

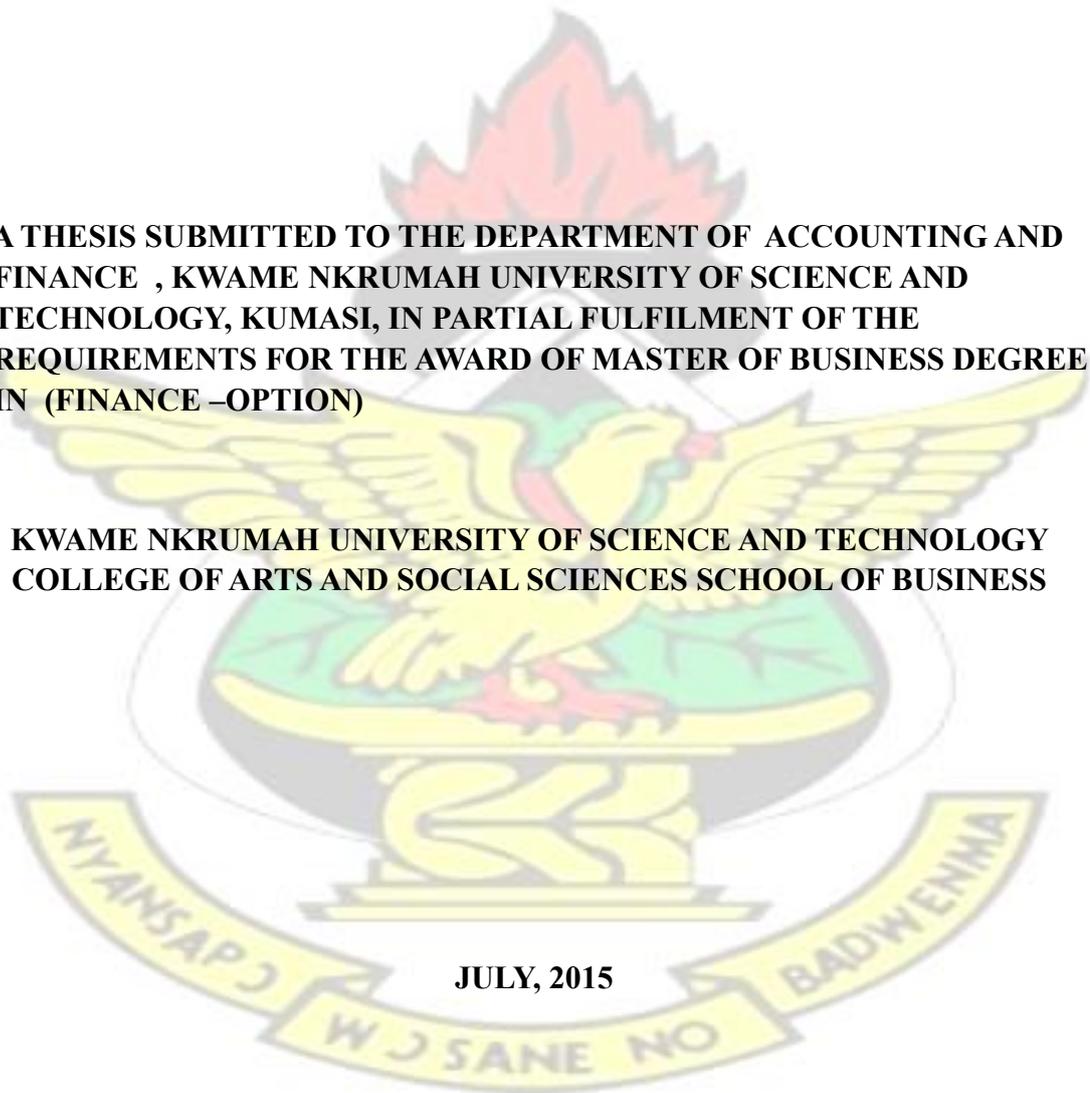
**DETERMINANTS OF RURAL BANKS DEPOSIT MOBILIZATION IN
GHANA**

BY
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**A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND
FINANCE , KWAME NKURUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY, KUMASI, IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS DEGREE
IN (FINANCE –OPTION)**

**KWAME NKURUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF ARTS AND SOCIAL SCIENCES SCHOOL OF BUSINESS**

JULY, 2015



DECLARATION

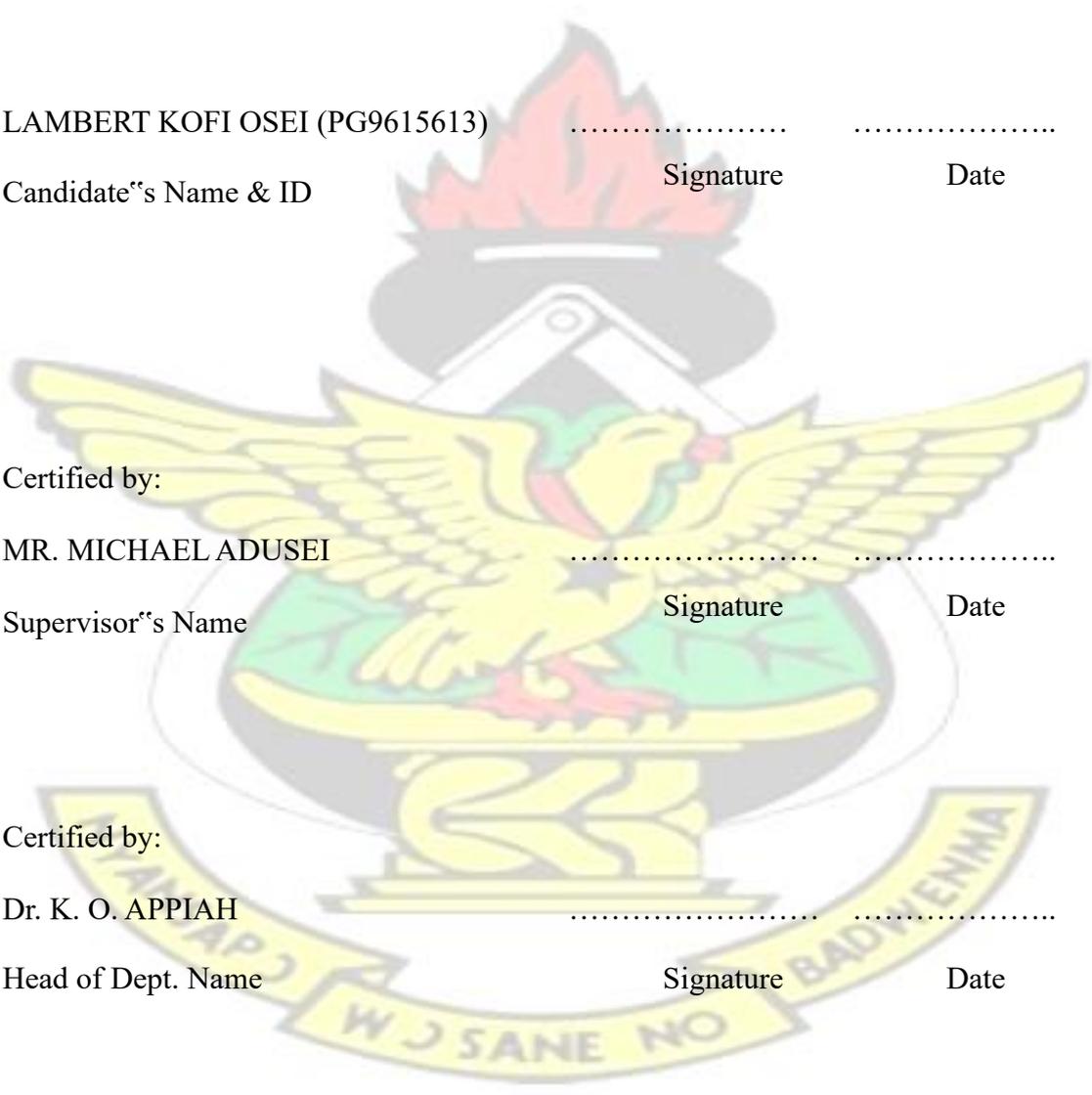
I hereby declare that this submission is my own work towards the MBA and that, to the best of my knowledge, it contains no materials previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been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

