THE DETERMINANTS OF RURAL BANK PROFITABILITY

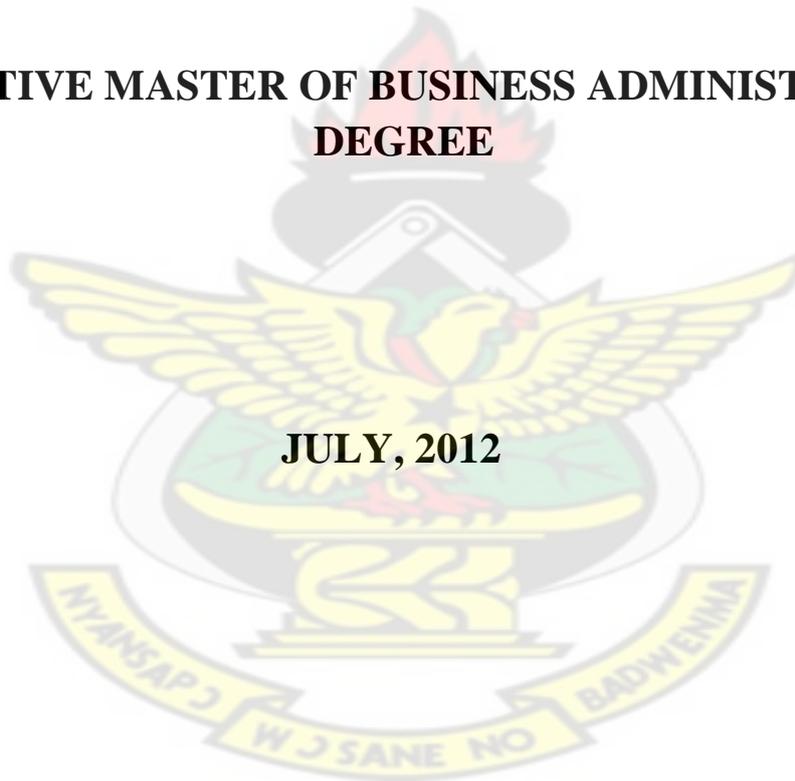## By

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DECLARATION

I hereby declare that this submission is my own work towards the award of the Commonwealth Executive Masters in Business Administration (CEMBA) and that to the best of my knowledge, it contains no material previously published by another person or any material which has been accepted for the award of any degree of the University, except where due acknowledgement has been made in the text.

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DEDICATION

This research work is dedicated to my dear wife Bernice Gefli and my entire

family for the love, support and understanding through the study of this course.

ABSTRACT

The aim of this study sought to examine the determinants of RCB's financial profitability. The assessment was on internal factors and external factors.

The study used mainly secondary data extracted from the annual financial statement of the selected banks. The study used a panel data with two hundred observations, where it looked at the period 2006 – 2010 for fifty rural banks in Ghana.

The empirical results reveal some interesting evidence on the determinants of RCB's profitability. The findings suggest that the size of the RCB's assets and increased non-interest income, are the internal factors that affect rural bank profitability, whiles GDP and the growth of money supply are external factors that affect rural bank profitability. However, loan loss provisions, total overhead expenses and inflation negatively affected rural bank performance.

It is recommended that it might be necessary for bank management to take all the required decisions as to the proportion of their assets they will want to hold to enhance the financial positions of the bank. Again government should ensure a stable economic growth that could translate into rural bank profitability

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CHAPTER ONE

INTRODUCTION

1.1   Background of the study

The Banking system touches the lives of millions and has to be inspired by a larger social purpose and has to sub serve national priorities and objectives such as rapid growth of agriculture, small industries and exports, raising of employment levels, encouragement of new entrepreneurs and development of backward areas. For this purpose it is necessary for the government to take direct responsibility for the extension and diversification of banking services in the rural community. Since their inception, rural banks have taken deep roots and have become a sort of inseparable part of the rural credit structure in Ghanaian banking system.

Ghana's economy can best be described as agrarian, with the agricultural sector contributing over 40 per cent of Gross Domestic Product (GDP) and employing almost 60 per cent of the nation's labour force. Peasant farmers who reside in the rural areas of Ghana produce about 90 per cent of the agricultural outputs. Also a majority of Micro and Small-Scale Enterprises (MSEs) are located in the rural economy. Consequently, over the years, a major concern of policy makers in Ghana has been the transformation of rural economies through effective and efficient rural financial intermediation.

In spite of the dominance of the rural sector in national economic development, financial intermediation in the rural areas of Ghana has been generally low. Before independence in 1957 banking facilities were virtually non-existent in the country. The few banks, which operated in Ghana a few decades after independence, were sited in the towns and cities. In the urban areas the major economic activity, commerce, offered good returns to the banks in the

form of profits. The banks were therefore attracted to only the big towns. The need for rural banking system became necessary because the bigger commercial banks were not able to accommodate the financial intermediation problems of the rural folks as they did not show any interest in dealing with these small-scale operators who are basically peasant farmers, petty traders, bakers, artisans etc .

Attempts in the past to encourage commercial banks to spread their rural network and provide credit to the agricultural sector failed to achieve the desired impact. The banks were rather interested in the finance of international trade, urban commerce and industry. There was therefore a gap in the provision of institutional finance to the rural agricultural sector.

More important still, the branch network of many banks cover mainly the commercial centres and big towns and does not reach the rural folks down in the rural areas. Therefore not only are rural dwellers denied access to credit from organized institutions, but also cannot avail themselves of the opportunity of safeguarding their money and other valuable property which a bank provides.

Thus these poor rural folks in the rural areas had no option than to resort to informal financial intermediaries for savings and credit delivery services. The agricultural sector, in particular, relied heavily on moneylenders for the supply of their credit needs at very high interest rates. Others relied on "susu" groups, which they had to join and be "forced" to save to enable them to access credit.

The rural banking concept was therefore introduced in 1976 by Bank of Ghana to fill the vacuum in the rural areas. The objective was mainly to create formal financial institutions in the rural areas to mobilise savings in those areas to help to finance rural economic activities and promote growth. Other formal and informal institutions like Financial Non Governmental

Organizations, Savings and Loans Companies; Credit Unions and 'Susu' schemes came to the fore by making rural credit available to rural dwellers.

Regarding the structure, the rural banks in Ghana are unit and community banks. They are community-owned and the share capital being raised by the people in the community. They are registered under the Companies Code of Ghana as a Limited Liability Company and licensed under the Banking Law of Ghana by the Central Bank, the Bank of Ghana. The Bank is governed by a Board of Directors elected by shareholders at an Annual General Meeting. In 1976, the first rural bank, the Nyakrom Rural Bank Limited was established at Agona Nyakrom in the Central Region.

Despite the invaluable financial services rendered in the rural areas, the rural banking concept is still gaining popularity with a number of rural communities applying to Bank of Ghana to establish rural banks. Therefore, the need to look at the banks' performance with reference to the operational efficiency in determining the financial health position.

Three main approaches will dominate the literature: the production approach, the intermediation approach and the operating approach. The first two approaches apply the traditional microeconomic theory of the firm to banking and differ only in the specification of banking activities. The final approach goes a step further and incorporates some specific activities of banking into the classical theory and thereby modifies it. Under the production approach, pioneered by Benston (1965), a financial institution is defined as a producer of services for account holders, that is, they perform transactions on deposit accounts and process documents such as loans. Hence, according to this approach, the number of accounts or its related transactions is the best measure for output, while the number of employees and physical capital are considered as inputs. However, the production approach might be more

suitable for branch efficiency studies, as at most times rural bank branches basically process customer documents and bank funding, while investment decisions are mostly not under the control of branches (Berger and Humphrey, 1997). The intermediation approach on the other hand, assumes that financial firms act as an intermediary between savers and borrowers and posits total loans and securities as outputs, whereas deposits along with labour and physical capital are defined as inputs (Sealey and Lindley, 1977). The operating approach (or income-based approach) view banks as business units with the final objective of generating revenue from the total cost incurred for running the business (Leightner and Lovell, 1998). Accordingly, it defines banks' output as total revenue (interest and non-interest income) and inputs as the total expenses (interest and non-interest expenses).

