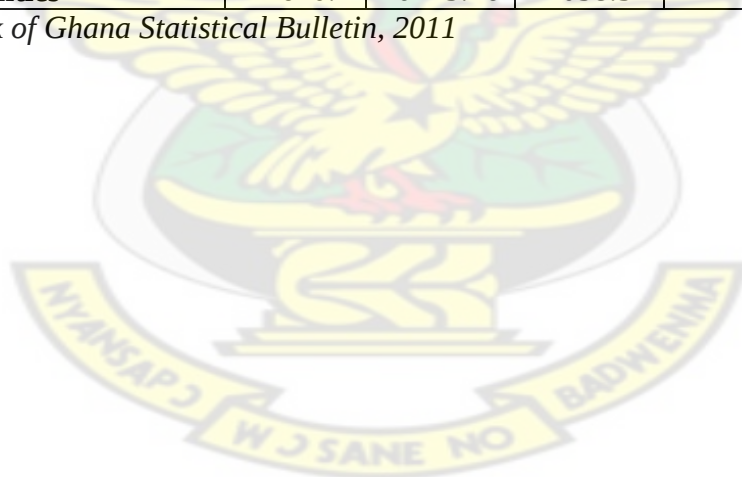
Source: Bank of Ghana Statistical Bulletin, 2011



A.1.4 Liabilities of Deposit Money Banks, (Millions of Ghana Cedis)

PRIVATE SECTOR DEPOSITS	2007	2008	2009	2010
Demand Deposits	1,412.70	1,686.60	1,648.36	2,963.74
Foreign Currency Deposits	992.9	1,816.81	2,664.17	2748.97
Savings Deposits	849.6	964.09	1,256.52	1,875.24
Time Deposits	837.6	1,246.11	1,865.76	2,284.19
Total	4,092.90	5,713.61	7,394.96	9,872.14
PUBLIC SECTORS DEPOSIT				
Demand Deposits	208.8	406.23	351.13	376.88
Saving Deposits	1.1	1.27	1.17	2.47
Time Deposits	138.3	231.25	325.68	425.31
Total	348.2	638.75	677.98	804.66
Government Deposits	301.5	349.45	452.45	692.63
Foreign Liabilities	569.4	723.97	877.17	814.59
Credit from Bank of Ghana	52.7	12.48	443.85	134.8
Paid-Up Capital & Reserves	833.9	1195.82	1789.65	2336.26
Other Liabilities	1421.6	1781.67	2422.29	2588.61
Total Liabilities	7620.2	10415.76	14058.34	17243.71

Source: Bank of Ghana Statistical Bulletin, 2011



A.1.5: Selected Economic Indicators in Ghana: 2007-2010

	2007	2008	2009	2010
Inflationary Measures				
Headline Inflation(%)	12.75	18.13	15.97	8.58
Average Inflation(%) (yr)	10.7	16.52	19.25	10.71
Core1:INFXEU(inflation adj.for energy & utility)	9.35	13.86	16.23	8.03
Brent crude oil prices[US \$ per barrel]	91.51	43.29	75.24	92.34
Domestic Petroleum Prices(GH per litre):premium	1.0199	0.818	1.1698	11,698
Monetary Sector Indicators(y-o-y)Growth				
Total Domestic Credit	64.6	43.9	16.12	25.53
Private Sector Credit	59.7	48.21	15.76	19.86
Reserve Money(RM)	30.6	27.1	36.3	45.22
Total Liquidity(M2+)	36.3	40.2	26.9	35
Broad Mone(M2)	43.5	31.25	21.21	46.2
External Sector Development(\$)				
Net International Reserves	2,241.32	1,300.59	2,459.37	3,924.87
Gross International Reserves	2,808.35	2,032.16	3,164.81	4,724.89
(equiv in months of imports of goods & services)	3.1	1.8	3.2	3.7
Current Account(incl.official transfers)	-652.69	-813.78	-159.9	-955.18
Private Transfer(net)	583.59	480.29	494.42	530.67
Commodity Price Movement				
Cocoa LIFFE [£ per tonne]	1,056.00	1,657.10	2,248.00	1,994.48
Gold[US\$per fine ounce]	807.2	821.49	1,116.95	1,391.16
Brent Crude oil[US\$ per barrel]	91.51	43.29	75.24	92.34
Real Sector Indicators(Base:Avg.2001=100)				
CIEA:year-on-year growth(nominal)	26.08	na	19.5	16.5
CIEA:year-on-year growth(real)	17.28	na	9.2	10.5
External Debt (million of U.S.\$)by maturity				
Total(exclude cocobod short term)	3,590.37	4,035.07	5,007.88	6,118.27
External debt /GDP(%)	15	16.2	19.1	19.8
Debt service/Exports of goods and services(%)	3.5	6.5	5.5	3.8
Debt service/GDP(%)	0.2	0.5	0.5	0.3
Government Fiscal Operation(Millions Gh Cedis)				
Net Domestic Financing	87.1	249.7	90.01	-141.82
NDF as % of GDP	0.62	1.53	0.42	0.55