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DEDICATION

This research work is dedicated to my dear wife Mrs. Anita Osei and my entire family for the love, support and understanding through the study of this course.

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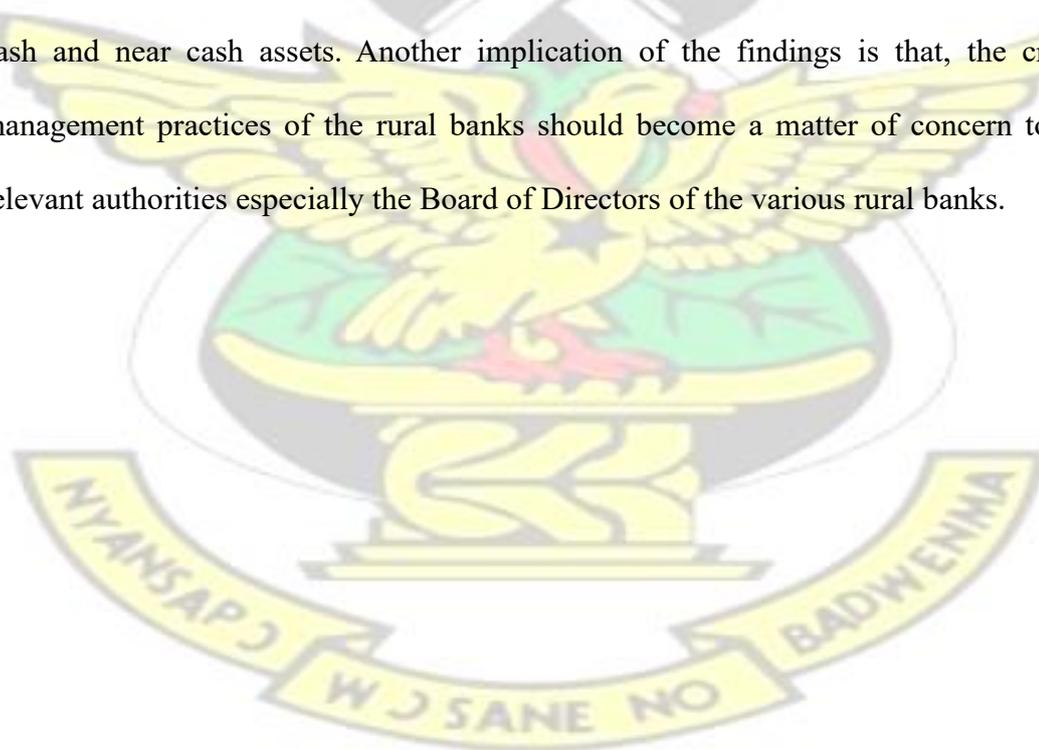
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ABSTRACT

The general objective of this study is to examine whether equity to asset ratio or capitalization, Liquidity ratio or Liquidity risk, Loan to asset ratio or credit risk, Return on asset or profitability and Log of assets or bank size are the factors that determine rural banks deposit mobilization in Ghana. The research included 112 rural banks in Ghana out of a total number of 137. These banks have been selected depending on the availability of their quarterly data from 2009Q1 to 2013Q4. Panel least regression with fixed effects has been used for analysis. The results of the findings suggest that, liquidity ratio, loan to asset ratio and bank size are significantly determinants of rural banks deposit mobilization. In view of the above findings, it is recommended that the Bank of Ghana, being the main supervisory body should as a matter of policy, strengthens its liquidity reserve requirements of the rural banks by making sure that they keep enough cash and near cash assets. Another implication of the findings is that, the credit management practices of the rural banks should become a matter of concern to all relevant authorities especially the Board of Directors of the various rural banks.



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TABLE OF CONTENTS	CONTENT	PAGE
DECLARATION		ii
DEDICATION		iii
ACKNOWLEDGEMENT		
iv ABSTRACT		
.....	v	TABLE OF
CONTENTS	vi	LIST OF
TABLES	ix	LIST OF
ABBREVIATIONS	x	
CHAPTER ONE		1
INTRODUCTION		
1		
1.0 BACKGROUND OF THE STUDY		1
1.1 STATEMENT OF THE PROBLEM		3
1.2 OBJECTIVES OF THE STUDY		4
1.3 RESEARCH QUESTIONS		4
1.4 THE SCOPE OF THE STUDY		4
1.5 METHODOLOGY		5
1.6 LIMITATIONS OF THE STUDY.....		5
1.7 ORGANIZATION OF THE RESEARCH		6
CHAPTER TWO		
7 LITERATURE REVIEW		
7		
2.0 INTRODUCTION		7