However, the cost and output measurements in banking are especially difficult because many of the financial services are jointly produced and prices are typically assigned to a bundle of financial services. An expense on management, a correlate of efficient management is a very important determinant of bank's profitability. In this context, Bourke (1989) and Molyneux and Thornton (1992) find that better-quality management and financial performance go hand in hand. The influence arising from ownership status of a bank on its profitability is another much debated and frequently visited issue in the literature. The proposition that privately owned institutions are more profitable, however, has mixed empirical evidence in favour of it. For instance, Barth et al. (2004) claim that government ownership of banks is indeed negatively correlated with bank efficiency. Furthermore, Bourke (1989) and Molyneux and Thornton (1992) found that ownership status is irrelevant in explaining profitability. While many of the above factors would be relevant, it would be instructive to scan the literature that has exclusively focused on Rural Community Banks (RCBs).

Over the years, RCBs, which are often viewed as the small man's bank, have taken deep roots and have become a sort of inseparable part of the rural credit structure. The mandate of promoting banking with a rural focus, however, would be an enduring phenomenon only when the financial health of the RCBs is sound with in-built restrictions on their operations. Expense management, ownership structure, equity ratio and asset quality not only affect the financial performance of RCB's, but also their ability to continue as a going concern, with bad loans and poor management systems contributing factors. This study thus seeks to investigate whether operational efficiency of RCB's affects their financial performance.

1.2   Problem Statement

A survey conducted by Price Waterhouse Coopers on the banking industry in 2010, showed that the industry profit before tax has declined from 30.4% in 2007 to 19.7% in 2009. The study noted that the total income of the industry more than doubled (from GH¢793 million in 2007 to GH¢1.5 billion in 2009) over the period. However the rapid deterioration of the industry's loan portfolio adversely impacted profit margins. Revelations from the survey showed that impairment charges for non-performing loans increased over the three year period, from GH¢ 60 million in 2007 to GH¢266 million in 2009.

Notable banks like United Bank of Africa (UBA), Barclays Bank Ghana Ltd (BBGL), Stanbic, Unique Trust, First Atlantic Merchant Bank and Banque Sahélo-Saharienne pour I'Investissement et le Commerce (BSIC Ghana Limited), were unable to was unable to recover cost form their operations and are thus categorized as the loss making group. In the light of the above, it is very crucial that critical attention is given to the performance of rural

banks so that attention of stakeholders will be turned towards those variables. There is no doubt that there are some rural banks that are not performing as expected.

1.3   Research Objectives

The main aim of this study is to examine the determinants of rural banks' profitability. The specific objectives of the study are as follows:

1. To assess the profitability of the selected rural banks from 2006 to 2010

2. To identify the determinants of rural bank profitability of selected rural banks

1.4   Research Questions

The study seeks to answer the following questions:

1. What is the trend in profitability of the selected rural banks from 2006 to 2010?

2. What are the determinants of rural bank profitability of selected rural banks?

1.5   Rationale for the Study

This study contributes to literature on financial performance in several forms. First of all, it provides additional evidence on the impact of operational efficiency on banks' financial performance to stimulate further academic studies on rural and community banks since it remains a greatly unexplored area in the country's academic discourse.

Again, the focus on rural banks makes the paper more unique since little seems to have been done on the area of banks in Ghana.

1.6   Scope and Limitation of Study

This research attempts to study the determinants of financial performance of fifty (50) rural and community banks in the Ghana. The study is to examine changes in financial performance and operating efficiency of RCB's and factors affecting those changes.

The generalization of research findings from this study may be limited by several factors such as the number and uniformity of the samples used for the study. The sample constitutes merely 50 rural banks situated in the country out of over 133 rural banks in the country. The number of observation varies between 50 rural and community banks for a certain statistical analysis and 250 observations for other analyses. This small number of sample, for instance, limits the detail analyses of the data. Limitation of the study is also related to the data regarding of the proxy for soft budget constraint.

1.7 Organization of Study

The study is structured into six chapters. The first chapter gives an introductory overview of the study. It considers the background to the study, the research problem, the research objective, rationale for the study, the scope and limitation as well as the organisation of the study.

Chapter two reviews existing knowledge and literature of the study. This includes materials from journals, magazines, financial reports of companies, and the Internet amongst others. Chapter three explains the research methodology and the estimation method to be used to analyze the data. Chapter four gives a brief overview of the Rural and Communities Banks in

Ghana. Chapter five deals with the analysis of the data collected and the discussion of the findings. Finally, chapter six weaves the discussion together into a conclusion based on findings drawn from the study.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

RCBs though operate with a rural focus are primarily scheduled commercial banks with a commercial orientation. Beginning with the seminal contribution of Haslem (1968), the literature probing into factors influencing performance of banks recognizes two broad sets of factors, *i.e.*, internal factors and factors external to the bank. The internal determinants originate from the balance sheets and/or profit and loss accounts of the bank concerned and are often termed as micro or bank-specific determinants of profitability. The external determinants are systemic forces that reflect the economic environment which conditions the operation and performance of financial institutions. A number of explanatory variables have been suggested in the literature for both the internal and external determinants. The typical internal determinants employed are variables, such as, size and capital [Akhavein *et al.* (1997), Demirguc-Kunt and Maksimovic (1998) Short (1979) Haslem (1968), Short (1979), Bourke (1989), Molyneux and Thornton (1992) Bikker and Hu (2002) and Goddard *et al.* (2004)].

2.2.   Theoretical Literature

There have been various studies that have looked at performance of various institutions. The known measures of performance over the years have been either based on return on assets or return on equity. However, in the measuring these performance, many researchers have argued for the return on assets (ROA) as against return on equity (ROE). According to Hassan & Bashir (2003), ROA shows the profit earned per dollar of assets and most importantly, it reflects the management's ability to utilize the bank's financial and real

investment resources to generate profits. For any bank, ROA depends on the bank's policy decisions as well as on uncontrollable factors relating to the economy and government regulations. Rivard and Thomas (1997) suggest that bank profitability is best measured by ROA in that ROA is not distorted by high equity multipliers and ROA represents a better measure of the ability of a firm to generate returns on its portfolio of assets. ROE on the other hand, reflects how effectively a bank management is in utilizing its shareholders funds. Since ROA tend to be lower for financial intermediaries, most banks heavily utilized financial leverage heavily to increase their ROE to competitive levels (Hassan and Bashir, 2003).

In sum, one can deduce from the above that in examining performance or profitability of banks and what drives it, management decision and country level policies are vital in determining how profitable a bank can be. For this matter to study the drivers of banks profitability both endogenous variables internal to the bank in question and macroeconomic variables are intrinsic and inevitable.

2.3   Empirical Literature

2.3.1   Bank Performance

Harker and Zenios (1998) define the performance of financial institutions as an economic performance which is measured in both short and long-term by a number of financial indicators such as price-to-earnings ratios, the firm's stock beta and alpha, and Tobin's q-ratios. In identifying superior performance measures, Heffernan and Fu (2008) suggest that economic value added and net interest margin do better than the more conventional measures of profitability, such as return on average equity (ROAE) and return on average assets

(ROAA). Their study also found that some macroeconomic variables and financial ratios are significant, and have the expected signs. The study further concludes that the type of bank is influential but not its size. Percentage of foreign ownership and bank listings do not have significant influence.

Wong, Fong, Wong, and Choi (2007), found bank consolidation, cost efficiency, and the ability of a bank to assume risk to be among the determinants of bank profitability, whereas market structure, as measured by market concentration, and banks' market share are not significant determinants of bank performance. Okazaki (2006) has a slightly different opinion as his findings show that policy promoted consolidation has a positive impact on deposits, though it affects profitability. St. Clair (2004), using Census X12, concluded that proper management of lending activities, credit quality and expense control enhance profitability. The study also found that interest rates may place significant downward pressure on capital and liquidity, and that provisioning erodes profits.

In study to form an opinion if companies in Sweden that successfully have implemented TQM have better financial performance development that median branch indices and their stated companies by Hansson and Eriksson (2002) indicated that the award recipients as a group outperform the branch index and their identified competitors on most of the financial performance indicators used in the study. Employing a sample of 21 companies fitting the criteria of all Swedish companies that have received either regional or national quality award from the Swedish institute of quality, concentrating on only profit driven companies since non-profit companies do not always strive to increase financial performance due to other incentives. The financial benefits of implementing TQM were assessed by comparing in order to make valid comparison regarding financial performance and how quality award recipients have developed in relation to their competitors. Percentage change in sales, return

on assets, return on sales, percentage change in total assets and percentage change in number of employees were the five to study the performance development of for the companies, using medians to compare performance indicators based on the fact that medians are more robust than average values to problems concerning outliers and skewness.