Source: Bank of Ghana Statistical Bulletin, 2011.

A.1.6 Government debt (stock at the end of year)

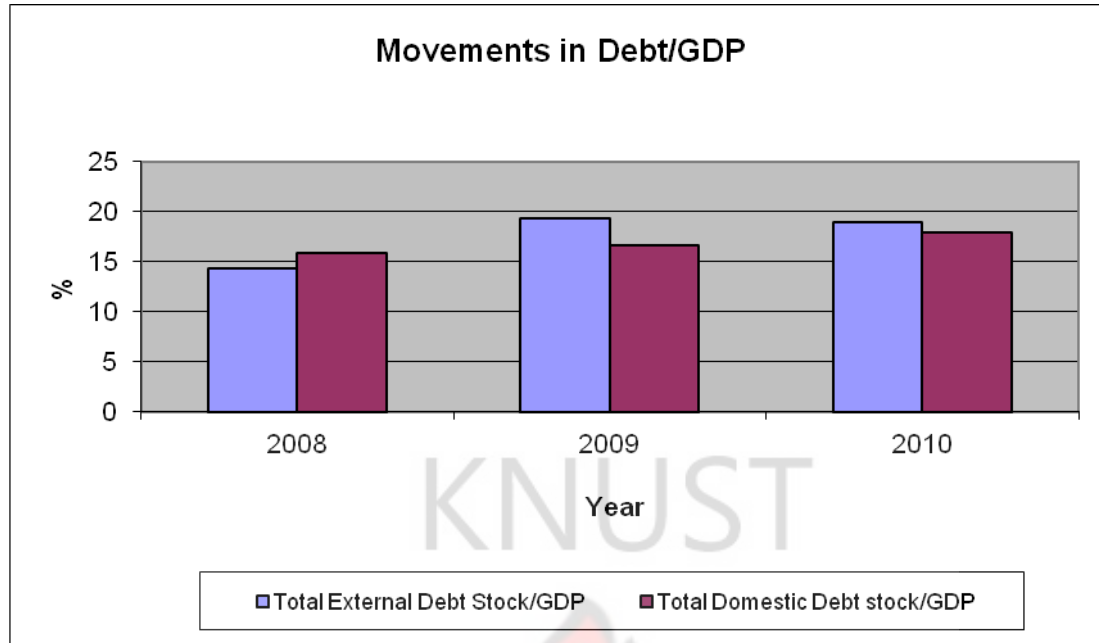
Government debt (stock at the end of year)

	Unit	2008	2009	2010
Total External Debt Stock	Million US\$	4,035	5,008	6,119
Total External Debt Stock/GDP	%	14.3	19.4	18.9
Total Domestic Debt	Gh¢ Million	4,800	6,103	8,280
Total Domestic Debt stock/GDP	%	15.9	16.7	17.9
Government Total Debt	Million US\$	7,989	9,280	11,737
Government Total Debt	Gh¢ Million	9,699	13,256	17,298
Government Total Debt per capita	Million US\$	349	396	485
Government Total Debt per capita	Gh¢ Million	424	566	714
Government Total Debt per/GDP	%	32.1	36.2	37.4