2.1 OVERVIEW OF SAVINGS MOBILIZATION	8
2.2 THEORIES OF SAVINGS	9
2.3 DEFINITION OF BANK DEPOSITS	10
2.4 TYPES OF DEPOSIT TAKING INSTITUTIONS	10
2.4.1 Rural and Community Banks	12
2.4.2 Savings & Loans Companies	12
2.4.3 Credit Unions	13
2.4.4 Non-Governmental and Community-Based	14
2.4.5 Money Lenders	14
2.4.6 Susu Collectors, Associations, Clubs and Companies	15
2.5 INSTITUTIONAL CAPACITY REQUIRED FOR DEPOSIT MOBILIZATION	15
2.6 DEPOSIT PRODUCTS	16
2.6.1 Current Accounts	17
2.6.2 Passbook Savings Accounts	18
2.6.3 Contractual Savings Accounts	18
2.6.4 Time Deposits	19
2.6.5 Long-Term Contractual Savings	19
2.7 REASONS WHY PEOPLE SAVE	20
2.8 MECHANISMS FOR DEPOSIT MOBILIZATION IN GHANA	21
2.9 THE IMPORTANCE OF DEPOSIT MOBILIZATION IN GHANA (THE PERSPECTIVE OF THE BANK)	22
2.10 INTERNAL ENVIRONMENTAL FACTORS FOR SUCCESSFUL RURAL BANKS DEPOSIT MOBILIZATION	23
2.11 THE EXTERNAL ENVIRONMENTAL FACTORS WHICH DETERMINE DEPOSIT MOBILIZATION IN GHANA.	27
2.11.0 INTRODUCTION	27
2.11.1. INTEREST RATE	27
2.11.2 TAXATION	28
2.11.3 GOVERNMENT EXPENDITURE	28
2.11.4 RESERVE REQUIREMENTS	29
2.11.6 INFLATION	30
2.11.7 INCOME LEVELS	31
2.12 COMPULSORY Vs. VOLUNTARY SAVING PRODUCTS	31

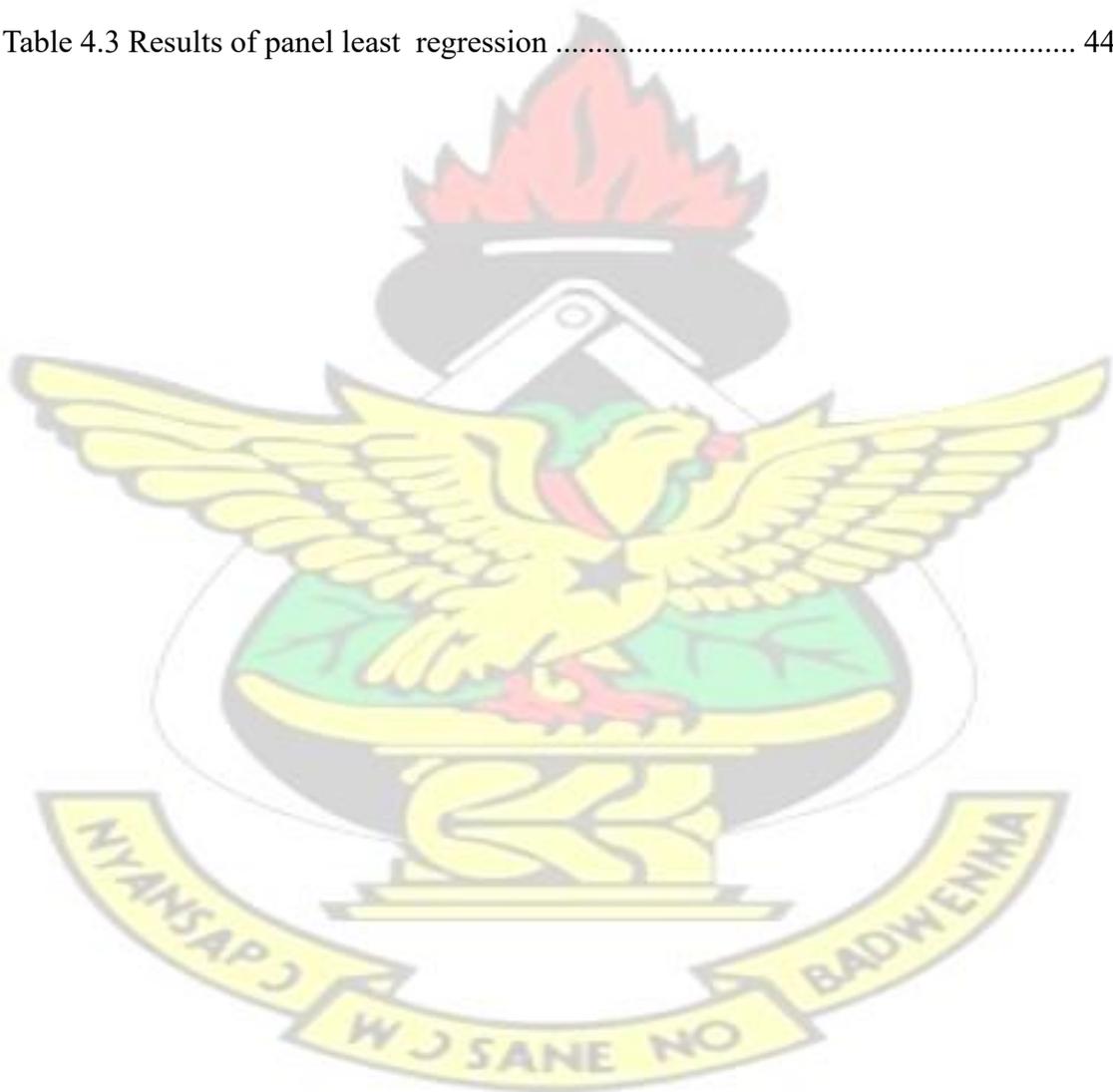
2.13 CHALLENGES OF DEPOSIT MOBILIZATION IN GHANA	32
2.13.1 OUTREACHING RURAL SAVERS	32
2.13.2 REGAINING CONFIDENCE IN THE BANKING SECTOR	33
2.13.3 UNSTABLE MACROECONOMIC CONDITIONS	33
2.13.4 INSUFFICIENT INSTRUMENTS	34
CHAPTER THREE	35
35 RESEARCH METHODOLOGY	35
3.0 INTRODUCTION	35
3.1 SOURCES OF DATA	35
3.1.1 Secondary Data	35
3.2 RESEARCH DESIGN	35
3.2.2 Quantitative Data	36
3.3 SELECTION OF VARIABLES	36
3.3.1 Dependent variables	37
3.3.2 Independent variables	37
3.3 TARGET POPULATION AND SAMPLING METHODS	38
3.4 MODEL SPECIFICATION	38
3.5 ESTIMATION PROCEDURE	39
3.6 ANALYTICAL TOOLS AND TECHNIQUES	40
3.7 DATA ANALYSIS METHODS	40
3.8 VALIDITY AND RELIABILITY OF DATA	40
4.0 INTRODUCTION	42
4.2 DESCRIPTIVE STATISTICS	42
4.6 TESTS FOR MULTICOLINEARITY	43
4.3 REGRESSION RESULTS.....	44
CHAPTER FIVE	48
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS ..	48
5.0 INTRODUCTION	48
5.1 SUMMARY OF THE FINDINGS	48
5.2 CONCLUSIONS.....	49
5.3 RECOMMENDATIONS	50

