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**THE EFFECTS OF INTEREST RATE LIBERALISATION ON BANK
PROFITABILITY; GHANA COMMERCIAL BANK LIMITED AS A CASE
STUDY.**

By

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DEDICATION

This work is dedicated to my family especially my lovely wife and daughter; Mrs Esther Bonney and Fidora Maame Efua Bonney.



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LIST OF ABBREVIATIONS

ADB	Agricultural Development Bank
BOG	Bank of Ghana
CAMELS	Capital Adequacy, Management, Earnings and Profitability, Liquidity, Sensitivity to market risk.
ERP	Economic Recovery Programme
FINSAP	Financial Sector Adjustment Programme
FSIs	Financial Soundness Indicators
GCB	Ghana Commercial Bank
GDP	Gross Domestic Product
IMF	International Monetary Fund
NIM	Net Interest Margin
NPAs	Non Performing Assets
ROA	Return On Asset
ROE	Return On Equity
SAP	Structural Adjustment Programme
SBP	State Bank Of Pakistan

ABSTRACT

Ghana launched an Economic Recovery programme (ERP) in 1983 and followed it up with a Financial Sector Adjustment Programme in 1988 with the aim of removing fundamental weaknesses in the economy and re-positioning the financial sector for growth. Interest rates before the reforms were administratively controlled by the Bank of Ghana (BOG) and a variety of other controls were also imposed on the asset allocations of the banks such as the sectoral credit directives. Following the financial sector reforms with its consequence interest rate liberalization, it was expected that it would lead to real positive rates, which would in turn cause an increase in the rate of domestic resource mobilization (domestic savings).

It was in this light that a regression analysis was employed to analyze the effects of the reforms on bank profitability with Ghana Commercial Bank as a case study. The study specifically analyzed the effects of pre reforms era which spanned from 1980 to 1987 and the post reforms period of 1990 to 1997 on the Profitability of Ghana Commercial Bank Limited based on the Earnings and Profitability component of the CAMELS framework using financial accounting ratios.

The study concludes that Ghana Commercial Bank's Earnings and Profitability as represented by Return on Asset (ROA) and Return on Equity (ROE) improved significantly after the reforms and that Treasury Bill rates and Bank of Ghana prime rates are significant drivers of the bank's profitability. Recommendations have also been made on improving the macroeconomic environment for successful implementation of financial sector reforms.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The economy of Ghana witnessed a decline in the late 1970s and the early part of 1980s. The negative performance of the economy significantly affected the banking sector. The banking sector became less competitive; most banks were financially weak, unprofitable, and illiquid and technologically bankrupt (Anim, 2000). Interest rate controls and credit ceilings ensured that cheap credit was available to the government-imposed priority sectors such as manufacturing. Heavy taxation of the banking sector had become a major source of revenue for the government. High reserve requirements were placed on banks. These restrictive policies created major distortions in the financial sector. In the presence of high inflation, real interest rates became negative (Antwi Asare and Addison 2000).

The Government of Ghana launched the Economic Recovery Programme (ERP) in April 1983 with the aim of liberalizing the economy from controls in order to enhance productivity. The economy witnessed some stabilisation between 1984 -1986. It was, however, felt that for the programme to achieve the desired results there should be a dynamic financial sector to facilitate the payment system and enhance the allocation of resources. Financial Sector Adjustment Programme (FINSAP) was embarked upon in 1988 to address the weaknesses in the banking industry: low competition, weak financials, and low profitability as a result of high non-performing loan assets, less liquidity, low capital base, and low level of technology (Anim, 2000).

Banks in Ghana have therefore undergone restructuring during 1988-1992. There have been some improvements in the restructuring. Profitability has soared in recent years with return on equity (ROE) between 16% and 24%, averaging 20% over the past decade. Capital adequacy ratios have seen improvement and outpaced the statutory requirement of 10%. In real terms, bad debts have been falling, and the problem of non-performing assets seems to have been tackled.

It could, however, be argued that all is not well with the banking industry. The high profitability could be said to owe less to efficiency and competitiveness than to the structure of the industry that enables most banks to reap supernormal profits (Ziorklui and Gockel, 2000). Also, a careful review of the balance sheets of banks in Ghana suggests that the banks in Ghana have generated extra returns by taking greater risks.

Another dimension is whether or not size matters in the performance of banks. Evidence in Ghana seems to suggest that small/medium banks like The Trust Bank and Ecobank are more profitable than big banks like Ghana Commercial bank (the largest bank in Ghana) and Agricultural Development Bank (ADB). In the real world, size is a hot issue but according to Gibrat's law size does not matter (Gibrat, 1931). Alhadeff and Alhadeff (1964) also found the top 200 banks in the US grew more slowly than the total did. Rhoades and Yeats (1974) replicated this study for the period 1960-71 and they too found that the larger banks grew less than the system as a whole. Schotens (2000) also found bank profits are inversely related to the amount of bank assets and positively related with the amount of tier-one bank capital. If the evidence of improved performance in the banking sector after the reforms is anything to go by,

then the expectation is that Ghana Commercial Bank which is one of the leading banks in Ghana must be posting good results.

Ghana Commercial Bank was established on 20th May 1953 as the Bank of the Gold Coast. It was “owned and capitalized by the Government of the Gold Coast and having its main objectives as to meet the needs of residents of the Gold Coast and to operate for the benefit of African industry, agriculture, commerce and trade and to spread the use of banks among Africans.” (The Ghanaian Banker, 1997). It was set up to improve access to credit of indigenous business and farmers. It was also instructed to extend a branch network into rural areas so that people in these rural areas would have access to the banking facilities.

Under Section 15 of the Gold Coast Ordinance, the Bank was authorized to conduct the various types of conventional commercial banking activities ranging from “the granting of overdrafts, with or without security, to such extent as may be prescribed by bye-laws, the advancing and lending of money on the security of Government stocks, the receiving of deposits and the keeping of cash accounts, drawing, accepting, discounting, buying and selling of bills of exchange and other negotiable instruments and the remittance of funds”

An ordinance was passed to rename the Bank of the Gold Coast as the Ghana Commercial Bank in 1957. According to the preamble to the Ghana Commercial Bank (Amendment) Ordinance of 1957 it was “An Ordinance to change the name of the Bank of the Gold Coast to ‘Ghana Commercial Bank’, to alter its capital structure, and to amend the Bank of the Gold Coast Ordinance.

The Bank was converted to a public company under the Statutory Corporations (Conversion to Companies) Act 1993, (Act 461) on September 7th 1994 as part of the pre-privestiture activities. As a public company limited by shares, Ghana Commercial Bank Limited was incorporated under the Companies Code 1963 (Act 179) to acquire and take over the assets and liabilities as well as the banking business carried out by Ghana Commercial Bank as it existed under the Ghana Commercial Bank Decree, 1972 (NRCD 115). The Bank currently has 157 branches nationwide as at the end of 2009 (GCB Annual Report, 2009).

In pursuance of its Economic Recovery Program, the Government of Ghana sold part of its shares to the public on Ghana Stock Exchange on Friday 17th May 1996. The current shareholding structure of the Ghana Commercial Bank is as follows: 21.36% by Government, 29.81% by SSNIT and 48.83% by the public. The corporate mission of GCB is: “To be the established leader in commercial banking in Ghana, satisfying the expectations of customers and shareholders, providing a full range of cost effective and high quality services through the optimization of information technology and efficient branch network”. (GCB Annual Report, 2009).

In addition to its traditional operational roles of accepting current, savings/time deposits and offering direct credit facilities, GCB also provides the following: International Trade Finance; Global & local funds transfer services; Investment services; Foreign and forex accounts; Electronic Banking and SME Banking.

Over the past decade, GCB profitability indicators have witnessed some improvements. Return on asset (ROA) for the seven year period ending 1987 increased by 22.59% with 1980 as the base but the Return on equity (ROE) for the same period decreased by 86.47%. This reduction in ROE was as a result of higher taxes imposed on banks at the time which almost eroded the capital of most banks. However, there was a significant increase of 403.78% in ROA for the seven year period ending 1997 with 1990 as the base. For the same period, ROE went up by 618.92% compared with the previous period reduction of 86.47%. The significant improvements in profitability was as a result of the implementation of the reforms in which there was a bit of stability in the macroeconomic environment, marginal reduction in non-performing loans as well as some competitions in the banking industry.

1.2 Statement of the Problem

Interest rates during the pre reforms era were administratively controlled by the Bank of Ghana (BOG) and a variety of other controls were also imposed on the asset allocations of the banks and one of such controls is the sectoral credit directives. The motivation for these policies was the belief that market imperfections and the nature of the financial system inherited from the colonial period, could not support the desired pattern of investment without extensive government intervention in financial markets. These policies were also motivated by three objectives: to raise the level of investment, to change the sectoral pattern of investment, and to keep interest rates both low and stable (Gockel, 1995).

Financial distress afflicted all the public sector banks in the 1980s. The Development Finance Institutions (DFIs) appeared to have run into serious difficulties first, while the emergence of distress in the two main commercial banks - GCB and SSB - was delayed until the

mid 1980s. All the banks were rendered insolvent by non performing assets (NPAs) and had to be restructured in 1989-1991, when a total of ₵62 billion of NPAs was identified in the banking system and replaced by BOG bonds or offset against liabilities of the banks to the BOG or the government. (Kapur et al, 1991). Of the ₵50.4 billion of NPAs which were eventually transferred to NPART in 1991, GCB, BHC and SSB accounted for 28%, 25% and 25% respectively (Brownbridge et al, 1998).

The true state of the banks' balance sheets was concealed by the failure to make adequate provisions for NPAs and to suspend accruing unpaid interest as income. Hence banks appeared solvent, according to the data in their published accounts, (even though the capital adequacy levels of some banks were very low) when appropriate accounting procedures would have revealed that losses had completely eroded capital. The extent of the financial distress in these banks was only revealed when diagnostic studies were carried out in 1987 as part of the preparations for the Financial Sector Adjustment Programme (FINSAP) (Brownbridge et al, 1998).

Following the financial sector reforms in Ghana with its consequence interest rate liberalization, it was expected that it will lead to real positive rates, which would in turn cause an increase in the rate of domestic resource mobilization (domestic savings). This implies that keeping interest rates below equilibrium levels might lead to a decline in the savings rate. In the case of Ghana Commercial Bank, it is of importance to determine whether the perceived benefits of the liberalized interest rates have had a positive impact on its profitability

Over a decade of implementation of the FINSAP, there is the need to find out whether the banking sector and for that matter Ghana Commercial Bank is becoming more profitable, or the banks had been more profitable before the financial reforms.

1.3 Purpose of the Study

The purpose of the study is to analyze the effects of liberalized interest rate on bank profitability.

1.4 Objective of the Study

The specific objectives of the study are as follows:

1. to analyze the effects of Pre – FINSAP on profitability of Ghana Commercial Bank Ltd.
2. to analyze the effects of Post – FINSAP on profitability of Ghana Commercial Bank Ltd.

1.5 Research Hypothesis

H1: Interest rate liberalization has led to improved profitability of Ghana Commercial Bank Ltd for Pre and Post FINSAP periods.

1.6 Significance of the Study

This research area was chosen due to the limited amount of work done in recent times on the Ghanaian experience with financial liberalization. Results obtained from this study are expected to reflect to a large extent a fair representation of the entire banking system in Ghana. It

is also envisaged that the study would help policy makers such as the Ministry of Finance and Economic Planning and the Banking Association of Ghana to formulate the appropriate strategies towards future financial reforms when the need arises with the past in mind.