Ghana Economic Performance 2010

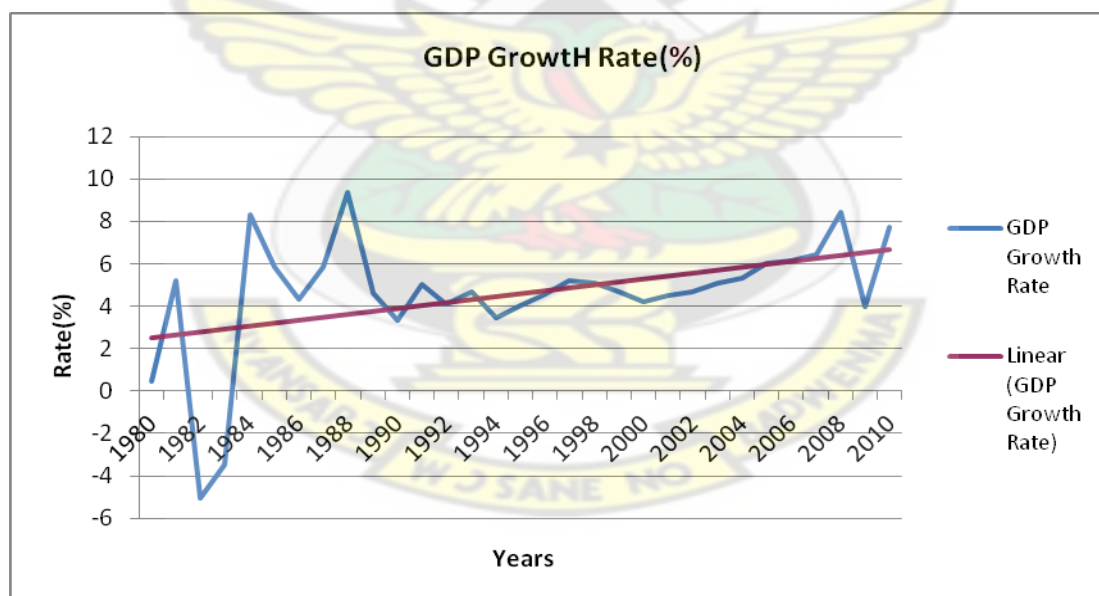
Source: Ghana Statistical Service (GSS),
2011

A.2.1: Movements of Debt to GDP Rate from 2008-2010



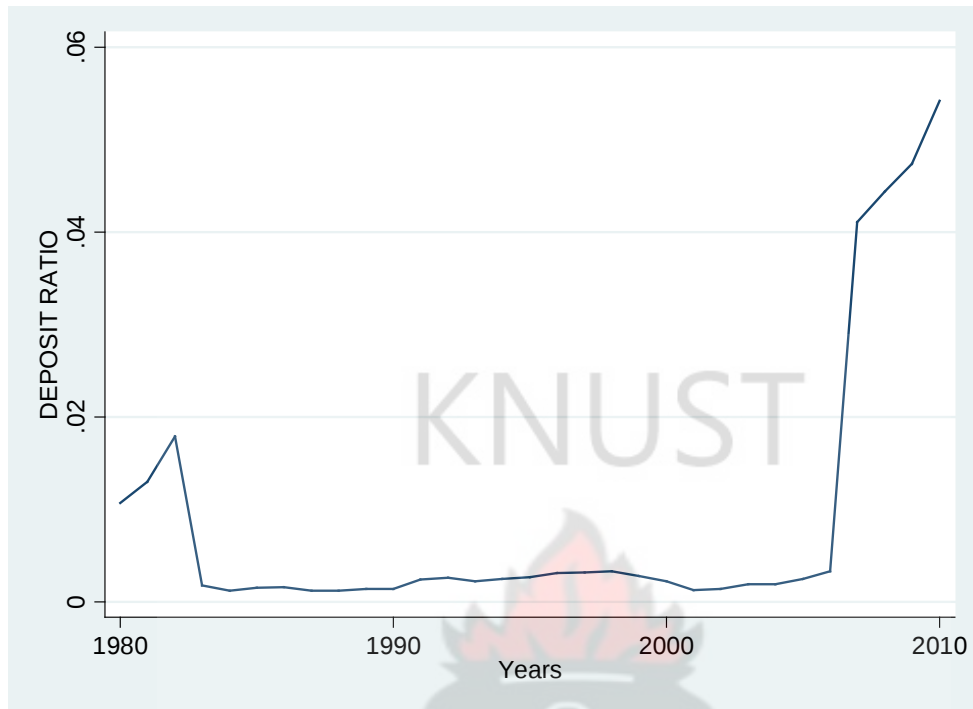
Source: Ghana Statistical Service (GSS), 2011