REFERENCES

52 APPENDIX

..... **56 LIST OF TABLES**

TABLE	PAGE
Table 2.1 Tiers of Ghana's Financial System	11
Table 3.1 Variables, definitions, notations and expected signs	38
Table 4.1 Descriptive Statistics of Independent Variables	42
Table 4.2 Pearson correlation matrix	43
Table 4.3 Results of panel least regression	44



LIST OF ABBREVIATIONS

ARB	Association of Rural Banks
BoG	Bank of Ghana
CAP	Capitalization
CRISK	Credit Risk
CUA	Credit Union Association
FNGO	Financial Non Governmental Organization
GAMC	Ghana Association of Microfinance Companies
GDP	Gross Domestic Product
GLSS	Ghana Living Standard Survey
GoG	Government of Ghana
GSS	Ghana Statistical Service
IMF	International Monetary Fund
IMF	International Monetary Fund
LRISK	Liquidity Risk
LTCs	Long Term Contractual Savings
RB	Rural Bank
RCB	Rural and Community Bank
RFP	Rural Finance Project
ROA	Return on Asset
ROE	Return on Equity
SAT	Sinapi Aba Trust
SME	Small & Medium Scale Enterprises
TUC	Trade Union Congress
UN	United Nations
WB	World Bank

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

"Voluntary savings mobilization from the public is not a matter of adding a few products to a microcredit organization. If successful, it inevitably and irreversibly changes the institution though not its mission. Those that are not prepared for such changes should not undertake to collect savings from the public. However, those that are willing and able to make the needed changes to overcome the risk can profitably attain wide outreach as financial intermediaries and can serve as models of the industry for other institutions".(Robinson, 2006) In Ghana, there are many bodies involved in the mobilization of deposits from the public. These bodies can be categorized into formal and informal financial services providers. The informal service providers are of various forms and often located in the rural areas of the country. The formal financial services providers on the other hand are the best organized and identifiable ones. They include; The Universal license Banks, Non- Banks Financial Institutions, Credit Unions, Savings Companies and the Rural Banks. Rural Banks as deposit taking MFI have the institutional structure and regulatory approval required to mobilize and intermediate deposits. A Rural bank (RB) is defined as a "body incorporated under Ghana's Companies Code whose name includes the word Bank and which is licensed by the Bank of Ghana to carry out special banking business which principles include the mobilization of savings and the provision of lending to the peoples within its radius of operations" (Anin,2001). This research will focus on the determinants of rural banks deposit mobilization in Ghana.

The role of the rural banks in Ghana as far as deposits mobilization is concerned has not provided maximum results. Banks deposit mobilization has tended to concentrate more in the urban areas. This covers the rich with regular cash flows and a few small and medium scale enterprises who are capable of making savings. Needless to say, most of the inhabitants of rural areas and micro businessmen have limited access to the commercial banks. In many instances these people resort to Susu collectors and rotational savers for their saving services. As far as these services may achieve their objectives of accumulating deposits, they face threats of frauds and subsequent mistrust of operators. The importance of providing bank services to these areas would be enormous either extending bank branches where profitable or bank personnel making regular visits and training of local group leaders capable of using bank expertise to mobilize deposits.

In Ghana there are limited sources of funds to investors and looking at the dominance of the rural banks operating in Ghana and commanding 70% of the banking business (Embassy of Ghana in Washington DC) there is the need for bank reforms that devise more effective ways of mobilizing deposits from these small scale enterprises and subsistent farmers and widens their scope to meet the entire population with bank products and services. There are many ways for converting savings into usefully large lump sums - the main money management task of the economic active poor. Most of it is done in the informal sector. People often borrow from or save with a friend or a relative or rural bank to help smooth cash flow, take advantage of an opportunity, prepare for a life - cycle event or address an emergency. For the purpose of achieving self-sufficiency there is the need to improve ways of mobilizing domestic deposits. “Records indicate that large chunk of deposits are lying idle under pillows and in bamboos in the rural areas being left out of the banking stream” (Rutherford, 2000).

This enquiry will help stakeholders such as Bank of Ghana, shareholders, investors, opinion leaders and individual citizens, in the microfinance industry to realize the extent to which their objectives have been met as far as rural savings mobilization is concerned. The gaps will be identified for further action. More importantly, as a microfinance practitioner, I hope this research work will continue to sustain my interest in the industry.

1.1 STATEMENT OF THE PROBLEM

The problem this research intends to address in Ghana is that rural deposit mobilization has not attained the level which is sustainable for business growth and poverty reduction. "The poor need savings services that allow them to (1) deposit small, variable amounts frequently and (2) access larger sums in the short, medium, or long term"(Rutherford 2009). "Like everyone else, they (poor) demand a portfolio of savings products that offer differing terms of access and generate differing returns". (CGAP 2005, p. 3) The Rural banks on the other hand also need these deposits to sustain economic activities in the country. However, "Records indicate that large chunk of deposits are lying idle under pillows and in bamboos in the rural areas being left out of the banking stream" (Rutherford, 2000). For the purpose of achieving selfsufficiency there is the need to improve ways of mobilizing domestic deposits. The macro economic indicators play a critical role in determining the success of deposit mobilization, yet they are beyond the control of rural banks. The onus therefore, lies on the rural banks to play a major role or to devise the most effective ways of mobilizing deposits so as to reduce poverty in Ghana.

1.2 OBJECTIVES OF THE STUDY

Generally, the study seeks to examine the determinants of rural banks deposit mobilization in Ghana.