The results of the study is also expected to inform Ghana Commercial Bank Limited and for that matter the banking industry as a whole as to whether their performance in terms of profitability has been improved significantly as a result of the financial reforms.

For the academia and professionals, the study would serve as a reference material for further research into how the financial reforms have impacted on bank performance and contribute immensely in building up academic and professional knowledge in financial sector reforms.

1.7 Scope of the Study

A study of the entire banking institutions in Ghana in the opinion of the researcher would have given adequate reflection of results sought after the implementation of the Financial Sector Reforms. However, only one financial institution, Ghana Commercial Bank Limited was used. A fourteen year annual financial reports; from 1980-1987 and 1990-1997 corresponding to pre and post financial reform periods respectively was used.

1.8 Structure of the Study

The study is structured in five main chapters: Chapter one covered the introduction which laid the background, problem statement, objectives, hypothesis, significance of the study, the

scope, as well as the organization of the study. Chapter two focused on the literature review which covered the relevant concepts, empirical evidence of interest rate liberalization and bank profitability and the explanation of the components of the CAMELS framework adopted by IMF. Chapter three presented the methodology adopted in the study. It includes the research design, the study setting, data collection and analysis techniques as well as the limitation of the study. Chapter four dealt with the data analysis and the discussion of the results of the study. Summary, conclusions and recommendations are found in Chapter five, which is the final chapter.



CHAPTER TWO

LITERATURE REVIEW AND THEORITICAL FRAMEWORK

2.1 Introduction

This chapter presents the review of the relevant literature on interest rate liberalization and its impact on bank profitability. It begins with theoretical review on financial sector reforms and financial crises; empirical evidence of interest rate liberalization and bank profitability and the CAMELS framework by IMF (2007) which was adopted has also been explained in this chapter.

2.2 Financial Sector Reforms

Financial sector reforms have been initiated with diverse objectives. A reform is “to change a system, law, organization etc. so that it operates in a fairer or more effective way...” (Longman,2000). Globally, financial reforms in emergent economies have not only become more popular but have also become synonymous with, among others, the lessening of rules on interest rate and lending operations of banks, eradication of barriers to contest, as well as the reinforcement of the financial organizations and infrastructure. According to Williamson (1999), financial sector reforms are important to enable the private sector, instead of the state, decide on bank lending operations as well as to improve on bank regulation. Even though different reasons may underlie financial sector reforms, recent reforms have veered towards ensuring more financial strength and economic development (Abiad and Mody,2003; Caprio *et al*, 1996; Cull and Humayun, 2003; Ministry of finance 2004; Reddy, 2006; Sundararajan, 2003). Several studies have established that financial renovation has a direct impact on bank behavior and results (Koeva, 2003). It can therefore be observed that, among others, financial reforms are implemented to, among others, influence the banking system and cause economic development.

Over the years, several events have prompted the need for reforms in different economies. Abiad and Mody (2003) identified three major causes of reforms and referred to these as ‘shocks’, ‘learning’, and ‘ideology and structure’. According to Abiad and Mody, these shocks which include decisions of new governments, ‘various types of crises’ and persuasion of foreign bodies such as the IMF have been the major causes of reforms in the past few decades. Among others, the crises in Asia, Europe, and Latin America between the early 1980’s and late 1990’s have been very expensive for the growth of these economies. Caprio et al, (1996) observed that attempts to isolate and review the position of the financial sector from the real sector constitute a major setback for critical analysis due to their closeness. However, the rise in financial crises, it is argued, has resulted in frantic efforts for financial reforms in emergent economies. (Caprio et al, 1996; Chu, 2007; Meltzer, 1998; IMF 2002; Chan-Lau and Chen, 2001). Therefore, among the numerous causes of financial sector reforms, financial crises and activities of influential bodies like the IMF have become predominant.

Indeed the effect of the financial crises on the major economic principles after the Second World War cannot be overlooked. The Keynesian economic principles which, among others, supported countries to offer below market determined interest rates and also subsidize products to enable them benefit from international trade was reexamined. With the reliance on these principles, the worldwide increase in general price levels around the 1960’s and 1970’s saw a considerable negative real interest rates for most of these developing economies. Consequently, earlier work of Gurley and Shaw (1955) as well as the more recent models of steady growth for

less emergent economies attributed to Shaw (1973) and McKinnon (1973) attracted worldwide attention and brought great hope for these economies (Caprio et al, 1996). According to their research work, 'financial repression' evidenced in needless taxes and state meddling in the financial system, especially on interest rate movements and allotment of loans, was the cause of the low financial deepening and the expensive nature of the savings and lending operations of banks.

Furthermore, among others, McKinnon and Shaw argued that interest rates must not be held below their free market determined level if savings can be influenced by interest rate levels. Consequently, an increase in interest rates should lead to an increase in what is saved, lent out in credit operations, or invested. Moreover, state control of banks tends to rather promote government interference, dishonesty, and discrimination (Caprio et al, 1996; Fry, 1982; McKinnon, 1993; Meltzer, 1998; Williamson, 1999). Williamson (1999), attacked state control of bank lending operations, among others, due to its counter-productive effect on bank regulation. Meltzer (1998), asserts that government interference to support a category of banks can also raise the risk of financial instability. Whereas some authors have argued for instant and total introduction of financial reforms, others have argued for an ongoing approach (Caprio et al, 1996).

Besides, decades afterwards after their introduction, the applicability of the McKinnon and Shaw models is still being debated (Chu, 2007; Fry, 1982; Meltzer, 1998; Williamson, 1999). Some recent research has opposed the theory with the idea the responsiveness of savings to changes in interest rates is minimal. However, even though the effect may be minimal, a higher percentage of the savings is attracted into the financial sector leading to an increase in

financial deepening which refers to the ratio of M2 to Gross domestic product or GDP (Odhiambo, 2005). As the institutions in the financial sector possess superior credit administration capabilities than those in the non-formal sector, this can lead to, among others, high quality credit administration, better investment and output which are all essential for development. Besides, an increase in interest rates has the potential to raise the riches of the saving citizenry as against the idea that their investing counterparts happen to be richer (Meltzer 1998; Williamson 1999). Agreeably, unregulated interest rates that rise in accordance with market mechanisms therefore have the tendency to attract savings into the financial system to engender development.

According to Sundararajan, (2003) and Chan-Lau and Chen, (2001), an improper execution of financial reforms can cause financial crises as evidenced by the effect of the Asian crisis. Following the crisis, the Interim Committee of the Board of Governors of the International Monetary Fund stated that: “The financial crisis in Asia has given heightened attention to the role of capital flows in economic development. The effects of the crisis have not negated the contribution that capital movements have made to economic progress in the Asian countries before the crisis erupted. Rather, the crisis has underscored the importance of orderly and properly sequenced liberalization of capital movements” This suggests that the financial crisis after the Asian crisis underscored the need to adopt more cautious approach during the implementation of financial sector reforms.

According to Chan-Lau and Chen (2001), issues worthy of consideration in an attempt to execute a financial sector reform include the goals of the reform organizers, the limitations arising from the economy and the political front, the total expenses involved as well as the advantages to be derived from each reform activity. Sundararajan, (2003) argues that the best way to ensure growth in the evolving local financial system and to integrate it into the dynamic global financial system, especially the capital account, is to adopt an orderly implementation of the necessary changes. Therefore, as the local economy improves, the aim of reforms is to prevent instability and the main approach should be to alleviate the dangers attracted whilst it advances. Sundararajan, (2003) identified three major essentials of local financial market reform to include the setting up of the basic frameworks for the various institutions which would regulate the macro economy and also ensure efficiency in the financial market. Backed by the laws of the country, this establishment provides a setting for the work of the central bank and the other financial institutions, as well as a suitable arrangement for their administration. Secondary, financial reforms must recognize the organization of the various institutions so as to ensure harmony among their functions and operations.

In an ascending order, markets must be arranged to include the money markets; the foreign exchange and treasury bill markets; the bond market; the corporate bonds and equity; and the asset-backed securities and derivatives market. The financial market ladder reveals the extent of danger that can cause instability to the market at every level of the market as well as the levels of interdependency between the various market levels. Appropriate organizational measures need to be taken to ensure that the right relationships are designed to prevent any inherent threats

that might cause financial instability to the entire economy as the reforms are being implemented.

Furthermore, removing barriers to international capital transfer can help improve the local financial markets. On the other hand, the extent to which the local financial markets should be developed before opening up for international capital dealings depends on the peculiarities of the economy and market concerned. This is because international capital transfer can be inherent with high quality technologies and advanced methods that may enhance the development of the domestic market. At the same time, certain critical structures, especially the capabilities of the local investor community, need to be developed appreciably in preparation for the opening up international capital (Sundararajan 2003).

2.2.1 Impact of Financial Sector Reforms

Generally, the positive effect of financial liberalization on the level of financial stability has not been settled. The benefits of financial reforms, it is argued, include, an increase in the variety of risk venturing products and activities as well as financial instruments and institutions for different transactions. Besides, mention is made of reduced international market transaction charges and time (Caprio et al, 1996; Hanson, 1996 in Caprio 1996). Furthermore, financial reforms are said to make it difficult for governments to take undue advantage of vulnerable local capital markets and promote clearness and responsibility. Moreover, reforms are recognized for their potential to assist economic development and also to direct global savings to the most

useful ventures. In spite of these benefits, practical evidence regarding the real benefits is still an argument due to the parochial nature of past studies (Kaminsky and Schmukler (2003).

Some authors, arguing against the benefits of reforms, suggest that financial reforms have been the cause of financial crises in several developing countries. Financial crises, according to the IMF (2002), usually 'have their origins in an unsustainable economic or financial imbalance'. Among others, these crises include large mismatches between short-term assets and long-term liabilities in the banking and business communities (IMF, 2002). Aghion et al (1998) and Demirguc-Kunt and Detragiache (2005) argue that the reduction in bank regulation during reforms mostly result in the banks free involvement in risky activities for higher income which eventually leads to such insecurity. For instance Jomo cited in Chu, (2008) argues that the financial turmoil in Malaysia was generated by financial reforms instead of some overbearing rules (Chu, 2008). Besides, Kaminsky and Schmukler (2003) believe that financial reforms open up weaknesses which cause poor bank performance after reforms in emerging economies.

Furthermore, the popular call for more stringent banking system control after the Asian financial problems underscores this argument (Chu, 2008). Surprisingly, a study by Chu (2007) could not identify any direct connection between financial liberalization and financial crises. Besides, enormous attempts to discover the cause of banking crises as analyzed in Čihák, and Schaeck, (2007) failed to establish the exact relationships between unstable financial systems and reforms. Ikhide and Alawode (2001) assert that even though several financial crises happened during the period when the financial sector was liberalized, no direct relationship could be observed. Sundararajan, (2003) referred to the way and manner that reforms are organized as

the cause of financial crises but not the fact that the reforms have been implemented. Agreeably, more research is required to establish the effects of financial sector reforms on the general economy as well as the exact relationship between banking crises and financial sector reforms.

2.3 Interest Rate Liberalization and Bank Profitability

Studies examining the effects of interest rate liberalization on financial intermediation have in many cases proved inconclusiveness. Nissanke and Aryeetyey (1998) observed that although “the financial policy debate has been polarized on the relative role of the state and the market, the actual outcome appears to depend upon the manner of government intervention, which can be either positive and welfare-enhancing or negative and deleterious for development”.

In calling for a liberalization of interest rates, Mckinnon and Shaw, (1973) argued that the environment of low interest rate policy and heavy government intervention, which was present in most developing countries could be characterized as a situation of financial repression, the actual level of investment is reduced due to the fact that financial savings had reduced. The reduction in financial savings could be as a result of the fact that the administered low interest rates were often negative in real terms (because inflation was quite high) thus hampering the development of the financial sector and promoting capital flight.