Previous studies have also identified the effects of prepayment risk on performance of commercial banks in the USA to understand how various risks that impact banks' performance can help to improve performance of financial institutions and better estimate risk premia charged by banks on the loans they extend to their customers, He and Fayman (2011). With a dataset comprising of macroeconomic variables and financial ratios, covered a sample period of 1976 through 2006 with the number of banks in each sample year is ranging from 10265 banks in 1976 to 6436 in 2006. The results of the paper suggested that prepayment risk may significantly impact return on loans, return on equity and real estate loans to total loans ratios of various commercial banks. Overall, the results suggested that prepayment risk is an important risk factor in mortgage lending business for commercial banks.

To examine the relationship between inventory performance and financial performance in manufacturing companies, Capkun, Hameri and Weiss (2009), analyzed both total inventory (INV) and its discrete components (raw material (RMI), work-in-process (WIP), and finished goods (FGI). Statistical analysis applied to the financial information of US-based manufacturing firms over the 26-year period from 1980 to 2005 with a sample containing 52,254 observations concluded that a strong correlation between inventory performance and financial performance across a broad array of manufacturing industries. Performance of total as well as all three discrete components of inventory were positively associated with financial performance but with a varying strength of the correlation differing between inventory types.

FGI performance has the strongest correlation with financial performance. Between WIP and FGI performance, WIP inventory performance has a stronger correlation with the GP measures of financial performance, while finished goods inventory performance has a stronger correlation with operating profit measures of financial performance. Their findings support the operations management literature's claim that a managerial focus on operations performance – in particular increases in inventory performance – correlates with significant value creation.

Neville, Bell and Menguc (2005) in a study to understand the role of reputation in the corporate social performance (CSP) and financial performance (FP) relationship, including contingencies using a stakeholder theory is drawn on to present a model of reputation's role in the contingent CSP-FP relationship found that CSP is affected by stakeholders' resource allocation to the organisation. The allocation was based on stakeholders' assessment of the organisation's reputation relative to stakeholders' particular expectations, which may be instrumentally and/or normatively framed. Reputation, therefore, played a key role in the CSP-FP relationship. Additionally, the authors proposed that the equivocal results of previous research into the CSP-FP relationship may be partly explained by organisational and market contingencies, contending that strategic fit, competitive intensity and reputation management capability moderate the CSP-FP relationship.

DeYoung and Hassan (1998) in a study to examine the profit efficiency of US banks chartered between 1980 and 1994 investigated how long it took a typical de novo bank to get through a period of low profitability. With a primary data set consists of 16,282 observations on 5435 small, urban commercial banks at year-end 1988, 1990, 1992, and 1994. This biannual data panel was unbalanced due to failures, acquisitions, and de novo entry. A total

of 2611 banks were observed in all four years, 977 banks in three of the four years, 1005 banks in two years only, and 842 banks in just a single year.

A number of studies have tried to examine the effects or influence of these changes on the efficiency of banks (Berger and Humphrey, 1997). Delis and Papanikolous (2009) used a semi-parametric model to examine the effect of bank specific, industry-specific and macroeconomic determinants of bank efficiency. The study also analyzes bank efficiency estimates derived from data envelopment analysis (DEA). The study further introduces the two-stage model of Simar and Wilson (2007) into a large scale empirical analysis of the banking systems of newly acceded EU countries. The study found that the bootstrapping technique unmasks some of the explanatory power of certain variables. In particular, bank size was found to have positive significant economic and statistical effects on bank efficiency, when the similar model is employed, but loses its entire significance when the Tobit model is used. The paper also indicates that the same pattern is documented for the effect of industry concentration, which has a negative effect in the Simar and Wilson model and the investment environment which a positive effect in the same model.

Kosak and Zajc (2006) focus on cost efficiency of banks as an indication of progress in the banking industry. The study applies standard efficiency measurement methodology to estimate the average cost efficiency for selected countries and geographical regions. The study found a positive relationship between the level of development of the financial system and cost efficiency, as well as a positive relationship between deposit per capita and cost efficiency. The study found both positive and negative relationship intermediation ratios with density of demand and, finally, a negative relationship between the market concentration parameter and cost efficiency.

Loukoianova (2008) used a non-parametric approach and DEA to analyse banks' cost and revenue efficiency. The results show that there has been a steady improvement in the Japanese banking system since 2001, although there are significant differences within the banking sector. The study also found results consistent with Edison et al. (2005), which found that Japanese banks have lower profitability compared to that of other advanced countries. Various studies using Return on Assets (ROA) have achieved mixed results. In addition to using ROA and Return on Equity (ROE), this study will also analyse data using linear regression analysis. We will also examine the relationship between non-performing loans (NPLs) and bank performance, and examine whether or not the recent sub prime crisis had any impact on bank performance.

2.3.2 Bank Profitability

Profitability can be defined as the ability of the business, in this case the bank, to collect more revenue than what it pays out. The ratio of capital structure and return on equity is also important to banks, since banks have low levels of equity compared to assets and therefore are sensitive to changes in financial leverage. Higher capital translates to lower risk and higher profitability.

In the literature, bank profitability, typically measured by the return on assets (ROA) and/or the return on equity (ROE) reported by a bank, is usually expressed as a function of internal and external determinants. Internal determinants are factors that are mainly influenced by a bank's management decisions and policy objectives. Such profitability determinants are the level of liquidity, provisioning policy, capital adequacy, expense management, and bank size. On the other hand, the external determinants related to both industrial and macroeconomic

conditions, are variables that reflect the economic and legal environments where the financial institution operates (Sufian and Chong, 2008). Capital adequacy in this context refers to the minimum requirement the banks are to hold with the Central Bank, it is used to protect depositors as well as stability and efficiency in the industry.

Focusing on internal and external banking characteristics in predicting profitability, Hassan and Bashir (2003), concluded that high capital and loan-to-asset ratios lead to higher profitability when the macroeconomic environment, financial market structure, and taxation remain unchanged. The study further shows that implicit and explicit taxes affect bank performance measures negatively while favourable macroeconomic conditions impact performance measures positively when all else remains equal. The results indicate a strong positive correlation between profitability and overhead. Prior studies such as Berger (1995) and Dermerguc-Kunt and Huizingua (1999), found a positive relationship between capitalization and performance.

Liquidity risk, arising from the possible inability of banks to accommodate decreases in liabilities or to fund increases on the assets' side of the financial position, is considered an important determinant of bank profitability. The loans market, especially credit to households and firms, is risky and has a greater expected return than other bank assets, such as government securities. Thus, one would expect a positive relationship between liquidity and profitability (Bourke, 1989). It could be the case, however, that the fewer the amount of funds tied up in liquid investments the higher we might expect profitability to be (Eichengreen and Gibson, 2001). Again, as part of liquidity, Cooper *et* al, (2003) maintained that changes in credit risk of a bank may reflect changes in the health of a bank's loan portfolio which may affect the performance of bank. The view of Cooper et al, (2003) was further echoed by,

other studies, when they conclude that variations in bank profitability are largely attributable to variations in credit risk, since increased exposure to credit risk is normally associated with decreased firm profitability. This triggers discussions concerning not the volume but the quality of loans made. This is because high risk loans increases the accumulation of unpaid loans and decreases profitability (Sufian and Chong, 2008; Miller and Noulas, 1997; Duca and McLaughlin, 1990).

Hutchison and Cox (2008) examined the relationship between capital structure and return on equity. They took samples from relatively less regulated and highly regulated periods and found a positive relationship between financial leverage and return on equity; they also found a positive relationship between return on assets and equity capital. Bashir (2003) concludes that high leverage and large loans-to-asset ratios lead to higher profitability when the macroeconomic environment, financial market structure and taxation are controlled. The study also indicates that foreign-owned banks are more profitable than their domestic counterparts. Stock markets are found to be complimentary to bank financing, whereas implicit and explicit taxes affect bank performance adversely.

Even though leverage (capitalization) has been demonstrated to be important in explaining the performance of financial institutions, its impact on bank profitability is ambiguous. As lower capital ratios suggest a relatively risky position, one might expect a negative coefficient on this variable (Berger, 1995). However, it could be the case that higher levels of equity would decrease the cost of capital, leading to a positive impact on bank profitability (Molyneux, 1993). Moreover, an increase in capital may raise expected earnings by reducing the expected costs of financial distress, including bankruptcy (Berger, 1995).