This Thesis will however focus on achieving the following specific objectives with respect to deposit mobilization in Ghana;

1. Establish the relationship between rural deposit mobilization - the dependent variable and (equity to asset ratio, liquidity ratio or liquidity risk, loan to asset ratio or credit risk, return on asset or ROA and bank size) the independent variables.
2. Identify the internal factors affecting rural banks deposit mobilization in Ghana.
3. Make recommendations with regards to factors accounting for Rural Banks deposit mobilization in Ghana.

1.3 RESEARCH QUESTIONS

Related questions to ask include;

1. What is the relationship between rural deposit mobilization the dependent variable and internal environmental factors thus the independent variables?
2. What are the determinants of rural banks deposit mobilization?

1.4 THE SCOPE OF THE STUDY

Deposit mobilization in Ghana is performed by many other banks in addition to rural banks. These include developmental banks, community banks, merchant banks, building societies, microfinance companies and savings and loan institutions.

However, this study is limited to rural banks which specialize in mobilizing deposits and maximize profits on interest on loans. Deposit taking institutions included in this

study are Savings and Loans Companies, Money lenders, credit unions, rural and community banks, non-governmental and community based organizations, Susu collectors, associations, clubs, companies and products. The scope covers these institutions because they have the largest share of the deposits mobilized in the country and further control the largest proportion of the financial system. "As a network, rural and community banks are the largest providers of formal financial services in Ghana's rural areas. By the end of 2008, Ghana had 127 rural and community banks with 584 service outlets representing about half of the total banking outlets in the country reaching about 2.8 million depositors and 680,000 borrowers".

(Nair and Fissha 2010)

1.5 METHODOLOGY

This study was based on review of past research work. The Rural Banks in Ghana have been used as the population of the study because of their use of common tools in attracting deposits. Secondary data collection is selected to collect data and information. To attain the objectives of the study, secondary data will be collected from 112 out of the 137 rural and community banks in Ghana for the period under review.

1.6 LIMITATIONS OF THE STUDY

The successful completion of this research was not done, without confronting some practical challenges. At best, this research work should have been extended to cover all the rural banks in Ghana to collate facts however, the inadequacy of time, material or data and financial constraints have compelled the researcher to limit the study to only 112 rural banks.

1.7 ORGANIZATION OF THE RESEARCH

The study is structured as follows;

Chapter one deals with the general introduction to the study, the problem identification, objective of the study, the related research questions the scope of the study, methodology, limitations of the study and organization of the Research. Chapter two seeks to review research related to mobilizing deposits. Issues to be reviewed include macroeconomic factors that determine deposit mobilization, bank specific factors that determines rural banks deposit mobilization, Perspectives of Deposit Mobilization, type of deposits mobilized by rural banks in Ghana and the reasons why rural people save and the challenges faced by rural banks in deposit mobilization. Chapter three presents the population and sample size; research design; sources of the data; validity and reliability of the data as well as method of analysis. Chapter four is the main body of the research work where tables would be used in the assessment of the information acquired. It discusses the determinants of rural banks deposits mobilization, and problems encountered as well as analyzing the main factors contributing to successful mobilization. Chapter five also encompasses the findings, suggestions and conclusions drawn from the study and recommendation as to how rural banks can maximize deposits or otherwise eliminate practices and policies which are detrimental to deposit mobilization in Ghana.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

“Deposit mobilization from households and other company surpluses is the principal source of funds for banks in Ghana” (Dighe, 2005). According to him,

63% of banks liabilities are made up of customer deposits. This shows that reasons that account for deposits mobilization have a huge impact on the performance of rural banks. “Developing economies are characterized by unstable macroeconomic environments such as inflation, inappropriate fiscal and monetary policies, interest rate controls.”(Kose et. al. 1999). The net effect is the change in liquidity which affects savings, capital formation and increased in poverty levels. Where the macroeconomic environment is favorable to savings then the banks are in a better position to make more mobilization of savings. However, where macroeconomic policies erode liquidity from the hands of the people then deposits reduce and may negatively impact on capital growth and investment in the country.

This chapter seeks to examine the concept of savings, theories of savings, bank deposits, types of deposit taking institutions, deposits products, reasons why people save, mechanisms for savings mobilization, internal determinants of deposit, macroeconomic factors that affect deposit mobilization in Ghana, voluntary or compulsory deposits, challenges associated with savings mobilization, and factors for successful bank deposits.

2.1 OVERVIEW OF SAVINGS MOBILIZATION

“Savings' can mean a variety of things; it could mean insurance, simply savings accounts, capital such as livestock or other tangible assets, or could mean putting cash under the mattress” (Financial Sector Development Secretariat, 2009). “Savings

mobilization refers to creating safe and sound institutions where savers can place their deposits with the expectation that they will receive the full value of their funds, plus a real return, upon withdrawal. It means developing appropriate products to satisfy the savers of varying income levels. Simply put savings mobilization is capturing voluntary savings deposits, protecting them, managing them and using them to fund loan portfolio”.(Branch and Klaehn, 2003).

“Apart from the established MFIs, individual savings collectors play an important role in mobilizing savings from households and micro entrepreneurs and to have substantial potential for financial intermediation in Ghana. Savers are willing to pay for the convenience and security of collectors coming to their work places and accumulating their daily savings over a month, or sometimes longer periods. Collectors sometimes provide advances but their lending capacity is severely limited by their lack of assets and access to credit.”(Aryeetey and steel, 1994)

“Demand for savings services is diverse and robust. A small amount of savings in a secure place can provide resources to manage consumption needs, smooth irregular income, cover expenditures for health and education, or provide the capital necessary to invest in household assets or new tool sand operations that improve productivity and contribute to higher incomes. Savings also help to manage shocks through providing resources during times of crisis. In recent years the volume of demand and consumer preference for safe and convenient savings services has been increasingly acknowledged, outdating a previous, widely held view that the poor do not save”

(Ledgerwood ct al. 2013)

2.2 THEORIES OF SAVINGS

“Savings fundamentally, is about choosing between current and future consumption” (Ashraf et al. 2003). Savings theories traditionally predict that current consumption is related not to current income, but to a longer - term estimates of income.

The Life Cycle hypothesis (Modigliani, 1966) “predicts that individuals hold consumption constant over their time; they save during their working years and draw down their savings during retirement”. The permanent income hypothesis (Friedman, 1957) argues that “their consumption is important to a consumer's estimates of permanent income”. These theories of savings were developed with industrial economies in mind. Deaton (1989) “suggest at least four reasons why those two theories might be of limited use in developing countries which are larger than in industrialize and are more likely to contain several generations”. “As a result there is less need to save for retirement or for intergenerational transfers. Second, income in many of these economies is uncertain and cyclical, making estimation of longer-term income flows difficult. Third, individuals are likely to be credit constrained, so that borrowing in early years will be difficult. Finally, these combined factors suggest that savings in developing countries/economies often plays an important role in buffering between income and consumption”.