This view by McKinnon and Shaw falls in line with the theory underlying the efficacy of interest rate as a tool of monetary control. Theoretically the efficacy of interest rate as a tool of monetary control is based on the fact that when real interest rates are significantly positive it is

expected that it would effectively constrain monetary expansion. The idea here is that while a positive real deposit rate will encourage financial savings the corresponding lending or loan rate, which is often higher than the deposit rate, would discourage investors from borrowing thereby reducing the demand for bank credit. This is because when the lending or loan rate is high it makes loan money costlier thereby restraining credit and hence money stocks and vice versa. Also the significantly positive rate would encourage people to go in for money market instruments because of the good returns on them thereby getting rid of their excess money holdings.

Burkett, (1987) also contend, that the promotion of economic development requires deregulation of the financial sector, in particular the removal of interest rate ceilings. Burkett argued that financial repression inhibits economic growth by an unregulated interest rate regime. Interest rate ceilings are said to cause a regressive redistribution of income through their disproportionate impact on small savers and through regressive rationing of subsidized credit by financial intermediaries.

However, Cottani and Cavallo (1992) argued that allowing interest rates to be freed, especially in an unstable macroeconomic context, could lead to prohibitively high real interest rates as well as moral hazard complications. In other words, there could be the tendency for certain players within the financial system to take advantage of the unstable situation to raise interest rates above realistic levels in a bid to make abnormal profits at the expense of the economy.

Fischer (1993), Cho and Khatkhate (1988) and World Bank (1989, 1993) have all concluded that financial sector reforms including liberalization of interest rates could improve the level of financial intermediation through the widening of the available instruments and higher real returns from savings. Thus liberalization of interest rates is to encourage efficiency in the use of financial resources and encourage savings, as interest rates will begin to reflect relative scarcities.

In Kenya, Oshikoya (1992) found that interest rate deregulation provided only a mild support to the financial theory. Rather, increased rates tended to intensify competition among commercial banks and non-bank financial institutions. A positive correlation between real interest rates and credit availability and investment was found to be the result of the financial liberalization.

Ngugi and Kabubo (1998) also undertook a study to investigate Kenya's experience with financial sector reforms and interest rate liberalization. They found out that, contrary to the expectations from theory that with liberalization, interest rate will be positive in real terms as a result of increased efficiency in intermediation, the spread between the lending and deposit rates actually narrowed.

In another survey, Demirguc-Kunt and Detragiache (1998) found out in their economic investigation that interest rate liberalization has helped in directing credit to technically more efficient firms.

The World Bank (1993) noted that those East Asian countries with records of economic development have skillfully utilized mild repressive policies like controlled interest rates and directed credit to allocate resources. In the case of the Southern Cone countries of Argentina, Chile and Uruguay, it was found by Corbo and DeMelo (1985, 1987) and World Bank (1989) that their financial liberalization programs were not successful because they were undertaken in an environment of large macroeconomic imbalances. The results were characterized by instability, increased speculative transactions, high real interest rates, proliferation of banks, non-performing loans, distress borrowing, public anticipation of inflationary bailout of insolvent financial institutions, large-scale devaluation and capital flight. Diaz-Alejandro (1985) described their situations by the early 1980s as a “financial crash”.

Asiama (1996) postulated savings models for the Ghanaian economy which he econometrically examined using time series data from 1964 to 1994. He found out that there existed a positive relationship between real interest rates and both financial savings and real savings. He therefore concluded among other things that, the savings rates in Ghana are directly responsive to the real rates of interest.

In their study of the impact of interest rate liberalization on the corporate financing strategies of quoted companies in Nigeria, Omole and Falokun (1999) identified various indicators influenced by the liberalized interest rates, including the financing mix adopted by the companies. In the process, a clear link between interest rates and corporate financing was brought forth. They noticed that the effects of the liberalization on the firm’s financing strategies had been significant, and the effect was revealing in the firms’ turnover, gross profits and investment, which increased considerably after liberalization of the money market.

Cho (1988) used financial ratios to assess the effects of financial liberalization on corporate finance and its implication for the allocative efficiency of credit to the corporate sectors. His assessment was based on equalized access to borrowing, equalized cost of borrowing and the trend of debt ratio among the strategic sectors of the Korean economy. He found that large firms had greater access to subsidized credit than small firms did in the 1970s but this changed after the reforms in the 1980s. Cost of borrowing reduced in 1980s between different sectors due to the expansion of the share of credit in the non-banking sector and direct credit market. He further argued that financial liberalization led to similar costs of borrowing for different borrowers except for risk premium and variable transaction costs. Access to sources of borrowing equalized in the 1980s and cost of bank borrowing unified due to abolition of preferential lending rates of various types of bank credit. Using a test of variance of 68 manufacturing firms, he concluded that after the reforms the average costs of borrowing significantly reduced. Real cost of debt was negative throughout the period leading to a decreased debt ratio.

Park (1994) applied Cho's (1988) methodology and used data from the same source but for a longer period (1971-88 and for 28 industries) to approximate the cost of borrowing as a measure of allocative efficiency. He defined cost of borrowing as the ratio of financial expenses and total borrowings. His findings confirmed Cho's but he hinted that since financial intermediaries ration credit according to non-price factors (Stiglitz and Weiss, 1981), the reduction in the difference in borrowing cost is not an adequate measure of improvement in allocative efficiency.

Johnston and Pararasiouglu (1995) suggested some suitable indicators to track the progress of financial sector reforms including the behavior of real interest rates in an economy. They argued that positive real rate of interest on deposits and loans indicate progress in the implementation of the reforms. They also stressed that measures of the volume of intermediation, such as M2/GDP and credit to the private sector/GDP should be assessed. A rise in either of these two indicators shows a positive response in the economy to the financial reforms.

The efficiency of financial intermediation of the banking system shown by the reserve money/total deposit and reserve money/quasi money ratios also provide information on banking sector performance (Jbili et al., 1997). These reserve money ratios include information on currency to deposit ratios, showing the effectiveness of banks in mobilizing deposits, the excess reserves of banks which are a proxy for their efficiency in the use of deposits and the required reserves which measure the implicit tax on the banking system. Finally, the interest rate spread between the average lending and average deposit rates also shows the efficiency of the banking system. Apart from these macroeconomic measures of financial sector performance, microeconomic measures, which focus on the banking sector, can also be analyzed.

Empirical evidence indicates that bank performance has often been measured by either the use of a profitability index (Rose, 1981; Agu, 1992) and/or the stock prices of the bank (Pettway and Sinkey, 1980; Simons and Cross, 1990). Burke (1989) and Abdulla (1994) used return on assets as a measure of performance. McNaughton and Barltrop (1992) added to these measures, return on equity.

Analysis of market structure requires variables that relate primarily to market concentration, bank size, bank ownership and number of branches. Bank concentration, which is the extent to which most of the market's output is produced by a few banks, has been found to be an important determinant of bank performance or profitability. The most common measures of market concentration are the deposit concentration ratio (CR) and the Herfindahl index of deposits or assets. Abdulla (1994) found significant positive evidence of bank assets being an important factor for bank performance in Bahrain. Agu (1992) found the profit-capital ratio to be positively correlated with the number of branches. Molyneux and Thornton (1992), for example found a significant positive relationship between the deposit concentration ratio and bank performance. Civelek and Al-Alami (1991) also confirmed that such relationships existed for Jordanian banks. Bourke (1989) found that the liquidity ratio, concentration ratio and growth in the money supply were significant in determining commercial bank profitability.

Arshadi and Lawrence (1987) used canonical correlation analysis to study the performance of new banks in United States. The indices they selected to measure performance included: ratios of interest expense on time and savings deposits, to total liabilities; of net income to total assets; interest on, and fees from loans to total advances; and of total loans of sample banks to total loans in the market area.

Bank-specific studies on the Ghanaian banking system are few. Obben (1992) studied the performance of Rural Banks in Ghana between 1976-1987 using Canonical Correlation Analysis. Indices used included profitability, liquidity management, asset-liability management, debt

collection, as well as deposit and loan growth. He found that debt collection was poor, and the loan/deposit ratio and excess reserve/total deposit ratio were positively correlated with loan/total asset and capital/total asset ratios. Ages of banks and capital/total asset ratio were significantly positively correlated; ROA and trading loans/total loans ratios were negatively correlated and significant and that deposit growth in real terms was declining during the sample period. This study was conducted before the reforms and the results reflected the level of deterioration at the time.

In assessing individual bank performance in terms of accounting information, useful financial ratios can be computed to study various aspects, although Siems (1992) was of the opinion that even when a host of financial ratios are examined, it would still be difficult to get a clear picture of performance. Nevertheless, when these ratios are used to examine a banks' comparative performance against similar banks in the same market and/or trends in a particular bank's own data over time, the information becomes very valuable (McNaughton and Barltrop, 1992).

In a recent study, Antwi-Asare and Addison (2000) applied the t-test for the difference between means and correlation to assess whether there were significant changes in selected variables between the financial repression (1980-86) and financial reforms (1990-96) period. Return on assets, return on equity, advances/deposit ratio, cash and short-term funds/deposit, net loss in provision/total assets were some of the variables used to study profitability, intermediation, liquidity and operational efficiency. Their findings were as follows:

Deposit Composition: Banks have not increased their shares of deposits and net advances in their balance sheet following the financial reforms. Instead there has been a decline. There was a significant decline of private sector savings, more deposits were held in current account (demand deposit) and banks were unable to attract longer-term deposits to engage in longer term lending.

Profitability: Profitability of banks had increased. Bank profits came from holding secondary reserves and other securities where returns on investment were higher than on advances.

Intermediation and Market Structure: Actual intermediation declined alongside a continuous reduction in the overall dominance of the four big banks

Credit Allocation: There was more emphasis on commerce in the sectoral allocation of credit. Net loan loss decreased.

State-owned Banks: Performance of state-owned banks was found to be below that of the private banks in terms of profitability, intermediation and operations. Although state-owned banks fared better in operational expenses, it was found that private banks made large investments in equipment and information technology (Antwi-Asare and Addison, 2000).

Several variables are used as determinants of bank profitability in the banking industry. The profitability measures according to CAMELS framework include the rate of return on equity (ROE), Net Interest Margin (NIM) and the rate of return on assets (ROA). According to Al-Shamrari and Salimi (1998), profitability ratio, especially ROA signals the earning capability of the organization. They also suggest that higher return on assets ratio is appreciable as it is the primary indicator of banks' profitability and functional efficiency.

Essentially determinants of bank profitability can be divided into two categories. First, there are studies focusing on specific countries. (Naceur, 2003; Athanasoglou et al, 2005; Aburime, 2008a). Second, there are studies that factor in different countries. (Bashir, 2000; Demirguc-Kunt and Huizinga, 2001; and Abreu and Mendes, 2002).

In the case of external factors, they are split into macroeconomic determinants and industry specific determinants. For macroeconomic factors, interest rates, inflation, cyclical output, the level of economic development and stock capitalization are considered. Cyclical output and the level of economic development are usually used to represent the business cycles since banks' profits are expected to be correlated with business cycles, being higher in case of upswings and lower in of downswings. (Demirguc-Kunt and Huizinga, 2001; Bikker and Hu, 2002). Under stock market capitalization, Havrylchyk et al, 2006) finds a negative relationship between market capitalization and banks' profitability meaning that equity and bank financing act as substitutes rather than complements.