A.3.1: Ghana's GDP Rate (%) from 1980-2010



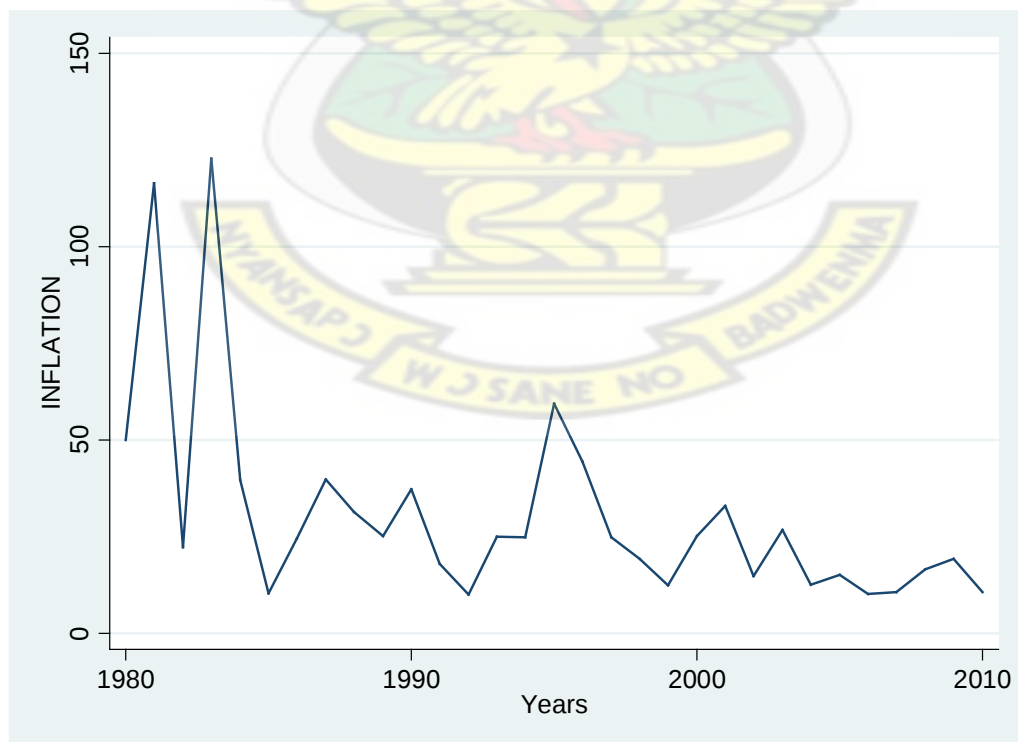
Source: IMF, IFS data files, 2011.

A.3.2 Ghana's Bank Deposit from 1980 to 2010.