2.3 DEFINITION OF BANK DEPOSITS

A Bank deposit is the amount of money in cash or cheque form or sent via a wire transfer that is placed into a bank account. "Formal providers are beginning to make important progress in reaching lower-income markets with savings services" (Ledgerwood et al. 2013). When savings services are offered by institutional providers, they are generally referred to as deposits. “Savings is a more general term used when

discussing a broad set of activities related to holding assets stored by others; deposits are the portion of savings held in financial institutions”. (CGAP, 2005). The target bank account can be any kind of account that accepts deposits. “Bank Deposit is money placed into a banking institution for safekeeping. Bank deposits are monies in an accounts at a banking institution, such as savings accounts, checking accounts and money market accounts. The account holder has the right to withdraw any deposited funds, as set forth in the terms and conditions of the account. The "deposit" itself is a liability owed by the bank to the depositor (the person or entity that made the deposit), and refers to this liability rather than to the actual funds that are deposited” (Ledgerwood, et al. 2013)

2.4 TYPES OF DEPOSIT TAKING INSTITUTIONS

Ghana’s financial system is in three tiers: formal financial institutions, semi – formal financial institutions and informal financial institutions”(Mann,et al 2010, and BoG,2013) Table 1 shows their categories, how they are defined, services they offer, their clients and their outreach. Out of the financial institutions in the table the credit unions, savings and loans, susu companies and financial non-governmental organisations and the rural and community banks operate mainly in the rural arrears of Ghana.

Table 2.1 Tiers of Ghana's Financial System

Tier	Definition	Institutions	Sevices	Clients	Outreach
FORMAL	Licensed by Bank of Ghana	Commercial Banks, Development Banks	Deposits, Loans, Foreign exchange, Cash transfer, and insurance	Large Businesses, Government	Urban
		Rural and Community Banks	Deposits, Loans, Money transfer, Payments, Social investments	SMEs, Large Enterprises,	Rualr
SEMI – FORMAL	Licensed by BoG as of January 2013	Credit unions	Deposits, Loans for members only	Low income, self – employed	Rural
		Savings and Loans Companies, Financial NGOs			
INFORMAL	Legally registered at national level as at December 2013	Susu institutions, informal money lenders	Deposit, Loans	Self – employed, Poor	Rural

Source: Mann et al (2010), Steel(2006) and BoG (2013)

11
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2.4.1 Rural and Community Banks

Rural banks also known as rural and community banks are “unit banks owned by members of the rural community through purchase of shares and are licensed to provide financial intermediation.”(Aryeetey and steel, 1994). The characteristics of a rural bank(RB) have been admirably summed up in a preface to the Rural Bank operational manual published by the Bank of Ghana .They were first initiated in 1976 operate in rural areas providing primary savings services and agriculture loans, reflecting the main economic activity in the rural areas. “The number expanded rapidly in the early 1980s, mainly to service the government's introduction of special cheques instead of cash payment to cocoa farmers though with adverse consequences for their financial performance”(Nissanke 1998). Through a combination of rapid inflation, currency depreciation, economic decline, mismanagement of funds and natural disasters, combined with weak supervision. “The obvious need for re- capitalization and capacity-building was addressed during 1990-94 under the World Bank's Rural Finance Project, with half of them achieving satisfactory status by 1996. The combination of very high (62) primary and secondary reserve requirements imposed by Bank of Ghana in 1996 and high Treasury bill rates helped to reduce the risk assets and increase net worth, further improving their financial performance ”(Nissanke 1998).

2.4.2 Savings & Loans Companies

Initial licensing of the new Saving & Loans category was difficult, as the Bank of Ghana grappled with how to implement the new law. The required minimum capital (¢ 100 million or US\$150,000) initially posed a hurdle, but its real value was eroded by rapid inflation, and the number of Savings & Loans grew from 3 in 1995 to 7 by

1998. By 2002 the 8 Savings & Loans had over 160,000 depositors and 10,000 borrowers. Increases in the minimum capital requirement in 1998 and 2000 restored the dollar value through a ten-fold increase in the nominal value, and a further raise in 2001 to about US\$2 million stalled the rate of new entry. The Savings & Loans category has also made possible the entry of private investment to serve a particular market niche on a smaller scale than would be required for a commercial bank, although providing a challenge to the supervisory authorities. “First Allied Savings & Loans uses a group and individual savings with credit scheme with existing, registered occupation-based groups such as Butchers, Kente weavers, Carpenters, and other associations” (Chord,2000). “Savings & Loans have also been leaders in innovating. Saving s& Loan has pioneered linkages with Susu collectors and clubs, and offers a micro-leasing product to clients with at least two successful loan terms” (Anin, 2000).

2.4.3 Credit Unions

Credit Unions are thrift societies offering savings and loan facilities exclusively to members. “The first credit union in Africa was established in Northern Ghana in 1955 by Canadian Catholic missionaries. By 1968, when they were brought under legislation and the Credit Union Association (CUA) was formed as an apex body, there were 254 CUs (64 of them rural) with some 60,000 members” (Quainoo ,1997). “The number of CUs continued to grow to nearly 500 by the mid-1970s, but their financial performance was not particularly strong. Over 70 of all Ghanaian credit unions were in an 'unsatisfactory' situation as of April 1996, and 42 of them were placed in the worst category” (Camara 1996). “By the end of 2001, these ratings had improved to 60 and 15, respectively, and the share given the top rating for financial soundness had improved significantly to 29 (CUA, 2002). Most Credit Unions require borrowers to provide security, in addition to being in good standing with their deposits”(Camara,

1996). Ideally, this can be in the form of a guarantee from another member of the credit union who has adequate uncommitted savings balance. Some Credit Unions use the Susu method in the collection of deposits and loan repayments.

2.4.4 Non-Governmental and Community-Based

Non-Governmental Organizations and Community-Based Organizations have facilitated the development of good microfinance practices in Ghana by introducing internationally tested methodologies, often in partnership with Rural Micro Finance.

These methodologies often are based on group solidarity methods. and have benefited from linkages with Commercial Bank Organizations come together on the basis of some kind of location, occupations, friendship, family ties, gender, or other grounds to serve a purpose at the community level" (Chord 2000).Ghana has relatively few NGOs whose primary mission is microfinance and that have reached significant scale. Although some NGOs have active micro credit programs, they are generally multipurpose or welfare-oriented agencies. The principal exception is Sinapi Aba Trust (SAT; established 1994), which has 16 branches country-wide, offering both group-based and individual loans.