For industry-specific factors, the Structure-Conduct-Performance hypothesis point out that rising market power enhances the profitability of banks. As a matter of fact, Molyneux and Thomson, (1992) state that monopolistic profits follow out of major deviations from competitive market structures. Smirlock, (1985) notes that the use of ROA has provided strongest evidence on the concentration-profitability relationship in banking. Keeton and Matsunaga (1985) assert that ROA is especially useful in measuring changes in bank performance over time since banks' income and expense components are more closely related assets. Several studies of the structure-performance hypothesis in the banking system have also used both ROA and ROE (Civelek and

Al-Alami, 1991; Agu, 1992). Civelek and Al-Alami, (1991) found results based on ROA to be statistically very inferior and justified the relative performance of ROE on the basis that it reflects the efforts of managers interested in maximizing shareholders' wealth. However, other studies have used ROA as a measure of profitability in testing the structure-conduct performance hypothesis in banking (Molyneux and Forbes, 1995). The basic argument in favour of profitability measures in banking is that banks are essentially multi-product firms and the use of profitability measures eliminates problems associated with cross-subsidization between products and services.

Bank profitability has come to be important after the financial sector reforms. Researchers have tried to analyse bank profitability based on external and internal variables in various country contexts (Gisycski, 2001). External variables include rate of economic growth, industry-wide developments, inflation, money supply and other macroeconomic factors. Bank specific internal variables include nature of ownership, size, quality of assets, interest spread, business diversification and productivity and growth parameters. Studies have concentrated on analyzing the impact of ownership on bank efficiency and profitability since reforms (Sarkar et al, 1998; Arun and Turner, 2002; Das et al, 2005; Mohan, 2005).

Ganeshan (2000) revealed by empirical establishment of profit function that interest cost, interest income, deposit per branch, credit to total assets, proportion of priority sector advances are significant determinants of profitability of Indian Public Banks.

From the review of the literature, it is clear that a successful financial liberalization can be implemented if the following exist in an economy: macroeconomic stability, adequate prudential supervision of banks, fiscal discipline and a tax system that does not discriminate excessively against finance (World Bank, 1989). Besides these prerequisites, another crucial issue is that of the sequencing of reform packages between financial and real sectors. In Ghana, most analysts have been concerned about the impact of the reforms on bank credit allocation. The problem could be due to the inability to address the prerequisites more thoroughly as Brownbridge and Gockel (1996) have argued, or the sequencing of the implementation of the package as argued by Caprio et al (1994), or both.

To this end, it can be said that financial repression in developing countries has been a cost to them in terms of the benefits that could have been derived from an improved financial system. The reforms introduced have not yielded the expected outcomes but as we extend the data in this analysis, it is possible to arrive at new findings, which may change the current debate on the impact of the financial reforms on financial intermediaries.

2.4 Theoretical Framework

This study is based on IMF's FSI model – CAMELS framework. The FSIs among others were to examine the financial conditions of financial institutions as well as averting instability (IMF 2001). Other pointers, referred to as 'macro prudential indicators' which describe the

prevailing conditions in the general economy and are also likely to herald bank financial mishap include movements in the general level of prices, interest rates, and credit (Čihák and Schaeck 2007; IMF, 2001).

In the banking set-up, the IMF developed FSIs for the banking systems are primarily derived by the collection of financial pointers relating to the strength of each bank. The acronym 'CAMELS' is adopted to summarize these pointers. The six pointers are made up of: capital adequacy, asset quality, management soundness, earnings, liquidity, as well as market risk sensitivity (IMF 2001).

The first pointer of the CAMELS model is Capital Adequacy. The capital of a bank provides a cushion for sudden financial difficulties. The composition of capital includes shareholders owned funds and other items set aside for the purpose. Even though stable capital leads to trust in the financial system capital should not be used as a replacement for sound management. Ratios being used to determine capital adequacy include capital to liabilities (CL) ratio and the capital to assets ratio (Čihák and Schaeck 2007; Greuning and Bratanovic, 2003; Hilbers et al, 2000). Financial institutions that ensure adequate provision of enough bring about trust in the financial system.

The second pointer of the CAMELS framework is Assets. An asset refers to 'something belonging to an individual or a business that has value or the power to earn money' (Longman,

2000). The financial health of financial institutions deteriorates with successive erosion in the value of their assets. The various pointers to the deterioration in the value of assets include the earning assets to total assets and the provisioning to gross advances ratios (Čihák and Schaeck, 2007; Hilbers et al, 2000). A careful study of the trends in the asset quality offers a useful means of identifying trends in the assets quality as well as those that are likely to cause financial difficulties to the bank (Greuning and Bratanovic, 2003; Hilbers et al, 2000, SBP, 2001).

The “M” in the CAMELS framework represents Management. Good management is very essential to the achievement of the objectives of the bank. Apart from the duty to organize the activities of the bank, the management are accountable to all those who have placed their money in the care of the bank. Generally, the various assessment criteria provide useful information about the performance of management. On the other hand, it is not easy to assess management performance with financial accounting ratios. It is therefore important to include other assessment mechanisms to be able to assess management (Greuning and Bratanovic, 2003; Hilbers et al, 2000). Tools that are useful for assessing management quality include total expenses to total income and operating expense to total expenses ratios (SBP, 2001).

The “E” pointer of the CAMELS model also represents Earnings and Profitability. The earnings and profitability of a financial institution relates to, among others, its ability to persistently generate income to increase its own funds and reserves and also settle its debt obligations. Even though banks usually earned income through interest earning activities, earnings from fees and other innovative activities have also become major income earning items

among current banks. Bank earnings have therefore been characterized with instability and risky activities. Assessing earnings, therefore, can be challenging. The tools for assessing bank earnings and profit levels include the return on assets (ROA), return on equity (ROE), and the net interest margin (NIM). These ratios are assessed over a period to be able to ascertain whether the banks earnings are increasing or decreasing. Periods of general increase in prices as well as management plans have the potential to influence bank earnings (Greuning and Bratanovic, 2003; SBP, 2001; Hilbers et al, 2000).

Another factor of the CAMELS model is Liquidity. Liquidity implies that a bank must have adequate cash and near cash assets needed to meet changes in bank momentary obligations as well as to supply financial resources for development. Pointers must include the origin of funds as well as huge disparities regarding when obligations fall due and the ability of the bank to settle them. The liquid assets to total assets ratio and the loans to deposits ratio are used to assess liquidity. Adequate liquidity improves trust in the general financial set-up but can deteriorate if not appropriately managed. It is therefore important that banks keep enough liquid assets to meet their obligations (Greuning and Bratanovic, 2003; Hilbers et al, 2000; Sahajwala, 2007; SBP, 2001).

The final factor of the CAMELS framework is Sensitivity to market risk. Financial institutions deal in a greater variety of financial products making them susceptible to, among others, interest rate, foreign exchange risks and commodity price risk (Hilbers et al (2000). The

focus assessment is on how management would be able check and organize financial problems arising from these phenomena (SBP, 2001).

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents two issues. Firstly, the methodology adopted and used for the study has been discussed. These include the research design, sampling, data collection and analysis techniques. The second issue briefly looked at the interest rate liberalization in Ghana.

3.2 The Study Setting

The financial system of Ghana is made up of formal and informal sectors. The formal banking structure consists of the Central Bank which is the apex, commercial banks, development banks, merchant banks with ARP Apex Bank being the apex of all rural banks. Currently, there are twenty seven banking institutions in Ghana. There is also formal non-bank financial institutions such as the discount houses, leasing companies, savings and loans companies, insurance companies, pension schemes and the stock exchange. The informal sector consists of money lenders and Susu collectors.

3.2.1 Interest rate Liberalization

Under the financial reforms, interest rates have been deregulated. This move was in part to encourage competition among the banks. But, the deregulation of the interest rate was also to conform to the new form of financial programming Ghana was following under the Structural Adjustment Programme (SAP). Under the SAP, Ghana was using the money supply as the nominal anchor. This implied that the price of money (the rate of interest) should be determined by market forces.

The move towards interest rate liberalization was a gradual process. The first distinctive move was the abolition, in September 1987, of the maximum and minimum deposits, except the minimum saving deposit rate, which was temporarily maintained at 12%. In February, 1988 minimum lending rates for commercial banks were also abolished and by March of 1989 commercial banks were given the right to determine their own rates and display them in their banking halls. In November 1990, there was further liberalization of the financial sector by the abolition of 20% mandatory lending to agriculture. Thus by the beginning of 1991 the financial sector was almost liberalized. Since the liberalization, both real lending and real Treasury bill rates have been positive. Saving rates have been struggling to stay positive. This is reflective of the weak mobilization efforts by the banks since most savers would rather hold their idle balances in the form of the relatively risk-free but high yielding government bills.

3.3 Selection of the Case

Ghana Commercial Bank limited was selected as a case because it is the biggest bank in terms of market share; it is a commercial bank with the largest asset base in the country; and has the most extensive branch network both in the urban areas and the countryside and could therefore be assessed easily for data. (Annual Banking Survey, 2009). These in the view of the researcher are the factors that have put Ghana Commercial Bank in a unique position within the banking sector such that it is capable of producing results satisfactory enough after financial liberalization. Again, the extensive nature of the branch network of the bank means that its operations are more likely to affect the majority of individuals, groups and corporate bodies whose interest the Banking Law (PNDC Law 225) seeks to protect.

3.4 Research Design

The researcher adopted the case study approach to prove the research hypothesis. The justification for this method is that it provided insight into analyzing the pre and post financial reforms on the profitability of Ghana Commercial Bank.

Several analytical tools have been adopted to analyze bank performance both in developed and developing countries. These include trend analysis of financial ratios, Canonical Correlation Analysis, Statistical Analysis: Difference between Means and Correlation, Regression Analysis, Multivariate Analysis, Probit and Logit Analysis and the Questionnaire Approach. The choice of technique has usually depended on the researcher and more importantly on the availability of data. Irrespective of the methodology adopted, however, profitability ratios are used as indicators in such analysis. These profitability ratios were used to find out whether as a result of liberalization of interest rates there has been a significant growth in profitability of Ghana Commercial Bank Limited.

The usefulness of financial ratios in analyzing bank performance has been demonstrated in several studies dating back to Cameron (1966, 1972) and Goldsmith (1969). These ratios are used as variables for the assessment of profitability, market structure, intermediation, liquidity and operational efficiency. The most common ratios for profitability includes return on assets (ROA), return on equity (ROE) and on shareholders' funds. Profitability (measured by ROA and ROE) has been the main measurement index although others like intermediation; market structure (Concentration Ratio), liquidity and operational efficiency have been prominent. This

study therefore adopted the quantitative approach and the data available subjected to statistical analysis by using regression analysis.

3.5 Data Collection

Secondary data based on the annual audited financial reports of Ghana Commercial Bank for a period of fourteen years (1980 – 1987 and 1990 – 1997) was obtained from the bank's library at the Head Office on the high street, Accra. The period corresponded to the pre and post FINSAP. The researcher benefited in so many ways from the use of this type of information for the study. First, this was less expensive to collect, in terms of time and money. It afforded the researcher the opportunity to collect high quality data which would not have been of the same quality if the researcher were to collect it in its primary form. Saunders et al, (2007) quote Stewart and Kamins (1993) as stating that secondary data are likely to be of higher-quality than could be obtained by collecting primary data.

3.6 Method of Data Analysis and Presentation of Results

A statistical method was used to assess the direction of the impact of financial liberalization and determined whether the changes between 1980-1987 and 1990-1997 have been significant or otherwise. The secondary data obtained were scrutinized to determine their suitability, reliability, adequacy and accuracy. All the figures contained in the financial statements were in old Ghana cedis. Microsoft excel was used to compute the Earnings and Profitability ratios from the financial statements and a statistical software SPSS for windows was also used to analyzed the data. According to Healey, (1993), SPSS is the most widely used statistical software in the Social Sciences.