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Sayilgan and Yildirim (2009) noticed that first differences in the industrial production index, the ratio of budget balance to industrial production index, and the ratio of equity to total assets affect profitability indicators in a significant way, whereas consumer price index inflation and the first difference of the ratio of off balance sheet transactions to assets affect profitability indicators negatively. Mamatzakis and Remoundos (2003) found that variables related to management decision significantly impact the profitability of commercial banks. The study however, indicates that the evidence for the profitability persistence phenomenon is weak. Deregulation of the market and the process of European integration with the introduction of the Euro are significant to the competitiveness of the banking sector in the region. Capital strength has also been mentioned in Vong and Chan (2006) as being of paramount importance in affecting banks' profitability since a well-capitalized bank is perceived to be of lower risk, and such an advantage will be translated into higher profitability. The study also found that the quality of the assets, as measured by loan-loss provisions, affects the performance of banks negatively. According to their findings, a large deposit-taking network is not advantageous. On the other hand, macroeconomic variables such as inflation exhibited a significant relationship with bank performance.

Other studies have focused on areas such as bank characteristics, financial structure and macroeconomic indicators on bank net interest margins and profitability, such as Naceur (2009) whose results show that a high net interest margin and profitability tend to be associated with banks that hold a relatively high amount of capital and with large overheads. Stock market development and disintermediation of the financial system was found to have a positive effect on bank profitability.

Among the recent on bank performance is that of Okazaki and Sawada (2006), which examined the effects of bank consolidation that had occurred as a result of government

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policy. Focusing on short-term effects, the study confirmed a substantially positive effect on deposit growth. The positive effect was especially pronounced during the major financial crisis of 1927 and 1928. Policy-promoted consolidations, however, reveal negative effects especially where many banks are involved, or where the banks involved operate in the same market. Although the total profitability of Japanese banks had been very low during the period under review, as reported by the IMF Japan Report 2005, a positive impact was observed when the Japanese government took measures to stabilize the banking system by injecting capital and strengthening supervision through its Financial Supervisory Agency (FSA). The report also points out several factors limiting bank profitability, and suggests measures for improvement. In measuring bank performance this study focused on deposit growth rate and return on total assets. Some of the limiting factors mentioned by the IMF report are low revenues, traditional low yielding corporate financing, improper credit allocation and pricing, improper classification of loans, the small range of products which banks can provide, bank governance, not having independent directors, cross share holdings between banks and borrowers, and the role of Government Financed Institutions having greater power to conduct their business than private banks.

Bank profitability is sensitive to macroeconomic conditions despite the trend in the industry towards greater geographic diversification and the greater use of financial engineering techniques to manage risk associated with business cycle forecasting. Generally, higher economic growth encourages bank to lend more and permits them to charge higher margins and improve the quality of their assets. Neely and Wheelock (1997) use per capita income and suggest that this variable exerts a strong positive effect on bank earnings. Demirguc-Kunt and Huizinga (2001), and Bikker and Hu (2002) identifies possible cyclical movements in bank profitability i.e. the extent to which bank profits are correlated with the business cycle.3

Their findings suggest that such correlation exists, although the variables used were not direct measures of the business cycle (Sufian and Chong, 2008).

2.3.3   Rural Bank Performance and Profitability

The literature on RCBs recognizes a host of reasons responsible for their poor financial health. According to the Narasimham Committee, RCBs have low earning capacity. They have not been able to earn much profit in view of their policy of restricting their operations to target groups. The recovery position of RRBs is not satisfactory. There are a large number of defaulters. Their cost of operation has been high on account of the increase in the salary scales of the employees in line with the salary structure of the employees of commercial banks. In most cases, these banks followed the same methods of operation and procedures as followed by commercial banks. Therefore, these procedures have not found favour with the rural masses.

There are quite a lot of literatures on rural banks though not as much with the general aspects of banking. Studies have investigated the relationship between loan quality and the efficiency of financial institutions.

Considering 22 different parameters that impact on the functioning of Regional Rural Banks in India for the year 2000, Malhotra (2002) sort to find out whether the issue location matters in the determination of bank performance, He posits that geographical location of rural banks is not the limiting factor for their performance. He further finds that 'it is the specific nourishment which each rural bank receives from its sponsor bank, is cardinal to its performance'.

Miller and Noulas (1997) found out that asset and liability management and the quality of assets affect performance. They concluded that larger banks experience poor performance due to the declining quality of their loan portfolio. In relation to rural banks, Robison and Barry (1977) in their study identified that rural banks often experience liquidity problems, which mainly arise from seasonal flows of loans and deposits. Robison and Barry suggest that banks with low risk portfolios are less efficient than those with high-risk portfolios. Quality of assets and availability of liquidity may help to reduce risk (Robison & Barry 1977) Ibrahim (2010) studied the performance evaluation of regional rural banks in India. The study measured performance in terms of specific areas like number of branches, district coverage, deposits mobilized, credits and investments made by the Indian Regional Rural Banks (RRBs) for the eight years period starting from 2001-02 to the year 2008-09. The study concluded that the performance of RRBs in India improved in the post-merger period. Even though number of RRBs decreased, the branch net work has been increased. During post-merger period, there has been increased number of districts covered by the RRBs. Again, total capital funds have been increased tremendously after amalgamation took place in the year 2005-06. Credit-deposit ratio has been increased over the years showing that a remarkable deployment of credit by these banks in rural areas.

Studying bank performance with two sets of factors in mind, that is internal and external factors, Misra (2006) postulates that internal factors originate from financial statements of a bank, while external factors are systematic forces that reflect an economic environment. In his conclusion, Misra reports that loan portfolio management and investment portfolio contribute positively to financial performances of rural banks.

Indicators of management quality

2.4   Summary of Literature Review

According to some policy makers, one way of the increasing demand for financial services by poor householders, particularly in developing countries is through microfinance (ADB 2000; UN 2005). However, a lot of the formal commercial banks in these developing countries are reluctant to provide financial services their rural sectors due to high risks; high costs involved in small transactions, and perceived low profitability. This has compelled most people in rural areas acquire their financial needs from small financial institutions (SFIs) such as rural banks, credit unions, micro finance institutions (MFIs), or other informal financial institutions (ADB 2000). This has inadvertently led to SFIs serving a large number of customers, dealing with a large amount of funds and contributing to the financial services sectors in developing countries.

In view of the above, there is the need to assess the financial performance of rural banks especially as Ghana is also a developing country. This will enable policy makers to know whether rural banks in the country can still provide the needed support to rural folks by studying the factors that contribute to their performance.

CHAPTER THREE

METHODOLOGY

3.1.   Introduction

Research methodology is very important since the content, face and concurrent validity and reliability of every scientific research needs to be achieved. The scientific nature of the study aided the collection of relevant data. This chapter however details the process used in carrying out the study so as to arrive at the valid conclusions which would enhance in the achievement of the objectives of the study.

3.2   Population

A research population entails the collection of all the possible elements of interest. The identification of a population is essential for every scientific study. The population for this study comprise of all Rural Banks in Ghana.

3.3   Sample size

As stated by Mason et al. (1999), a sample refers to a set of people or objects chosen from a larger population in order to represent that population. In lieu of the above, the sample size for the case study consists of fifty (50) rural banks in Ghana that existed between the years 2006 to 2010.

3.4   Data

For the purpose of this study, the audited financial statement for the selected banks was used. The duration for the study spanned from the year 2006 – 2010. This makes total observation points of 250 for the study.

3.4   Conceptual framework and model

According to various studies (Hawawini et el, 2003; Opler and Titman 1994) the profitability

or performance of a firm is affected by many factors thereof. These factors also affect rural

banks so far as they are considered to be firms. The study focuses specifically on rural banks

in the Ghanaian banking sector. It contributes to the ongoing discussion of factors that

determine the performance of rural banks. As stated earlier on, the study sample comprise of

selected rural banks in the country. The mode of selection is random.

The mode of the study was panel. It considered a five year period which spanned from the

year 2006 to 2010. The work examined firm specific factors and macroeconomic variables

that determine and predict how a bank performs during periods of stable economic growth in

the market.

The study adapted and modified the variables in many bank profitability studies.

3.5   Estimation of Profitability

A multiple regression model was used to test the relationship between the profitability of

rural banks (financial performances) which is represented by a dependent variable and a set

of independent variables.

3.5.1   Dependent variable

Following various studies and from literature, (Naceur and Goaied, 2008; Kosmidou ,2008),

and Abbasoglu et al, 2007), the study intends to use return on assets (ROA) as the dependent

variable. The ROA measures how profitable and efficient the RCB is making use of its total

assets while at the same time controlling for liquidity, operational expenses, bank size.