2.4.5 Money Lenders

Moneylenders were the first form of micro finance to be officially licensed in Ghana, and have long been an important source of emergency and short-term finance for the vast majority of the population lacking access to commercial financing. "By the mid1960s, money lending had become more of a part-time activity by traders and others with liquid funds than a full-time profession" (Offei 1965, cited in Aryeetey 1994).

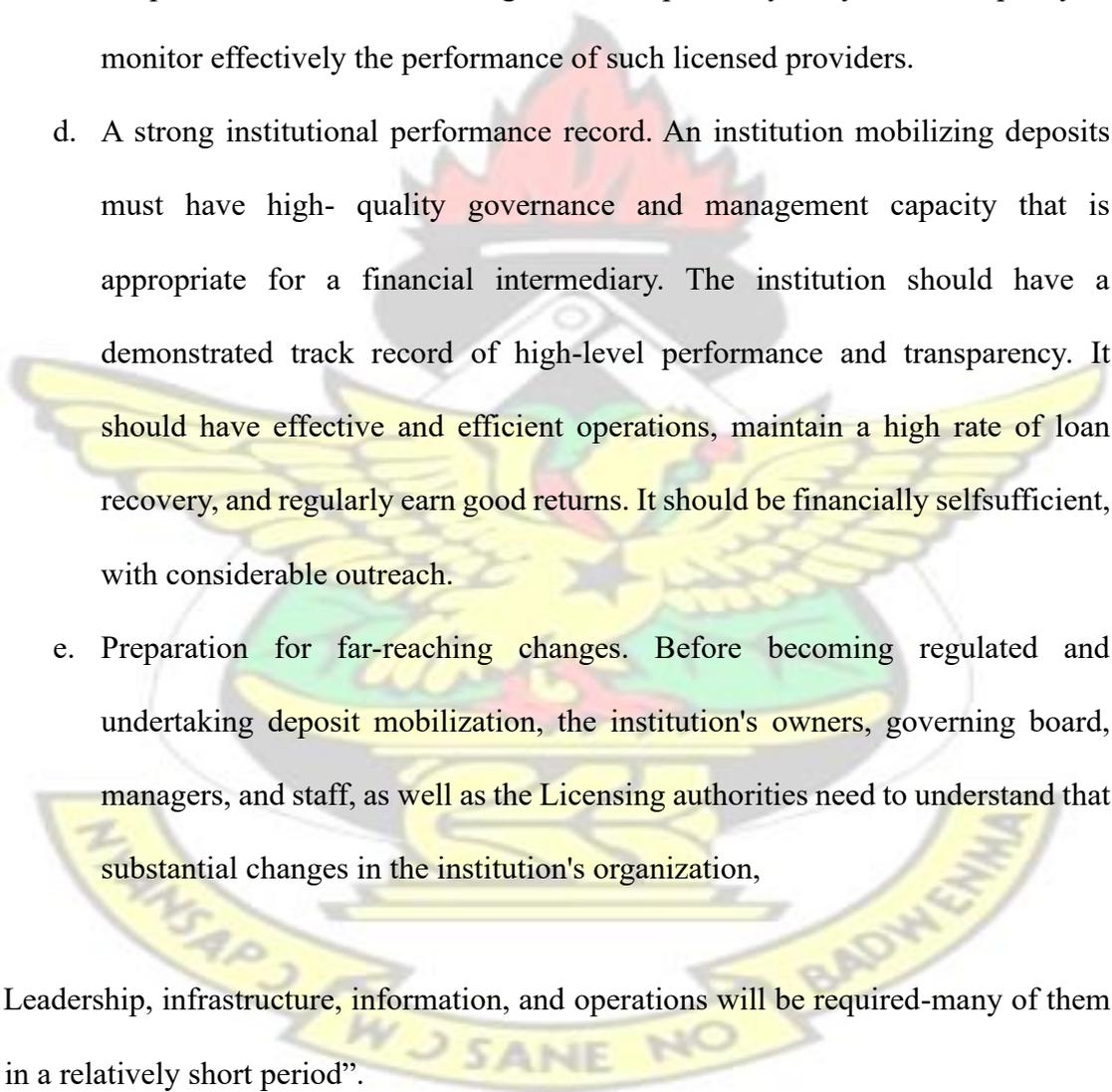
2.4.6 Susu Collectors, Associations, Clubs and Companies

The Susu system primarily helps clients accumulate their own savings over periods ranging from one month (Susu collectors) to two years (Susu clubs), although credit is also a common feature. In an effort to capitalize on Susu collectors' intimate knowledge of their clients, several Rural and Commercial Banks and Savings and Loans participated in a pilot program to provide funds to Susu. Even though they mobilize savings, the central bank has refrained from attempting to regulate them, leaving them to try to improve the reputation and quality of the industry through selfregulation. The combination of specialized categories of licensed financial institutions and traditional methodologies has succeeded both in mobilizing savings from lower-income households and giving them access to financial services that are part of the formal, supervised system.

2.5 INSTITUTIONAL CAPACITY REQUIRED FOR DEPOSIT MOBILIZATION

According to Robinson (2006), “five main conditions need to be met for a financial institution to mobilize public deposits:

- a. The political economy. Mobilizing voluntary public deposits requires at least a moderately enabling macroeconomic and some degree of political stability .
- b. The policy and regulatory environment. A reasonably adequate policy and regulatory environment is needed-or if not immediately possible, at least consistent non - enforcement of inappropriate policies and regulations. Institutions licensed to take savings from the public and to intermediate these funds need to operate in an environment characterized by liberalized interest rates and regulations appropriate for commercial micro finance.

- 
- c. Public supervision. For the protection of their customers, especially savers, institutions that mobilize deposits must be publicly supervised. This generally means that their governments must be willing to modify their standard banking supervision practices so that the rules are suitable for their activities. Appropriate supervision does not mean relaxing standards; it means applying high standards in ways that are relevant for financial service providers serving the poor. It also means ensuring that the supervisory body has the capacity to monitor effectively the performance of such licensed providers.
- d. A strong institutional performance record. An institution mobilizing deposits must have high- quality governance and management capacity that is appropriate for a financial intermediary. The institution should have a demonstrated track record of high-level performance and transparency. It should have effective and efficient operations, maintain a high rate of loan recovery, and regularly earn good returns. It should be financially selfsufficient, with considerable outreach.
- e. Preparation for far-reaching changes. Before becoming regulated and undertaking deposit mobilization, the institution's owners, governing board, managers, and staff, as well as the Licensing authorities need to understand that substantial changes in the institution's organization,

Leadership, infrastructure, information, and operations will be required-many of them in a relatively short period”.