3.6.1 Study Variables

Several variables were identified to help explain the effects of interest rate liberalization on profitability of Ghana Commercial Bank. Some of these explanatory variables are bank-specific; some pertain to the industry while others pertain to the macroeconomic environment. In this study, however, explanatory variables from the macroeconomic environment were employed. These variables are: Treasury bill rates (x), Bank of Ghana prime lending rates (y) and the rate of inflation (y). The dependent variable in this study was profitability which was measured in terms of return on asset (ROA), return on equity (ROE) and net interest margin (NIM). Higher values of these ratios are indications of continued growth of profitability and viability of the bank.

3.6.1.1 Macroeconomic Variables

Macroeconomic environment: An unstable macroeconomic and policy environment is perceived as more risky and banks may compensate for it by requiring wider margins. Given that interest rates are determined by expected inflation and lending rate/prime rate by the central bank, the proxies of both variables are included in the model. For expected inflation, the study employed actual values of inflation for both periods. Including the inflation rate also allowed investigation into the bank's assertion that it keeps an eye on Treasury bill rates when setting its lending rates which affects its interest income.

3.6.1.2 Model Specification

The model for the study is adopted from the approach used by Randall, (1998); Demircuc-Kunt and Huizinga, (1999); and Barajas et al, (2000) in which interest rate spreads are a function of bank and market characteristics, operational cost, the regulatory environment and the macroeconomic characteristics. The empirical model was therefore specified within the framework of the bank as a profit maximizing firm with macroeconomic level variables to deal with specific aspects of bank behavior.

The response of Ghana Commercial Bank's profitability to changes in the macroeconomic variables at the pre and post reforms was specified as:

$$\Pi_t = f(x_t, y_t, z_t)$$

Where Π_t is the return on asset (ROA), return on equity (ROE) or net interest margin (NIM) of Ghana Commercial Bank at period t, x, y and z are the macroeconomic variables at t period.

The adopted model takes the following form:

$$\Pi_t = a + b\Sigma x_t + c\Sigma y_t + d\Sigma z_t$$

3.7 Justification for the Method

The analysis of the secondary data was made using the Earnings and Profitability component of the CAMELS Framework. The framework was used with the financial accounting ratios derived from annual audited financial statements of GCB (Appendices 1, 2, 3 and 4). The framework was adopted to analyze the profitability of GCB and therefore test the hypothesis. The CAMELS framework is an IMF usual method for assessing bank standards which was also adopted by Rogers (2006) in his work entitled 'Corporate Governance and Financial Performance of Selected Commercial Banks in Uganda'.

In order to assess the impact of the financial sector reform program on the profitability of Ghana Commercial Bank, audited financial statements for seven year period (1980 – 1987) for the pre-reforms and another seven year period (1990 – 1997) for the post-reforms were used. To assess whether the FINSAP actually impacted on the profitability of Ghana Commercial Bank or not, the pre-FINSAP financial statements (1980-1987) and the post-FINSAP financial statements (1990-1997) were treated as two samples taken from two independent populations and their means compared using the student distribution as the test statistic with the level of significance of 0.05 in all the tests. It was expected that the profitability of GCB in the post-FINSAP era will be better than the pre-FINSAP.

3.8 Limitations of the Study

Generally, the data gathering exercise was successful. However, getting access to the audited financial statements of GCB for the 1980s and 1990s was quite difficult as lots of documents had to be combed through. It took the researcher more than a month just to retrieve the hard copies of the fourteen year audited financial statements as there were no soft copies available. These hard copies of the financial statements were not allowed to be taken out of the bank's research library and the only photocopier available at the time was broken down. Relevant pages of the financial reports were indicated to the library assistant with some money for photocopy outside the bank which was very costly.

Time was also a major constraint in this study. As a result of limited time within which to complete this work and unavailability of data for the same period from other banks, only Ghana

Commercial Bank was used as a case. There was therefore the likelihood that some issues regarding the topic might not come up if those issues are peculiar to other banks which were not covered in the study.

Another major constraint was the inability to sample data for the 1980s and 1990s from other commercial banks. This was not possible because most of these commercial banks have no research library where a researcher could go for information and where there are some forms of library; they are not opened to the public and therefore difficult to access information.

Again, the nature of the presentation of the financial statements especially for the pre-FINSAP period made it difficult to compute the Net Interest Margin (NIM). All the figures in the operating expenses on the income statement had been put together with very limited notes for explanations. As a result, no computation, analysis and comparisons were made for net interest margin (NIM) in the pre and post FINSAP periods.

As a measure to these limitations, a fourteen year period; beginning from 1980 to 1987 for the pre reforms and 1990 to 1997 for the post reforms were used to gather sufficient evidence to come out with the results of the study. The time was also managed judiciously to achieve the objectives of the study. These challenges, however, did not affect the results and limit the findings of the study.

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CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

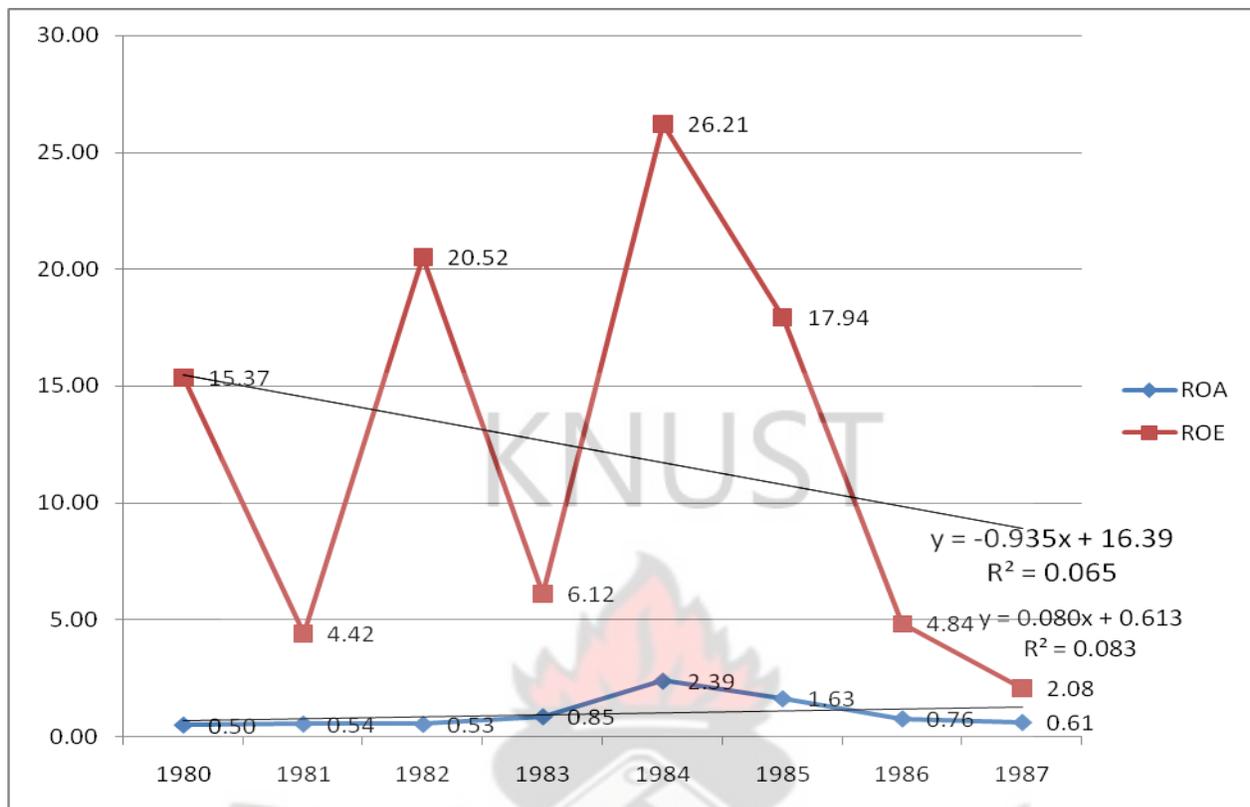
4.1 Introduction

This chapter focuses on the analysis of the data for the study as well as the discussion of the findings. The results of the findings have been analyzed using the Earnings and Profitability component of the CAMELS framework. The measures used were Return on Asset (ROA) and Return on Equity (ROE) which were subjected to trend analysis, followed by the regression analysis to establish the relationship between the earnings of the independent variables and finally the independent t-test to compare the pre and post FINSAP performances of the bank.

4.2 Trend Analysis of Earnings and Profitability Ratios

The earnings and profitability of a financial institution relates to among others, its ability to persistently generate income to increase its own funds and reserves and also settle its debt obligations. The tools for assessing bank earnings and profit levels include return on asset (ROA), return on equity (ROE) and net interest margin (NIM). According to Al-Shamrari and Salimi (1998), profitability ratio, especially ROA signals the earning capability of the organization. They also suggest that higher return on assets ratio is appreciable as it is the primary indicator of banks' profitability and functional efficiency. The results in figures 4.1 and 4.2 show the ratios over a 14 year period on the trend of the bank's earnings.

Fig 4.1: Trend of ROA and ROE of GCB for the Pre-FINSAP Period (1980 – 1987)



Source: Author's computation from Annual Audited Financial Statements, 1980 - 1987

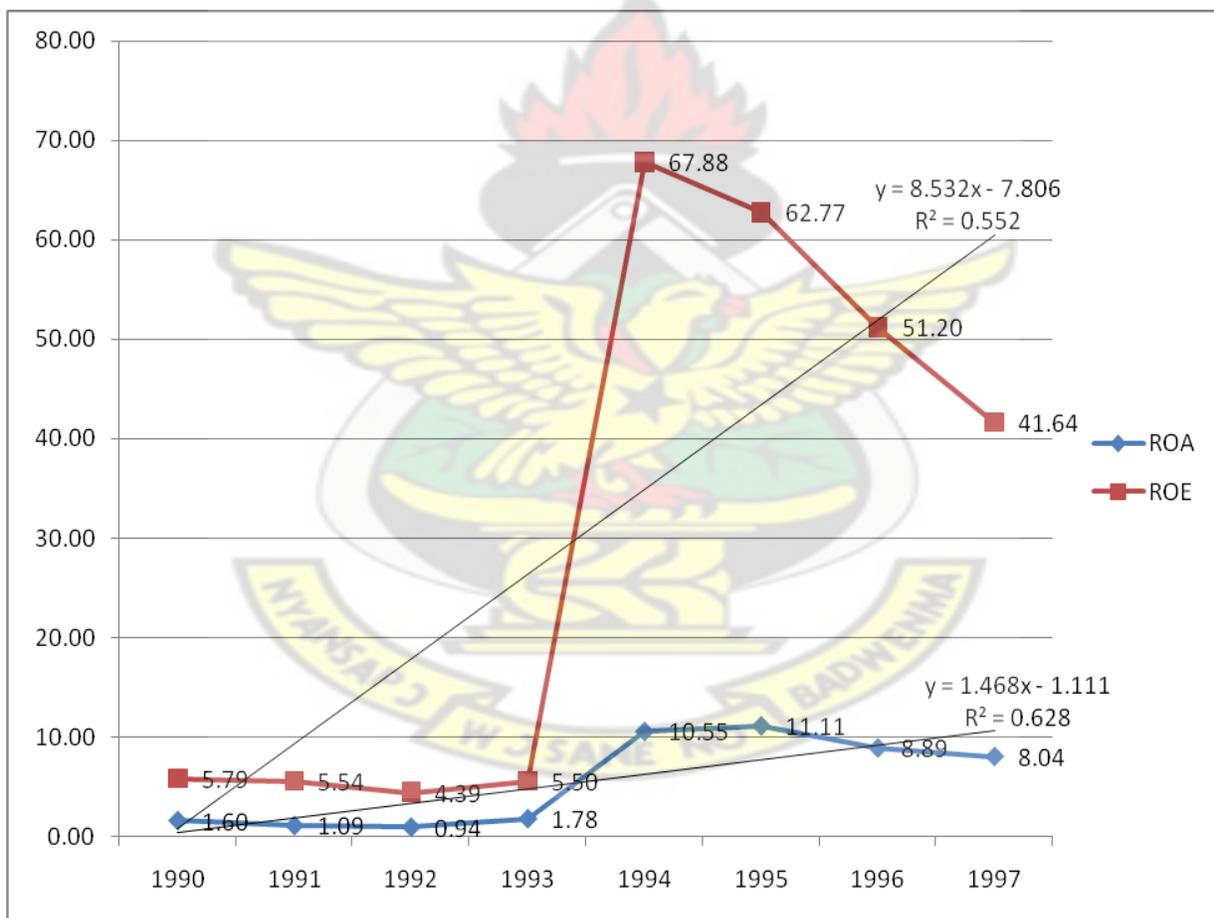
The results in Fig 4.1 revealed that during the pre-FINSAP period, the ROE showed an annual decrease of 93.5%. It can be observed that ROE increased from 15.37 in 1980 to an all time high of 26.21% in 1984 and there after decreased to a low of 2.08% in 1987. The persistent fall in the return on equity ratio signifies the tendency for the management of the bank to intensify their adventure to take more risk after observing the financial deterioration (Čihák and Schaeck, 2007).