3.5.2 Independent variables

From the literature, the set of independent variables were classified into two categories: internal determinants and external determinants.

Internal determinants: These are the bank-specific variables that were included in the regression, and they are bank size (log of total assets), loans loss provisions, divided by total loans), non-interest income, total overhead expenses and Cash in Hand

External determinants: Gross Domestic Product, Money Supply Growth, Annual Inflation rate.

3.6   Panel Regression Model

To be able to access the statistical relationship between bank profitability, measured by ROA and the independent variables, we estimated a panel data regression model as stated below:

$$ROA_{it} = \alpha_O + \beta_1 SIZE_{it} + \beta_2 LLPTL_{it} + \beta_3 NIITA_{it} + \beta_4 TOETA_{it} + + \beta_5 GDP_{it} + \beta_6 MSG_{it} + \beta_7 INFL + \Omega_{it}$$

Where:

ROA= Net income/total assets, as a measure of Profitability

SIZE = natural logarithm of total assets. As a proxy for bank size,

LLPTL= loans loss provisions divided by total loans

NIITA= non-interest income divided by total assets

TOETA = total overhead expenses divided by total assets,

LNGDP = natural log of GDP

MSG = Money Supply Growth

 INFL = Annual Inflation Rate

$$\Omega_{it} = U_i + \varepsilon_{it} + \lambda$$

Where: U_i Is the set of an unobserved Rural Bank *i* effects (fixed effects) and

ε_{it} Is a time varying idiosyncratic shock with the standard iid assumption

λ Is the model error

The subscripts i and t refer to the year and cross section (RCB); respectively

3.7   Justification of Independent Variables

Bank Size: The log of total assets variable is included in the regression as a proxy of size to capture the possible cost advantages associated with size (economies of scale). In the literature, mixed relationships are found between size and profitability. In essence, Bank Size may have a positive effect on bank profitability if there are significant economies of scale. On the other hand, if increased diversification leads to higher risks, the variable may exhibit negative effects (Sufian and Chong, 2008).

Loan loss provisions (LLPTL): The ratio of loan loss provisions to total loans is incorporated as an independent variable in the regression analysis as a proxy of credit risk. Many studies have concluded on the negative relationship between credit risk and bank profitability. Miller and Noulas (1997) suggest that as the exposure of the financial institutions to high risk loans increases, the accumulation of unpaid loans would increase and profitability would decreases. n another light, Thakor (1987) also suggests that the level of loan loss provisions is an indication of a bank's asset quality and signals changes in the future performance.

We therefore expect the coefficient of LLPTL to be negative because bad loans are expected to reduce profitability.

Non Interest Income (NIITA): The ratio of non-interest income over total assets is entered in the regression analysis as a proxy for non-traditional activities. Non-interest income consists of commission, service charges, and fees, guarantee fees, net profit from sale of investment securities, and foreign exchange profit. The ratio is also included in the regression model as a proxy measure of bank diversification into non-traditional activities. The variable is expected to exhibit positive relationship with bank profitability (Sufian and Chong, 2008).

Total Overhead Expenses (NIETA): The ratio of overhead expenses to total assets, , is used to provide information on the variations of bank operating costs. The variable represents the total amount of wages and salaries as well as the costs of running branch office facilities. The relationship between the NIETA variable and profitability levels may be negative, as banks that are more productive and efficient aim to minimise their operating costs. Furthermore, the usage of new electronic technology, like ATMs and other automated means of delivering services may have caused wage expenses to fall as capital is substituted for labour (Sufian and Chong, 2008).

In looking at the external variables, bank's profitability is sensitive to macroeconomic conditions despite the trend in the industry towards greater geographic diversification and a larger use of financial engineering techniques to manage risk associated with business cycle forecasting. Generally, higher economic growth encourages banks to lend more and permits them to charge higher margins while improving the quality of their assets. In line with bank profitability and macroeconomic relationship, Dermiguc-Kunt and Huizinga (2001) and Bikker and Hu (2002) identifies possible cyclical movements in bank profitability, i.e., the extent to which bank profits are correlated with the business cycle. Their findings suggest

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that such a correlation exists, although the variables used were not direct measures of the business cycle (Sufian. and Chong, 2008).

It is based on the above arguments that these variables are considered; *GDP* (natural log of GDP), *MSG* (money supply growth), and *INFL* (annual inflation rate).

It is expected that these variable that are known to affect to affect banks will also affect the profitability of rural banks in Ghana.

3.8   Assumptions and Limitations

All the explanatory variables were expressed as ratios. Again, it is assumed that sample is a fair representation.

However, the limitation lies in the fact that the past year's performance has a bearing on today's performance and non-incorporation of the same in the econometric estimation would blur the impact of other variables on ROA. The model does not consider prior year's performance.

The study is also limited in the number of rural banks used as well as the duration for the analysis due to the availability and willingness of rural banks to give the required data.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter deals with the analysis and discussion of the results of the study. The analysis is based on the models as specified in chapter three of the study. Section 4.1 presents the descriptive statistics on the variables used in the analysis of bank performance as presented in chapter three of the study. Then in section 4.2, the regression results of the study are presented. This looks at which of the variables are significant in predicting bank performance using net income scaled by assets as a dependent variable. Again, tables supporting the analysis will be presented.

4.2 Mode of data analysis

The data was collected from the financial statements of the RCB's sourced from the ARB Apex Bank, the umbrella body for RCB's in Ghana.

4.3 Evaluation of research instrument

The research objectives were formulated to examine the determinants of RCB's financial performances. To achieve the objectives, secondary data was gathered from the financial statement of twenty RCB's in Ghana, taking five (5) from each from the ten (10) regions in Ghana. A panel-corrected standard error estimation model was used to control for serial

correlation in some way prior to final estimation and relying on robust standard errors, Beck and Katz (1995).

4.4   Descriptive Statistics of variables

Table 1: Descriptive Statistics of Independent Variables

Variables	Mean	Median	SD	Skewness
SIZE	3.112465	1.157386	8.127127	9.104357
GDP Growth	3.829024	4	6.234268	2.905478
Loan Loss Provision (LLPTL)	2.182205	2.302585	0.8244192	-0.9302416
Non Interest Income (NIITA)	4.003297	5.209732	3.621957	-3.401693
Inflation (INFL)	11.60386	7	21.36033	4.308939
Total Overhead Expenses (TOETA)	4.001935	4.142623	1.806221	-0.3416939
Money Supply Growth (MSG)	3.936038	3.951244	0.508497	0.0236788

Details of information on the mean of variables, the median of variables, the standard deviation of variables s well as skewness as reported by the data over period 2006 to 2010 is presented in table 1 below. It can be observed that dispersion of variables over the sample period is quite high.

The mean of the variables ranges from 2.182205 per cent, as recorded by loan loss provision, to 11.603 per cent, as also recorded by inflation. It is also worth noting that apart from the mean of Inflation which also lies around 11.603 percent, all the other explanatory variables have their means ranging from 2.182 per cent to 4.00 percent.