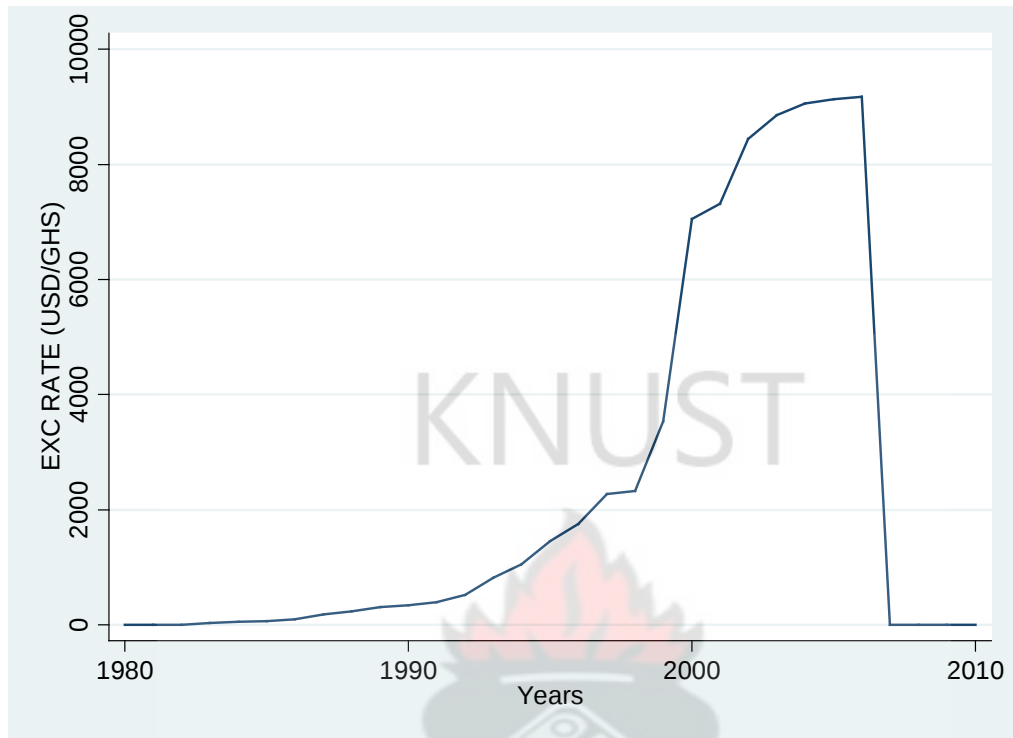
Source: IMF, IFS data files, 2011.

A.3.3 Ghana's Inflation rate trend from 1980 to 2010.