The ROA on the other hand was constant for the first four years and increased marginally to 2.39% in 1984 at the same time that ROE witnessed an all time high of 26.21%.

The rate of increase in the ROA was about 8% and just about 8.36% of the changes in the ROA could be attributed to the changes in the years.

The downward trend in profitability as indicated by the ROE was partly due to the high operating cost mostly from infrastructural and staff costs; high non-performing assets due to macroeconomic instability particularly the depreciation of the cedi leading to high loan default; increase in the asset base of the bank from ₵4.1 trillion in 1980 to ₵24.5 trillion in 1987.

Fig 4.2: Trend of ROA and ROE of GCB for the Post-FINSAP Period (1990 – 1997)



Source: Author’s computation from Annual Audited Financial Statements, 1990 - 1997

Fig 4.2 shows that the trend for ROA and ROE for the post-FINSAP period. During the post-FINSAP period, the ROE showed a positive trend. It increased from 5.79% in 1990 to 67.88% in 1994. It however, decreased thereafter to 41.64% by 1997. The average annual rate of increase for the period was 8.532. The return on asset (ROA) also showed a positive trend increasing from 1.60% in 1990 to 10.55% in 1994 with an average annual rate of increase of 1.468 for the period. Both ROA and ROE were almost constant for the first four (1990 – 1993) years of the period.

4.3 Regression Analysis of Earnings and Profitability Ratios

The analysis of the regression of the earnings and profitability of Ghana Commercial Bank is made with the view to establishing the relationship that existed between the return on asset, the return on equity and the independent variables.

4.3.1 Regression Analysis of pre-FINSAP Return on Asset

The results for the study indicated that there was a positive relationship between pre-FINSAP ROA and its predictors by 51.8% whilst only 26.8% of the changes in the ROA could be attributed to the changes in the variables. This means that 73.2% in the ROA could not be explained by the changes in the variables.

The test of significance (F-test) for the regression model yielded $F = 0.489$, $df = 3, 4$ and $p > 0.05$. This means that at 0.05 level, the regression model was not significant in establishing a relationship between Ghana Commercial Bank's pre-FINSAP ROA and its factors.

Table 4.1: Test results of regression model for relationship between Pre-FINSAP ROA and its factors.

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.869	3	.290	.489	.708 ^a
	Residual	2.370	4	.592		
	Total	3.239	7			

a. Predictors: (Constant), Inflation, Prate, Tbill

b. Period = Pre-FINSAP

c. Dependent Variable: ROA

From the results in Table 4.2, the regression model for pre-FINSAP ROA can be derived as: $\text{Pre-FINSAP ROA} = -1.668 - 1.650\text{TBILL} + 1.737\text{PRATE} - 0.013\text{INFLATION}$.

The Treasury Bill rate variable in the regression model measures the minimum return to the bank from investing in risk free assets. When the treasury bill rates increase, and the bank has a large amount of its earning assets in government bills, all other things being equal, it will result in an increase in the bank's profitability and vice versa. Thus an increase in treasury bill rates impact positively on profitability. The coefficient of this variable in the regression model had a negative impact on ROA and it was also not statistically significant.

The prime lending rate is the minimum rate at which the Bank of Ghana lends to the commercial banks. Increase in the prime lending rate would influence the bank to increase its base rate which is the minimum rate at which customers borrow. However, increment in prime lending rate might not directly increase cost of funds with its subsequent decrease in profitability

as banks do not borrow from the bank of Ghana. Depending on a bank's reliance on Bank of Ghana, increase/decrease in the prime lending rate might not directly affect the cost of funds and its resultant decrease/increase in profitability. The regression coefficient of this variable was however positive but not significant at 0.05 level.

The inflation variable which measures the general level prices in the economy has a direct relationship with treasury bill rate. Higher rate of inflationary levels are compensated for by higher levels of returns from treasury bills and subsequently higher profit levels all other things remaining equal. The coefficient from the regression model had a negative impact on pre-FINSAP ROA but insignificant at 0.05 level.

Table 4.2: Regression Coefficients for relationship between Pre-FINSAP ROA and its factors

Coefficients^{a,b}

Model	Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	-1.668	2.896	-.576	.595
TBILL	-1.650	1.712	-.963	.390
PRATE	1.737	1.781	.975	.385
INFLATION	-.013	.011	-1.154	.313

a. Period = Pre-FINSAP

b. Dependent Variable: ROA

Thus from Table 4.2, the significant values for the predictors were greater than 0.05 level and therefore these predictors were not significant for the pre-FINSAP ROA and that other

factors affected the ROA. This means the regression model was not a major driver of the pre-FINSAP ROA.

4.3.2 Regression Analysis of pre-FINSAP Return on Equity

The study also revealed that there was a strong positive relationship between pre-FINSAP ROE and its factors by 81.8% and that 66.9% of the changes in the ROE was attributed to the changes in the variables.

Table 4.3: Test results of regression model for relationship between Pre-FINSAP ROE and its factors.

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	376.277	3	125.426	2.693	.181 ^a
	Residual	186.299	4	46.575		
	Total	562.577	7			

a. Predictors: (Constant), Inflation, Prate, Tbill

b. Period = Pre-FINSAP

c. Dependent Variable: ROE

The test of significance (F- test) yielded $F = 2.693$, $df = 3, 4$ and $p > 0.05$. At 0.05 level, the regression model was not significant in establishing a relationship between Ghana Commercial Bank's pre-FINSAP ROE and its predictors.

Table 4.4: Regression Coefficients for relationship between Pre-FINSAP ROE and its factors

Coefficients^{a,b}

Model	Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	8.412	25.673	.328	.760
TBILL	-19.686	15.182	-1.297	.265
PRATE	19.292	15.795	1.221	.289
INFLATIO N	-.205	.097	-2.108	.103

a. Period = Pre-FINSAP

b. Dependent Variable: ROE

From Table 4.4, the regression model for pre-FINSAP ROE can be derived as follows:

$$\text{Pre-FINSAP ROE} = 8.412 - 19.686\text{TBILL} + 19.292\text{PRATE} - 0.205\text{INFLATION}$$

The coefficients of the variables; treasury bills rate, prime lending rate and inflation from the regression model impacted negatively, positively and negatively respectively on the pre-FINSAP ROE. The results also showed that all the predictors of the pre-FINSAP ROE were not significant at 0.05 level, and that the model was not major factor that affected the pre-FINSAP ROE.

4.3.3 Regression Analysis of post-FINSAP Return on Asset

The results for the post-FINSAP ROA showed that there was a higher positive relationship between GCB's profitability and its predictors by 79.1% and that just about 34.5% of the variability in this profitability could be explained by the predictors.

Table 4.5: Test results of regression model for relationship between Post-FINSAP ROA and its factors.

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.269	3	30.090	2.231	.227 ^a
	Residual	53.939	4	13.485		
	Total	144.208	7			

a. Predictors: (Constant), Inflation, Prate, Tbill

b. Period = Post-FINSAP

c. Dependent Variable: ROA

The test of significance (F-test) for the regression model yielded $F = 2.231$, $df = 3, 4$ and $p > 0.05$. That is at 0.05 level, the regression model was not significant in establishing a relationship between post-FINSAP ROA and its factors.

Table 4.6: Regression Coefficients for relationship between Post-FINSAP ROA and its factors

Coefficients^{a,b}

Model		Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-13.437	9.872	-1.361	.245
	TBILL	-5.335	5.096	-1.047	.354
	PRATE	5.669	5.249	1.080	.341
	INFLATIO N	.142	.101	1.400	.234

a. Period = Post-FINSAP

b. Dependent Variable: ROA

The regression model for the post FINSAP ROA can be derived from Table 4.6 as:

$$\text{Post-FINSAP ROA} = -13.437 - 5.335\text{TBILL} + 5.669\text{PRATE} + 0.142\text{INFLATION}.$$

The coefficients of the variables; prime lending rate and inflation in the regression model had positive impact on GCB's post-FINSAP ROA. However, the coefficient of the treasury bill rate variable impacted negatively on the post-FINSAP profitability and the independent variables were not statistically significant at 0.05 level.

4.3.4 Regression Analysis of post-FINSAP Return on equity

The post-FINSAP ROE results indicated that Ghana Commercial Bank's profitability also showed a higher positive relationship with its predictors by 75.5% and about 57% of the variability in this profitability could be explained by the changes in the predictors.

Table 4.7: Test results of regression model for relationship between Post-FINSAP ROE and its factors.

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3155.491	3	1051.830	1.771	.292 ^a
	Residual	2375.971	4	593.993		
	Total	5531.462	7			

a. Predictors: (Constant), Inflation, Prate, Tbill

b. Period = Post-FINSAP

c. Dependent Variable: ROE

The test of significance (F-test) for the regression model yielded $F = 1.771$, $df = 3, 4$ and $p > 0.05$. That is at 0.05 level, the regression model was not significant in establishing a relationship between the post-FINSAP ROE and its factors.

Table 4.8: Regression Coefficients for relationship between Post-FINSAP ROE and its factors

Coefficients^{a,b}

Model	Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	-89.689	65.518	-1.369	.243
TBILL	-38.606	33.824	-1.141	.317
PRATE	40.693	34.836	1.168	.308
INFLATIO N	.839	.672	1.248	.280

a. Period = Post-FINSAP

b. Dependent Variable: ROE

From Table 4.8, the regression model for the post-FINSAP ROE can be derived as:

$$\text{Post-FINSAP ROE} = -89.689 - 38.606\text{TBILL} + 40.693\text{PRATE} + 0.839\text{INFLATION}.$$

With the exception of the treasury bill rate variable in the regression model which impacted negatively on GCB's post-FINSAP profitability or ROE, the other two variables showed a positive impact on the profitability.

The results further indicated that all the factors were not predictive of the Ghana Commercial Bank's post-FINSAP ROE since the t-statistics were not significant at the 0.05 level and that the positive relationship of the profitability with their predictors may be due to chance.