Again, the standard deviation of the variables over this period was not all that high especially for money supply (0.508 per cent) and loan loss provision (0.824 per cent). Casual observation tends to show that for most of the cases, a higher mean is also associated with a higher standard deviation, so also is a low mean and standard deviation.
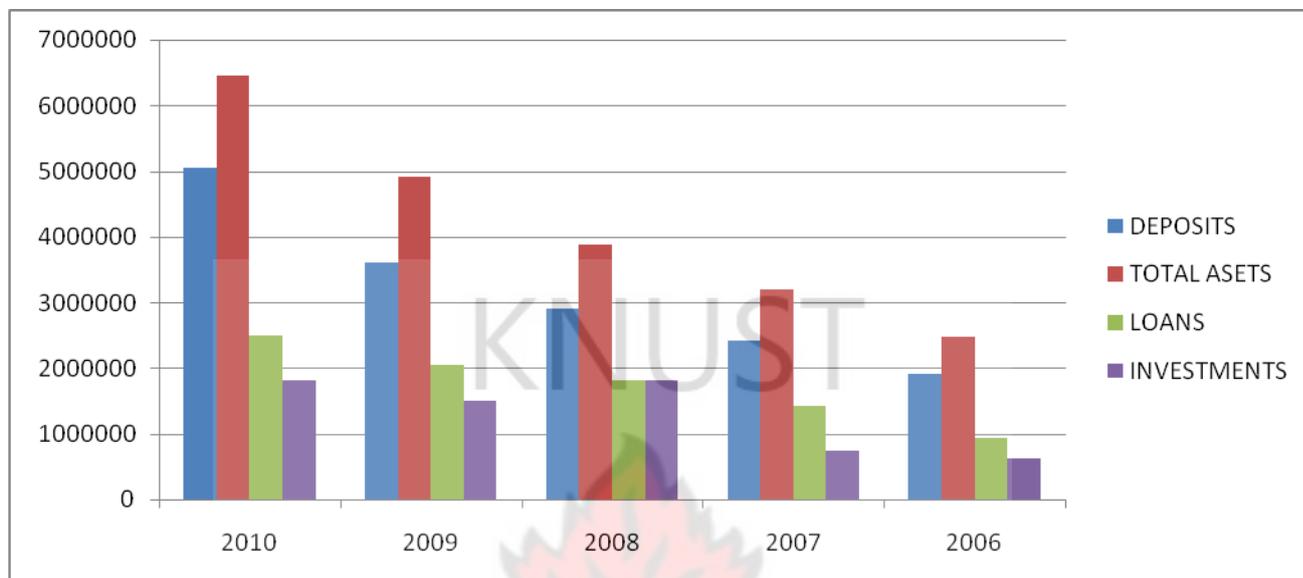
The skewness statistics is a measure of asymmetry of the distribution of the series around its mean. The skewness of a symmetric distribution, such as the normal distribution, is zero. The coefficients of skewness indicate that most of the series have positively skewed returns implying that most of the series have long lean right tails.

Table 2: Some Key Rural Bank Variables

Years/Indicators	DEPOSITS	LOANS	INVESTMENTS	TOTAL ASSETS
2010	5,059,136.00	2,492,787.00	1,815,219.00	6,448,788.00
2009	3,614,329.00	2,039,724.00	1,496,665.00	4,922,662.00
2008	2,902,922.00	1,817,671.00	1,817,671.00	3,886,700.00
2007	2,425,325.00	1,416,835.00	746,380.50	3,201,584.00
2006	1,904,625.00	929,564.30	615,317.10	2,482,272.00

As can be seen from Table 2 above, investments over the years have remained stable from 2008 to 2010 since assuming increasing importance in the asset portfolio of RCBs from 2006 to 2008. Loans/ advances have also contributed a higher proportion to income for RCBs in Ghana. For instance, investment and loans assets showed consistent increases over the period under the study, forming over 50% of the total assets for the RCBs used in the study.
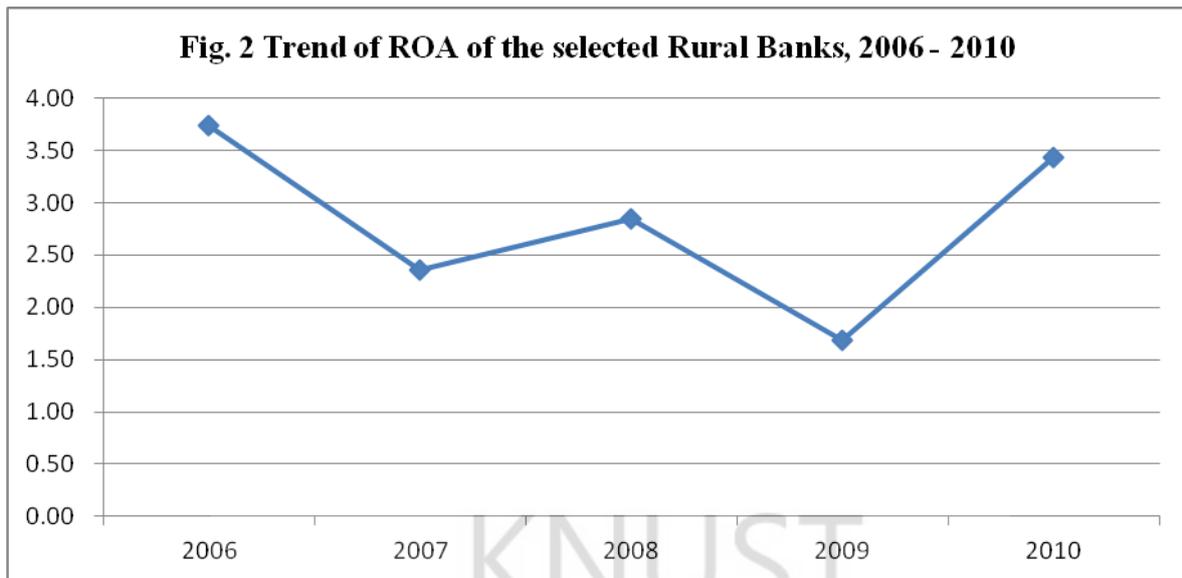
*Figure 1 **Key Rural Bank Variables***

From Figure 1 above, the total assets of the fifty (50) RCB's studied under the period exhibited continual growth in real terms, made up mostly by the loans allocation and its investments activities. The major source of funding for these assets has been their deposits mobilization, which also increased.

4.5   Trend analysis of Performance

The trend below shows the performance in terms of profitability measured as return on assets, of the selected banks over the five-year for which this study has been done.

Over the period, it is evidence from the graph that the performance of the banks have been highly unstable. The performance over the period was high in 2006 then it fell in 2007, rose slightly in 2008 before falling again in 2009. However there was a great improvement in 2010. This can be attributed to the fact that by 2010 there was a great improvement in the value of total assets.

Fig. 2 Trend of ROA of the selected Rural Banks, 2006 – 2010

Source: Research Data

4.6 Regression Results

The panel-corrected standard errors regression results on financial performance of rural banks, in *Table 3*. The results of this study show a significantly positive effect of most of the variables on bank performance as measured by return on assets. The result is statistically significant and in line with most studies on the determinants of bank profitability
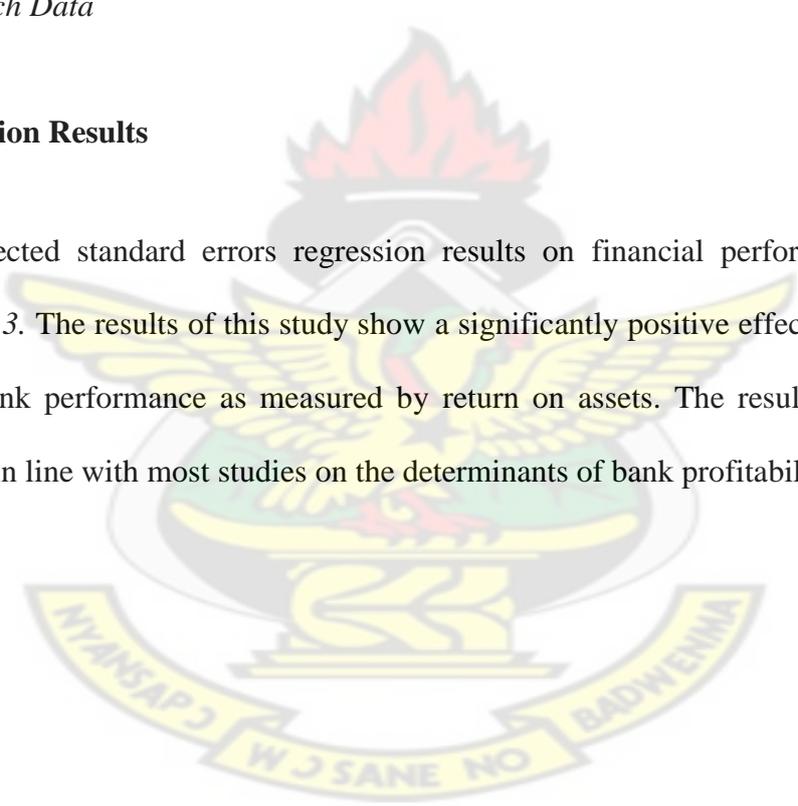
Table 3 Panel Data Results

Variables	Coefficients	Panel-corrected Std. Err.	Z	P>│z│
DEPENDENT VARIABLE: RETURN ON ASSETS (ROA)				
Constant	-118.625	46.0637	-2.58	0.01
SIZE	34.04065	12.1709	2.8	0.005
LLPL	-20.097	7.51176	2.68	0.037
NIITA	24.576	4.6277	3.03	0.002
TOETA	-6.582	4.0761	-1.61	0.062
GDP	0.278	0.356	0.780	0.043
MSG	0.272	0.017	15.920	0.000
INFL	-0.173	0.075	-2.310	0.021
R-squared	0.75			
Wald chi2(4)	14.06			
Prob > chi2	0.0071			
Number of observation	210			
Number of Rural Banks	50			

Compiled from STATA Results by Researcher

The coefficient of size (log of assets) is positive but insignificant, suggesting size is not important in explaining performance, with this finding contrasting sharply with most studies of Western banks, where size has a positive influence on performance, which is often attributed to benefits achieved through scale economies. But it is consistent with the results of Shih et al. (2007) and Lin and Zhang (2008). This result also agrees with Sufien et al., (2008)

that log of total assets is a variable that measures bank size and is generally used to capture potential economies or diseconomies of scale in the banking sector.