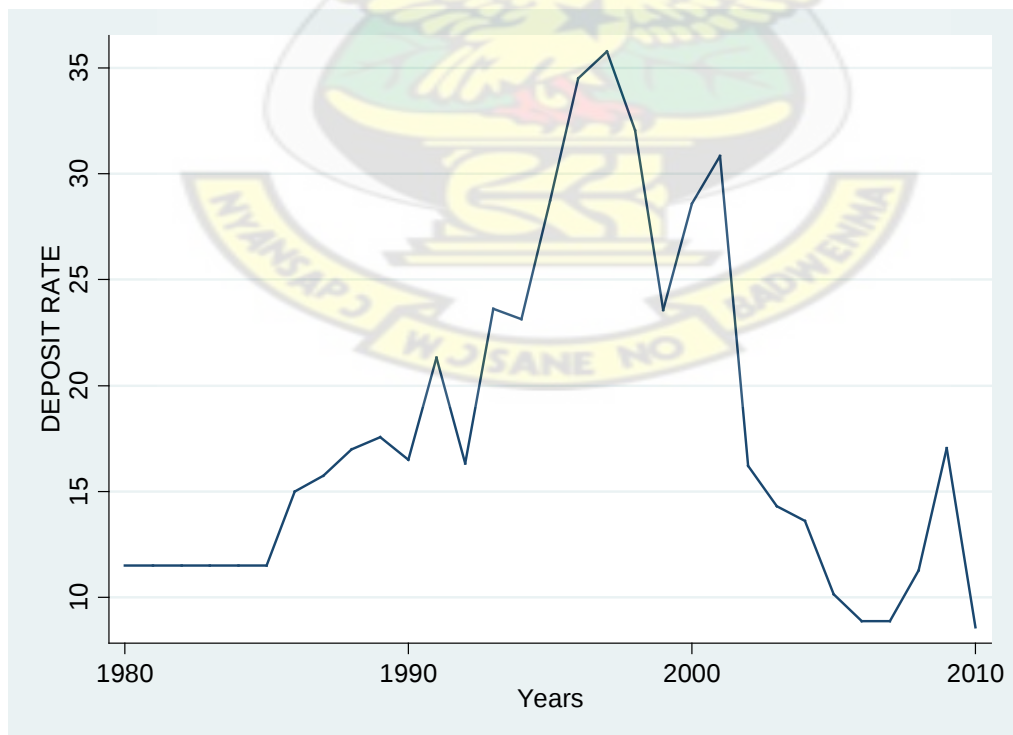
Source: IMF, IFS data files, 2011

A.3.4 Ghana's Exchange Rate from 1980-2010.



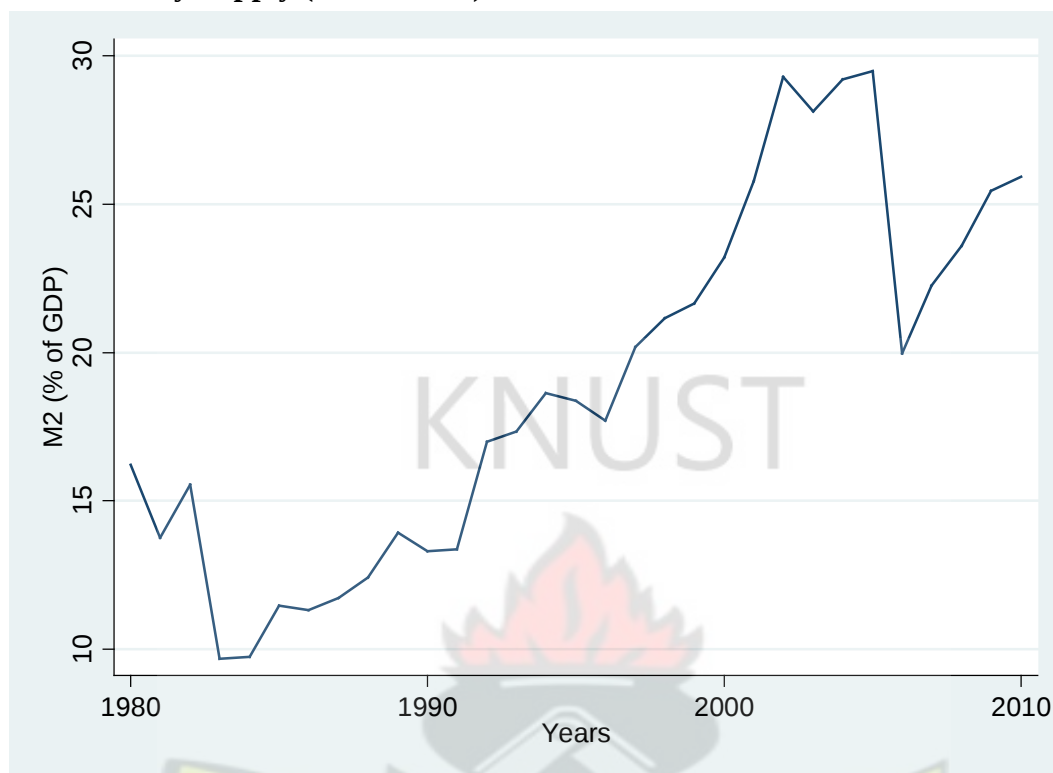
Source: IMF, IFS data files, 2011

A.3.5 Ghana's Deposit Interest rate from 1980-2010.



Source: IMF, IFS data files, 2011

A.3.6: Money Supply (1980 – 2010)



Source: IMF, IFS data files, 2011