4.4 Performance Comparison of the Pre and Post FINSAP

The results in Table 4.9 showed the summary of the independent t-test that was used to compare the pre and post-FINSAP performance of the selected variables that impacted on Ghana Commercial Bank's Earnings and Profitability.

Table 4.9: Summary of the Independent t-test result for the Pre and Post FINSAP

Variables	Period	Mean	Std. Dev.	N	df	Sig.(p-value)
ROA	PRE	0.9763	0.68025	8	14	0.015
	POST	5.5000	3.53885			
ROE	PRE	12.1875	8.96482	8	14	0.100
	POST	30.5887	28.11065			
TBILL	PRE	16.219	4.3945	8	14	0.001
	POST	32.475	10.2047			
PRATE	PRE	17.312	4.2083	8	14	0.001
	POST	33.125	9.8950			
INFLATION	PRE	53.400	42.7259	8	14	0.186
	POST	31.038	15.6939			

The ROA averaged 0.98 in the pre-FINSAP period but this increased to 5.5 in the post-FINSAP (Table 4.9). This means that there was a significant difference in the ROA for the pre and post FINSAP periods ($df = 14, p > 0.05$). Thus the ROA for GCB was significantly better after the FINSAP intervention compared to the period preceding the intervention.

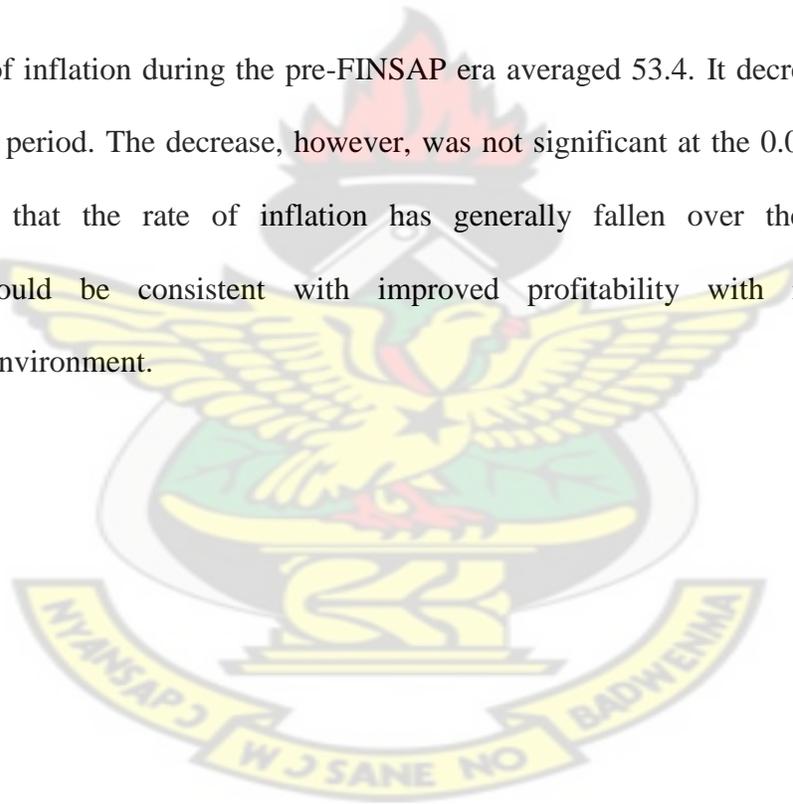
This also confirms the study by Antwi-Asare and Addison, (2000), in which a t-test for the difference between means was used to assess whether there were significant changes in selected variables between the financial repression (1980-86) and financial reforms (1990-96) periods. Return on asset (ROA) and return on equity (ROE) were some of the variables used to study profitability, intermediation, liquidity and operational efficiency. Their findings were that Profitability of banks had increased after the reforms and that bank profits came from holding secondary reserves and other securities where returns on investment were higher than on advances. Again, Keeton and Matsunaga, (1985) found that ROA was useful in measuring changes in bank performance over time since banks' income and expense components are more closely related to assets.

The ROE which averaged 12.19 in the pre FINSAP period increased to 30.59 in the post FINSAP period. However, this difference in ROE was not significant at the 0.05 level ($df = 14$, $p > 0.05$). This, however go contrary to the results by Civelek and Al-Alami, (1991) that found ROA to be statistically very inferior and justified the relative superior performance of ROE on the basis that it reflects the efforts of managers interested in maximizing shareholders' wealth.

The Treasury bill rate in the pre-FINSAP period averaged 16.22 and it doubled to 32.48 in the post-FINSAP period. The difference, however, was significant at the 0.05 level ($df = 14$, $p < 0.05$). The increment impacted positively on the earnings and profitability of Ghana Commercial Bank as large amount of its earning assets were in government bills.

Also the Bank of Ghana prime rate on the other hand averaged 17.31 and this almost doubled to 33.13 in the post-FINSAP era. Increase in the central bank lending rate had significant impact on profitability at 0.05 level ($df = 14, p < 0.05$). That is as the central bank rate increase, profitability also increase to confirm the notion that higher central bank rates would result in higher profits. A careful analysis of the relationship between the prime lending rates and the bank base rates indicate that banks usually pass on a higher portion of the increases in the prime lending rate to the borrowers.

The rate of inflation during the pre-FINSAP era averaged 53.4. It decreased to 31.04 in the post-FINSAP period. The decrease, however, was not significant at the 0.05 level ($df = 14, p > 0.05$). Giving that the rate of inflation has generally fallen over the periods under consideration would be consistent with improved profitability with improvement in macroeconomic environment.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary of the findings of the study as well as the conclusions and recommendations that give implications of the findings.

5.2 Summary

The objective of the study was to analyze the effects of interest rate liberalization on bank profitability. Ghana Commercial Bank Limited was specifically set out as a case study to analyze the trend of its profitability before and after the Financial Sector Adjustment Program (FINSAP).

The relevant literature on interest rate liberalization and its implication on bank profitability as well as some aspects of the CAMELS framework, a tool by IMF for assessing the financial soundness of banks were reviewed for the study.

A secondary data based on a fourteen year (1998 – 1987 and 1990 – 1997) audited financial statements of Ghana Commercial Bank Limited for pre and post FINSAP periods were used. A statistical method, specifically a regression analysis was used to assess the direction of the impact of the financial liberalization and determined whether the changes between the two periods have been significant. The analysis of the results of the data based on the earnings and profitability component of the CAMELS framework was done.

The results of the findings from the trend and regression analysis showed that return on asset (ROA) which measures the management efficiency in using the bank's resources to generate revenue, during the pre reforms era were not stable while return on equity (ROE) showed a negative trend. Thus Ghana Commercial Bank's profitability before the intervention had been dropping. The independent variables were not statistically significant at 0.05 level in determining the impact of the reforms on GCB's profitability even though these variables showed positive relationship.

The return on asset (ROA) and return on equity (ROE) after the intervention showed an appreciable level of improvement and for that matter GCB's profitability. The results of the regression analysis revealed that the independent variables had a positive relationship with GCB's profitability but these variables or predictors were not statistically significant at 0.05 level. This means that the relationship between the GCB's profitability and its predictors after the intervention was due to chance.

The summary of the independent t-test revealed that with the exception of return on equity and the rate of inflation which were insignificant at 0.05 level ($df = 14, p > 0.05$), the return on asset, the central bank lending rate and the treasury bill rates were significant at 0.05 level ($df = 14, p < 0.05$).

5.3 Conclusion

It is evident from the findings of the study that Ghana Commercial Bank's Earnings and Profitability as represented by Return on Asset (ROA) and Return on Equity (ROE) improved significantly after the reforms. The reason for the improvement may also be attributed to the removal of non-performing assets from the bank's financial statements. The positive impact of the reforms on Ghana Commercial Bank's profitability also means that the intervention has been good and the bank is free to operate in the free market-based environment which has a multiplier effects on the other areas of the economy. It can also be concluded that the treasury bill rates, the central bank prime rate are significant drivers of Ghana Commercial Bank profitability. Indeed focusing and reengineering alongside these indicators could enhance GCB's profitability.

5.4 Recommendations

The following recommendations are made based on the findings:

Stable Macroeconomic Environment

A precondition for the efficiency of a deregulated financial sector is a stable macroeconomic environment during the time of financial sector reforms. Thus in order to ensure to ensure effective financial development, the government should stabilize the macroeconomic environment. This will create an environment conducive to financial deepening and savings mobilization.

Development of Monetary Policies to Complement Government Fiscal Policies

The role of monetary policy in stabilizing macroeconomic variables has been hampered by the government fiscal policy of deficit financing. It is therefore essential to ensure that

government fiscal policies are designed to complement monetary policies. This will ensure harmony of monetary and fiscal policy and restore domestic and international confidence in the banking system.

Interest Rate Policies must be freed from Governmental influences

The central bank must have a reasonable degree of independence in the conduct of monetary policy. In particular, interest rate policy must be freed from governmental influences so that it can be employed effectively in response to actual or anticipated developments in the monetary situation and the rate of inflation.

Development of Long Term Credit facilities

The findings from the study generally point to improvement in profitability of Ghana Commercial Bank Ltd after the intervention. At the macro level, the high levels of inflation, the depreciation of the domestic currency, high reserve requirements on deposits and the slow enforcement of legal guidelines for both banks and non-bank financial intermediaries by the Bank of Ghana are some of the problems still facing the banking system. The bank therefore has to find new approaches to play a leading role in some of the key sectors of the economy, especially agriculture and manufacturing. An exciting and financially attractive long-term credit facilities needs to be developed by the bank in order to build up a customer base in these two sectors.

Credit Financing

To sustain the current level of progress in its profitability performance after the reforms, Ghana Commercial Bank should consider financing the credit needs of particular sectors of the economy through the issuing of special long-term bonds for sale on the Ghana Stock Exchange. Through this means, the Bank could mobilize more funds and be able to increase long-term lending.

Diversification into new products and services

The bank could also take part in debates and discussions on issues relating to the macroeconomic environment in order to have an input in decisions that might eventually affect the bank's performance in many ways than one. The bank will need to diversify into new products and services, and find new sources of fee-based income.

Supervision and Monitoring of Credit

The bank also needs to take the monitoring and supervision of borrowers more seriously. It is also recommended that Ghana Commercial Bank as part of its loan packages, should assist borrowers with some expertise (in consultancy, managerial or technical advice), in order to ensure that the enterprise concerned will perform as expected and thereby reduce the non-performing loans further from its balance sheet.

Quality Services

There is the need for Ghana Commercial bank to adopt high professional standards, prompt attention to depositors' needs and shortening the time it takes to withdraw or deposit

funds in order to reduce transaction costs. This can be done by hiring and training qualified staff and management team.