The coefficient of the ratio of loan loss provision to total loans (LLPTL) variable in the regression model which is an indicator of credit risk, which measures how much a bank is provisioning in year t relative to its total loans, have a negative effect on profitability as expected. In addition this variable is significant in explaining the variability in the return on assets of rural banks at 5%, a result which is in line with results of Miller and Noulas (1997), but is in disagreement with Thakor (1987) who were both cited by Sufian F. and Chong (2008), who suggested that the level of loan loss provisions is an indication of a bank's asset quality and signals changes in the future performance.

The ratio of non-interest income to total assets (NIITA), a measure of diversification and business mix have a positive on profitability, which was in agreement with the a priori expectations. In addition this variable was statistically significant in explaining the variability in ROA of rural banks at 1%. Thus NIITA is vital driver in the performance of rural banks in Ghana. This indicator which is a proxy for the bank's non-traditional activities is a relevant driver for performance of commercial banks in Ghana.

The ratio of total overhead expense to total assets (TOETA), which provides information on the efficiency of the management regarding expenses relative to the assets in year t, did not only have a negative impact on profitability and thus conformed to the a priori restrictions, but was also a significant driver of rural banks in Ghana's profitability. The level of significance was at 10%. This shows that minimizing rural in Ghana operating costs would indeed improve on the their performance, which conforms to Bourke, (1989) cited by Sufien et al. (2008), who asserts that there is a negative relationship between the operating expenses ratio and profitability.

The impact of gross domestic products (GDP) on profitability was positive and conforms to the a priori restrictions, and is a significant driver in the performance of rural banks in Ghana. This finding conform with earlier findings by Sufien et al. (2008), which agrees on the positive association between economic growth and the performance of the financial sector. However, other research findings such by valentine Flamini et al. (2009) says otherwise as the positive relationship between the growth of the economy and the performance of financial firms. All things being equal, the growth of the economy should have a bearing on not only firms in the financial sector but also firms in the non-financial institutions such as banks. Thus a unit growth in GDP will lead to 27.8% increase in the performance and that matter, profitability of rural banks.

The growth of money supply (MSG) as measured by currency in circulation has a positive impact on profitability as expected and has been a significant driver in the performance of rural banks in Ghana. Increasing the amount of money in circulation would imply rural banks in Ghana having access to these funds and having the opportunity to create money and wealth. This relationship was significant at 1%, thus a 1% increase in the money supply will lead to 27.2% increase in the profitability of rural banks.

The results reveals that annual rate of inflation has a negative impact on profitability, and very significant driver in the performance of rural banks in Ghana. The annual inflation rate (INFL) in Ghana is the prime data used in the determination of the central bank's lending rates to the commercial banks in Ghana. Thus the higher the rate of inflation, the higher the prime rate at which the central bank borrows to the commercial banks, when this happens the rural banks will also have to lend at a higher rate. Considering these the customer base of the rural banks, they will not be able to lend to these people at a higher rate which may then affect profitability.

CHAPTER FIVE

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study examined these predictors impact on the financial performance of RCB's. This chapter discusses the findings and draws conclusions from the findings and makes suggestions. It consists of the summary of the findings, conclusions and recommendations.

5.2 Summary of findings

The study examined the determinants of rural bank profitability of some selected RCB's in Ghana during the period 2006 to 2010. The panel-standard corrected errors method is used to control for serial correlation in some way prior to final estimation and relying on robust standard errors, Beck and Katz (1995). During the period under study, RCB's exhibited a higher level of increment in total assets, deposits, investments and liquidity.

The trend analysis shows that the return on assets which is a measure of profitability was not stable during the period under the study. The trend was high in 2006 and 2010 but fluctuated within the period . The findings suggest that the size of a rural bank is very significant in explaining its profitability.

It can also be concluded that non-interest income, growth of money supply, and annual gross domestic product are significant key drivers of profitability of rural community banks in Ghana. These variables were found to impact positively on rural banks' profitability. Indeed focusing and reengineering their institutions alongside these indicators could enhance their profitability as well as the performance of these commercial banks in Ghana.

However, other variables like the annual rate of inflation, loan loss provisions and total overhead expenses were found to impact negatively on rural bank profitability. It is therefore imperative that efforts are made to address the hindrances that will be presented by these variables.
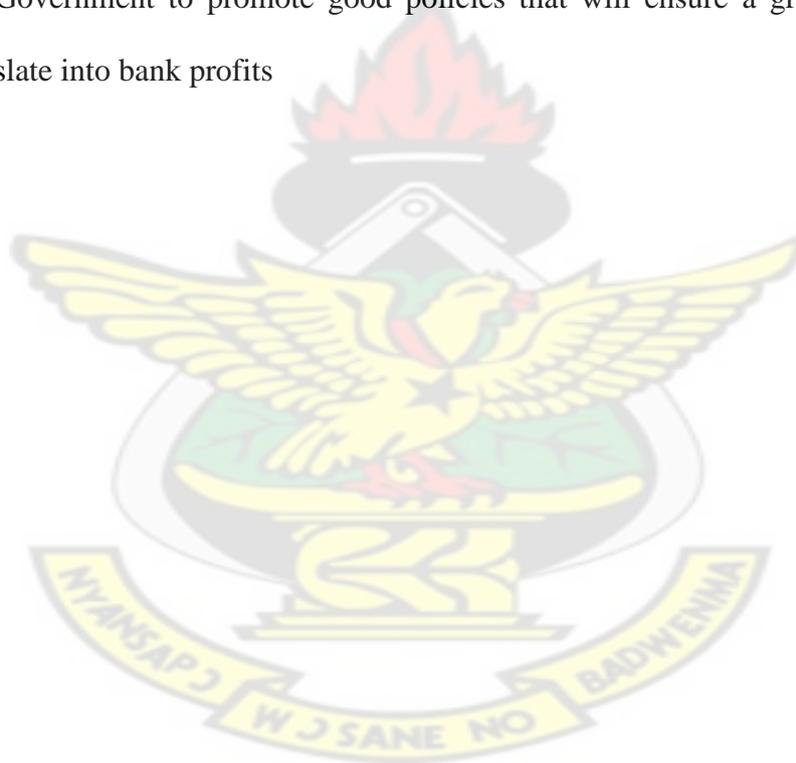
5.3 Conclusions

The importance of this study may be viewed from its contribution to fill an important gap in literature. That is, findings of this study can add to the existing body of the literature, and can serve as a starting point on which future studies can be done. On the practical dimension, this study may help bank decision makers to focus on the major banking activities that may increase financial performance positions comparing with other banks. Such information should help the management of RCB's in creating appropriate financial strategies for attaining the required planned financial performance.

This study also contributes to our understanding of the relationships between the profitability of RCB's and certain indicators of as identified by literature. The empirical findings suggest that size contribute positively to the financial performance of the profit making RCB's. GDP and non-interest income had a positive impact, while inflation, loan loss provisions and total overhead expenses also turned out to be consequential for the performance of the RCB's studied.

5.4 Recommendations

The study provides bank managers with understanding of activities that would enhance their banks financial profitability. The results of this study imply that it might be necessary for bank management to take all the required decisions as to the proportion of their assets they will want to hold to enhance the financial positions of the bank.

Governments should know performance of the economy and other macroeconomic variables that are not within the control of rural banks affects their profitability. It is therefore incumbent on Government to promote good policies that will ensure a growing economy which will translate into bank profits

REFERENCES

ADB 2000, 'ADB's Microfinance development strategy', Finance for the poor, vol. 1, no. July 2000, pp. 1-8.

Andah, D. O., and W. F. Steel, (2003), Rural and Microfinance Regulation in Ghana: Implications for Development and Performance of the industry. Africa Region Working Paper Series No. 49. Washington, DC: World Bank.

Barth, J.R., Caprio, G., Levine, R. (2004): "Bank supervision and regulation: What Works Best?" *Journal of Financial Intermediation*, 13 (2), pp.205-248

Beck N. and. Katz J.N, (1995), 'What To Do (and Not To Do) with Time-Series Cross-Section Data', *American Political Journal Review*, 89, pp. 634-647.

Benston, G.J. (1965), "Branch banking and economies of scale", *Journal of Finance*, Vol. 20 No. 2, pp. 312-31

Berger, A.N. and Humphrey, D.B. (1997), "Efficiency of financial institutions: international survey and directions for future research", *European Journal of Operational Research*, Vol. 98 No. 2, pp. 175-212.

Berger, A. N., (1995) "The Relationship between Capital and Earnings in Banking." Journal of Money Credit and Banking, 27, 432-456.

Bikker, J., & Hu, H. (2002). Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new basel capital requirements. *BNL Quarterly Review 221,* 143–175.

Bourke, P. (1989): "Concentration and other Determinants of Bank Profitability in Europe, North America and Australia", *Journal of Banking and Finance,* Vol.13, pp. 65-79.

Capkun, V., Hameri, A. and Weiss, L.A (2009), on the relationship between inventory and financial performance in manufacturing companies, International Journal of Operations & Production Management Vol. 29 No. 8, 2009 pp. 789-806.

Cooper, M., Jackson, W., & Patterson, G. (2003). Evidence of predictability in the cross section of bank stock returns. *Journal of Banking and Finance 27,* 817–850.

Demirguc-Kunt, A., & Huizinga, H. (2001). Financial structure and bank profitability. In Dermiguc Kunt, A., & Levine, R. (Eds.). *Financial Structure and Economic Growth: A Cross Country Comparison of Banks, Markets and Development.* Cambridge, MA: MIT Press.

Demerguç-Kunt A. and Huizinga, H. (1999), "Determinants of commercial bank interest margins and profitability: Some international evidence." World Bank Economic Review, Vol.13: 379-408.

DeYoung, R. and Hassan, I. (1998), The performance of de novo commercial banks: A profit efficiency approach, Journal of Banking & Finance 22 565-587

Duca, J., & McLaughlin, M. (1990). Developments affecting the profitability of commercial banks. *Federal Reserve Bulletin,* 477–499.

Eichengreen, B., & Gibson, H.D. (2001). Greek banking at the dawn of the new millennium. *CEPR Discussion Paper.*

FAO (1994) "Rural Poverty in the 1990s," in Rural Development Special No. 15, Ghana Universities Press, Accra, Ghana.

Harker, P.T. and Zenios, S.A (1998), "What Drives Performance of Financial Institution." Financial Institution Center, pp 98-21. The Wharton School, University of Pennyslvania.

Hassan, M. K., & Bashir, A. H. M. (2003). Determinants of Islamic banking profitability. Paper presented at the *10th ERF Annual Conference,* Morocco, 16–18 December.

He, L.T and Fayman, A. (2011). Prepayment risk and bank performance, *The Journal of Risk Finance* Vol. 12 No. 1, 2011 pp. 26-40

Heffernan, S. and Fu, M. (2008), "The Determinants of Bank Performance in China." EMG 02-2008.

Hutchison, D.E. and Cox, R.A.K (2007), "The Causal Relationship between Bank Capital and Profitability." Annals of Financial Economics.

Ibrahim, M. (2010), "Performance Evaluation of Regional Rural Banks in India". *International Business Research* Vol. 3, No. 4

IFAD (International Fund for Agricultural Development). 2008. The Republic of Ghana Rural and Agricultural Finance Program (RAFiP). Rome.

IMF Country Report, (2008).

Kosak, M. and Zajc, P. (2006), "Determinants of Bank Efficiency in the New EU member countries."

Leightner, J.E. and Lovell, C.A.K. (1998), "The impact of financial liberalization on the performance of Thai banks", *Journal of Economics and Business*, Vol. 50 No. 2, pp. 115-31.

Lin, X. and Y. Zhang (2008), "Bank ownership reform and bank performance in China", *Journal of Banking and Finance*, forthcoming.

Loukoianova, E. (2008), "Analysis of the Efficiency and Profitability of the Japanese Banking System." IMF Working Paper WP/08/63.

Malhotra, Rakesh (2002): "Performance of India's Regional Rural Banks (RRBs): Effect of the Umbilical Cord". *URL: http://www.alternativefinance. org.uk/rtf/rrbsmalhotra.rtf*.

Mamatzaki, E.C., Remoundos, P.C., (2003) "Determinants of Greek Commercial Banks Profitability, 1989-2000."

Mensah, W. A. 1993. "Study of the Rural Finance Sector in Ghana." Unpublished paper.

Miller, S, M and Noulas, A, G (1997), 'Portfolio mix and large-bank profitability in the USA', *Applied Economics*, vol. 29, no. 4, pp. 505-12

Molyneux, P., and Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal of Banking and Finance 16,* 1173–1178.

Molyneux, P. (1993). Structure and performance in European Banking. Working paper, University of Wales Bangor.

Neely, M., and Wheelock, D. (1997). Why does bank performance vary across states? *Federal Reserve Bank of St. Louis Review*, 27–38.

Misra, B. S 2006, 'T+he performance of regional rural banks in India: Has past anything to suggest for future?' *Reserve bank of India occasional papers*, vol. 27, no. 1 and 2, pp. 89-118

Molyneux, P., Thornton, J. (1992): "Determinants of European Bank profitability: A Note", *Journal of Banking and Finance,* Vol.16, pp.1173-1178.

PricewaterCoopers (2010), Ghana Banking Survey.

Naceur, S.M and Goaied, M (2009), The Determinants of Commercial Bank Interest Margin and Profitability: Evidence from Tunisia: International Monetary Fund (IMF).

Neville, A.N., Bell, J.B. and Menguc, B. (2005), Corporate reputation, stakeholders and the social performance-financial performance relationship, European Journal of Marketing Vol. 39 No. 9/10, 2005 pp. 1184-1198.

Okazaki, T. and Sawada, M. (2006) "Effects of Bank Consolidation Promotion Policy: Evaluating Bank Law in 1927, Japan.

Ranade, C. G. 1994. "Rural Finance in Ghana." Accra. Unpublished paper.

Rivard, R. J., and Thomas, C. R. (1997). The effect of interstate banking on large bank holding company profitability and risk. *Journal of Economics and Business 49,* 61–76.

Sayilgan, G., & Yildirim, O. (2009). Determinants of Profitability in Turkish Banking Sector: 2002-2007. International Research Journal of Finance and Economics (28), 207-214.

Sealey, C. and Lindley, J.T. (1977), "Inputs, outputs and a theory of production and cost at depository financial institutions", Journal of Finance, Vol. 32, pp. 1251-66.

Shih, V., Zhang, Q. and Liu, M. (2007), "Comparing the performance of Chinese banks: a principal component approach", *China Economic Review*, 18, 1, p15-34.

Sufian, F., & Habibullah, M. S. (2009). Bank Specific and Macroeconomic Determinants of Bank Profitability: Empirical Evidence from the China Banking Sector. Front. Econ. China, 4 (2), 274-291.

Sufian F. and Chong R.R., (2008). Determinants of bank profitability in a developing economy: empirical evidence from the Philippines. Asian academy of management journal of accounting and finance; AAMJAF, Vol. 4, No. 2, 91–112, 2008

Thakor, A. (1987). Discussion. *Journal of Finance 42,* 661–663. www.mediawiley.com

St. Clair, R. (2004), "Determinants of Banking Financial Performance and Resilience in Singapore. Monetary Authority of Singapore, pages 3-6.

Tarawneh, M. (2006), "A Comparison of Financial Performance in the Banking Sector: Some Evidence from Omani Commercial Banks", *International Research Journal of Finance and Economic, Iss. 3.*

UN 2005, 'Microfinance and the millennium development goals', United Nations, New York, http://www.yearofmicrocredit.org/docs/mdgdoc_MN.pdf viewed 10th January 2009

Vong, A.P.I and Chan, H.I. (2009), "Determinants of Bank Profitability in Macau."

Wang, S. (2006), *Report on Competitiveness of China's Commercial Banks 2006*, Social Sciences Academic Press (China).

World Bank 1975. Rural Development - Sector Development Policy, Washington D.C.