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GHANA COMMERCIAL BANK LIMITED								
INCOME STATEMENTS FOR THE SEVEN YEAR PERIOD ENDED 30TH JUNE 1987								
	1980	1981	1982	1983	1984	1985	1986	1987
	¢'000	¢'000	¢'000	¢'000	¢'000	¢'000	¢'000	¢'000
TURNOVER	-	-	-	339,910	1,126,770	1,968,687	4,198,587	7,339,663
Net Profit for the year	20,338	25,782	35,198	71,092	544,313	583,645	500,045	756,473
Less Provision for tax	11,500	12,500	19,500	42,555	324,146	399,990	381,200	704,713
	8,838	13,282	15,698	28,537	220,167	183,655	118,845	51,760
Transfer to Reserve Fund								
Section 9(3) of GCB Decree 1972	5,085	6,465	4,000	7,117	109,265	91,594	65,392	23,321
Section 13 of GCB Decree 1972	1,615	1,535	1,000	12,883	5,735	8,406	5,000	5,000
Other Funds	-	-	-	13	174	184	5,256	904
	6,700	8,000	5,000	20,013	115,174	100,184	75,648	29,225
Net Profit transferred to income surplus	2,138	5,282	10,698	8,524	104,993	83,471	43,197	22,535
Balance b/fwd	1,180	1,318	1,599	2,298	50,822	5,815	9,286	2,483
Add Prior year adjustment	-	-	-	270,000	-	-	-	(3,074)
	1,180	1,318	1,599	272,298	50,822	5,815	9,286	(591)
Net profit for the year transferred from P&L	2,138	5,282	10,698	8,524	104,993	83,471	43,197	22,535
	3,318	6,599	12,297	280,822	155,815	89,286	52,483	21,944
Transfer from general reserves	2,000	5,000	-	-	-	-	-	-
	5,318	11,599	12,297	280,822	155,815	89,286	52,483	21,944
Less Distribution to Sharholders								
Proposed first and final dividend	2,000	5,000	5,000	5,000	20,000	30,000	50,000	20,000
Bonus share issued	2,000	-	5,000	225,000	130,000	50,000	-	-
Capitalisation of Reserves	-	5,000	-	-	-	-	-	-
	4,000	10,000	10,000	230,000	150,000	80,000	50,000	20,000
Balance c/fwd per balance sheet	1,318	1,599	2,297	50,822	5,815	9,286	2,483	1,944

APPENDIX 2: GCB BALANCE SHEET

GHANA COMMERCIAL BANK LIMITED								
BALANCE SHEET THE SEVEN YEAR PERIOD AT 30TH JUNE 1987								
	1980	1981	1982	1983	1984	1985	1986	1987
	¢000	¢000	¢000	¢000	¢000	¢000	¢000	¢000
CURRENT ASSETS								
Cash in hand & Cash Balances with BOG	1,154,302	1,502,109	2,141,519	2,605,358	6,107,555	8,074,121	10,430,145	14,602,422
Cash in Transit and Balances with other Banks	477,784	211,401	831,775	69,679	922,055	4,338,139	2,562,392	4,467,980
Short Term Investment at cost	494,323	371,705	686,133	634,843	290,323	1,022,615	1,092,752	1,477,671
Securities of Bank of Ghana & other Govt	434,823	493,776	980,568	1,580,000	1,550,000	1,800,000	3,100,000	3,190,000
Other investment at cost	9,458	9,458	18,145	14,133	14,310	27,799	191,690	65,147
Advances, Loans and other accounts	1,307,553	2,026,001	1,811,346	3,136,312	11,212,582	13,514,842	12,787,078	20,799,758
Other Accounts	-	-	-	-	-	-	18,520,430	57,733,414
Liabilities of customers for confirmed credits, bonds	192,044	128,417	150,907	198,589	2,471,045	6,643,105	14,945,392	19,473,005
TOTAL CURRENT ASSETS	4,070,287	4,742,867	6,620,394	8,238,914	22,567,870	35,420,621	63,629,879	121,809,397
Fixed Assets								
	33,828	54,290	72,576	88,731	165,969	418,117	2,086,137	2,713,066
TOTAL CURRENT ASSETS	4,104,115	4,797,157	6,692,970	8,327,645	22,733,839	35,838,738	65,716,016	124,522,463
Deposits, Savings & other accounts including	3,850,553	4,597,940	6,460,565	7,753,939	19,672,509	28,141,693	48,265,866	102,539,639
Proposed first & Final Dividend	4,000	5,000	5,000	5,000	20,000	30,000	50,000	20,000
liability on behalf of customers	192,044	128,417	150,907	198,589	2,471,045	6,643,105	14,945,392	19,473,005
TOTAL CURRENT LIABILITIES	4,046,597	4,731,358	6,616,472	7,957,528	22,163,554	34,814,798	63,261,258	122,032,644
NET ASSETS	57,518	65,799	76,497	370,117	570,285	1,023,940	2,454,758	2,489,819
Stated Capital	35,000	40,000	45,000	270,000	400,000	750,000	1,200,000	2,000,000
Capital Surplus	-	-	-	-	-	-	911,974	111,974
Reserve Fund	21,200	23,965	27,965	35,082	144,347	235,941	301,332	324,653
General Reserve	-	235,055	1,235	14,118	19,853	28,259	33,259	38,259
Other Reserves	-	-	-	96,000	270,000	454	5,710	12,989
Income surplus	1,318	1,599	2,297	50,821	5,815	9,286	2,483	1,944
TOTAL NET ASSETS	57,518	300,619	76,497	466,021	840,015	1,023,940	2,454,758	2,489,819

APENDIX 3: GCB INCOME STATEMENT (1990-1997)

GHANA COMMERCIAL BANK LIMITED								
INCOME STATEMENTS FOR THE SEVEN YEAR PERIOD ENDED 31st DECEMBER 1997								
	1990	1991	1992	1993	1994	1995	1996	1997
	¢'000	¢'000	¢'million	¢'million	¢'million	¢'million	¢'million	¢'million
Interest Income	22,790,263	28,566,415	25,805	41,164	56,797	84,518	122,200	157,028
Interest Expense	10,262,820	12,026,041	11,366	17,706	22,839	38,400	69,401	89,377
Net Interest Income	12,527,443	16,540,374	14,439	23,458	33,958	46,118	52,799	67,651
Commissions and fees	2,885,485	3,319,510	3,931	5,508	7,830	13,398	25,112	27,807
Other Operating Income	4,724,635	2,606,207	3,217	1,357	41,641	40,854	34,441	39,901
TOTAL INCOME	20,137,563	22,466,091	21,587	30,323	83,429	100,370	112,352	135,359
Provision for Bad & Doubtful Debts	6,963,080	9,608,735	6,004	388	10,241	754	6,912	12,475
Provision for Contingent Liabilities	624,276	291,662	-	2,942	2,191	1,370	196	197
Operating Expenses	8,465,248	9,064,740	12,462.00	16,454	19,951	37,615	42,994	58,332
Net Operating Profit	4,084,959	3,500,954	3,121	10,539	51,046	62,139	62,642	64,749
Other Income	1,044	47,195	44	64	(13)	37	115	84
Profit before Tax	4,086,003	3,548,149	3,165	10,603	51,033	62,176	62,757	64,833
Taxation	2,060,000	1,189,846	825	5,777	17,761	25,782	22,318	22,524
	2,026,003	2,358,303	2,340	4,826	33,272	36,394	40,439	42,309
Extra Ordinary Item	-	-	-	-	-	6,185	-	-
Profit after Tax	2,026,003	2,358,303	2,340	4,826	33,272	42,579	40,439	42,309
Dividend	-	500,000	1,000	2,100	5,000	13,200	16,500	19,775
Transfer to Statutory Reserve Fund	-	-	-	-	-	-	5,055	5,289
Transfer to Income Surplus	2,026,003	1,858,303	1,340	2,726	28,272	29,379	18,884	17,245

APPENDIX 4: GCB BALANCE SHEET

GHANA COMMERCIAL BANK LIMITED								
BALANCE SHEET THE SEVEN YEAR PERIOD AT 31ST DECEMBER								
1997								
	1990	1991	1992	1993	1994	1995	1996	1997
	¢000	¢000	¢million	¢million	¢million	¢million	¢million	¢million
ASSETS								
Cash and Short term funds	128,432,253	138,633,434	112,465	232,216	41,117	76,053	179,934	74,070
Investments	76,499,610	123,133,964	116,306	264,194	159,161	202,128	229,920	267,864
Investments in London	-	-	-	-	168,529	133,716	122,326	172,316
Loans and Advances	19,157,449	22,626,539	43,507	50,017	28,554	37,556	90,434	204,161
Other Assets Account	27,133,094	35,977,981	59,496	43,034	54,973	75,745	49,188	52,915
	251,222,406	320,371,918	331,774	589,461	452,334	525,198	671,802	771,326
Investments in subsidiaries	145,700	346,982	1	1	1	1	1	1
Fixed Assets	4,676,072	5,073,627	6,653	7,045	31,203	34,681	34,378	35,112
TOTAL ASSETS	256,044,178	325,792,527	338,428	596,507	483,538	559,880	706,181	806,439
LIABILITIES								
Deposits and current accounts	161,657,239	227,643,231	208,650	425,684	260,444	359,253.00	511,183.00	555,607.00
Creditors and Accruals	59,405,368	55,608,109	76,509	83,148	164,900	116,898	92,707	135,021
Provision for Liabilities and charges	-	-	-	-	9,177	15,899	23,316	9,198
Borrowings	-	-	-	-	-	-	-	5,000
TOTAL LABILITIES	221,062,607	283,251,340	285,159	508,832	434,521	492,050	627,206	704,826
Stated Capital	2,000,000	2,500,000	3,500	5,000	20,000	20,000	20,000	20,000
Capital Surplus	72,291	72,291	72	72	3,761	3,754.00	3,753	3,970
Share Deals	-	-	-	-	-	-	-	887
Exchange Reserve	17,990,248	23,794,708	33,183	64,863	-	-	-	-
Income surplus	14,919,032	16,174,188	16,514	17,740	25,256	44,076	55,222	76,756
SHAREHOLDERS FUNDS	34,981,571	42,541,187	53,269	87,675	49,017	67,830	78,975	101,613
Total Liabilities and Shareholders' Funds	256,044,178	325,792,527	338,428	596,507	483,538	559,880	706,181	806,439

APPENDIX 5: EARNINGS & PROFITABILITY RATIOS (PRE-FINSAP PERIOD)

	1980	1981	1982	1983	1984	1985	1986	1987
	%	%	%	%	%	%	%	%
ROA	0.50	0.54	0.53	0.85	2.39	1.63	0.76	0.61
ROE	15.37	4.42	20.52	6.12	26.21	17.94	4.84	2.08

Source: Author's computation from Annual Audited Financial Statements (1980-1987)

$$\text{ROA} = \frac{\text{Net Profit before Tax}}{\text{Total Assets}} \times 100$$

$$\text{ROE} = \frac{\text{Profit after Tax}}{\text{Total Shareholders' Funds}} \times 100$$

APPENDIX 6: EARNINGS & PROFITABILITY RATIOS (POST-FINSAP PERIOD)

	1990	1991	1992	1993	1994	1995	1996	1997
	%	%	%	%	%	%	%	%
ROA	1.60	1.09	0.94	1.78	10.55	11.11	8.89	8.04
ROE	5.79	5.54	4.39	5.50	67.88	62.77	51.20	41.64

Source: Author's computation from Annual Audited Financial Statements (1990-1997)

APPENDIX 7: INDEPENDENT VARIABLES (Pre-FINSAP)

Year	91-day T'bills rate (%)	Central Bank rate (%)	Inflation (%)
1980	12.0	13.5	50.2
1981	18.25	19.5	116.5
1982	9.5	10.5	22.3
1983	13.0	14.5	122.8
1984	16.75	18.0	39.7
1985	17.75	18.5	10.3
1986	19.75	20.5	25.6
1987	22.75	23.5	39.8

Source: Bank of Ghana Reports (Various Issues)

APPENDIX 8: INDEPENDENT VARIABLES (Post-FINSAP)

Year	91-day T'bills rate (%)	Central Bank rate (%)	Inflation (%)
1990	27.5	28	37.2
1991	18.0	19.5	18.1
1992	25.4	26	10.1
1993	32.0	32.5	25.0
1994	29.5	30.5	24.9
1995	33.0	33.5	58.5
1996	48.1	48.5	46.6
1997	46.3	46.5	27.9

Source: Bank of Ghana Reports (Various Issues)