2.6 DEPOSIT PRODUCTS

In general, an institution providing deposit services does not need a large number of products. “A savings account permitting unlimited transactions, a time deposit account

(which includes options for relatively short maturities), potentially a contractual savings account to support education, retirement, housing, or upcoming ceremonies, and, if necessary, one or two other deposit products are sufficient”(Ledgerwood, et al. 2013). “They must be carefully designed through a balance of product features, security, convenience, and price to allow them to be used in different combinations for different purposes by all types of savers-poor and nonpoor, individuals and institutions” (Robinson 2006). “Deposit products available from regulated providers include; current accounts, savings accounts, contractual savings accounts, time deposits, and long-term savings or micro pensions”. (Ledger wood, 2013)

2.6.1 Current Accounts

“Current accounts are generally considered to be more of a transaction account than a savings account. They provide the account holder with the ability to manage daily cash flows and transfer funds and make payments. Also called checking accounts or demand or site deposits, current accounts are fully liquid accounts in which the depositor may deposit and withdraw any amount at any time with no advance commitment or notice. Current accounts may be set up with automatic transfers, for example, to pay bills each month or to transfer to another account. Customers often must deposit a minimum amount to open a current account and maintain a minimum balance to keep it active. Generally current accounts do not pay any interest but charge clients fees either on a monthly or a transaction basis or both. If clients overdraw from their current accounts, they may be charged a penalty or the payment may be rejected outright”. (Ledgerwood, et al. 2013)

2.6.2 Passbook Savings Accounts

“A basic savings account or passbook savings is an account that is fully liquid (that is, money can be freely deposited and withdrawn by the account holder) or semiliquid (that is, the number of transactions are restricted). For example, for savings accounts with no minimum balance requirement, to compensate for the small balances generally held in these accounts, providers may restrict the number of monthly transactions and/or limit withdrawals to lower-cost access points such as automated teller machines or mobile phones. Passbook savings generally offer clients interest on the funds deposited, although many providers also charge transaction and other fees associated with services. The main advantages with passbook accounts are liquidity and higher interest rates compared to current or transaction-based accounts. Generally passbook savings accounts are used for short-term savings for cash flow management or for emergencies or unexpected opportunities. Interest paid is normally lower than that paid on time deposits”. (Ledgerwood, et al. 2013)

2.6.3 Contractual Savings Accounts

“Contractual savings accounts (also called commitment savings or target savings) require clients to commit to regularly deposit a fixed amount for a specified period to reach a predetermined date or amount. Clients are prohibited from or penalized for withdrawals before the maturity date. After the maturity date, the client can withdraw the entire amount plus the interest earned. Contractual savings accounts help clients accumulate funds to meet specific expected needs, such as school fees or to pay for an upcoming celebration such as a marriage. Generally the interest paid on contractual savings is similar to other savings accounts, the primary benefit being the discipline they provide. Contractual savings products can be used as a first entry point for youth

in micro finance. Often only small modifications are needed to tailor a regular product for youth, including, for example, low or no minimum balances or a link to a financial education program. An innovative savings product similar to contractual savings is borrowing for the purpose of saving” (Ledgerwood, et al. 2013).

2.6.4 Time Deposits

“Time deposits-also called fixed deposits, term deposits, or certificates of deposit-are savings products in which a client makes a one-time deposit that cannot be withdrawn for a specified period or term without penalty. At the end of the term, the client can withdraw the entire amount with interest or roll over the deposit for another term. Financial institutions offer a range of possible terms and usually pay a higher interest rate on time deposits than on passbook or contractual savings accounts because these accounts offer the institution larger amounts of money for longer periods of time at lower costs”(Ledgerwood, et al. 2013).

2.6.5 Long-Term Contractual Savings

“Long-term contractual savings (LTCS) products can be used to prepare for retirement and to build resources for life-cycle events anticipated in the future. LTCS products work much like other contractual savings products whereby clients make small regular deposits over time and then withdraw either the lump-sum amount or, like micropensions described above, with an annuity allowing a regular stream of payments over time after a certain age. Although clients appreciate the illiquid nature of LTCS products as well as the benefits of discipline (like other contractual savings products), they necessarily compare the options of investing elsewhere and the associated risks. The risk of LTCS products is that the person may die before the savings goal is reached.

This risk is addressed with retirement and life products offered by insurance companies”. (Frankiewicz and Churchill ,2011).

2.7 REASONS WHY PEOPLE SAVE

There are motivations behind customers of particular banks depositing with those banks. “People save to compensate for uneven income streams. Poor households save for various reasons; such as insurance against bad health, disability and other emergencies, investments, social and religious obligations and future consumption. Poor households save in- cash, in - kind (animals, gold, grain ,land, raw materials and the likes) use rotating savings and credit associations and other forms of financial and non-financial savings and loan associations because of limited access to appropriate deposit facilities”.(CGAP,1998). In the words of Siewersten and Facet (2009), “people save to take care of emergency and unexpected investment opportunities; managing irregular income flows; long term investments; social and religious obligations(life-crisis, ceremonies, religious holidays and pilgrimages, contributions to local funds and functions); and old age and disability”.

International Finance Corporation indicates that the purpose of savings is a key determinant in choosing bank's savings instruments. The purpose is determined by the financial pressure and urgency. The economic status client (and very often the level of education and awareness) defines the amount save to manage emergencies or smoothing consumption. The reasons why people save in Bangladesh, according to International Finance Corporation (2011) are; Savings for any future expenses. Money often is what is needed to set up or expand a business in rural areas, savings to buy land for farming or households use is a common practice:

“To finance the overseas travel expenses of sons.

Meeting daily consumption needs (food, festivals, entertainment of guest, and small medical expenses)

Marriage expenses are quite steep because of the social status attached and it creates financial pressure to save more.

With an increase income levels, investing in a savings plan for old age becomes more common”.

According to Christen and Mas (2009), savings can improve the lives of poor people in three different ways;

- a) Enhance productivity
- b) Smooth consumption
- c) Protect against shocks.

2.8 MECHANISMS FOR DEPOSIT MOBILIZATION IN GHANA

Traditionally, customers of banks walk to the banking premises to deposit money. This method of savings mobilization is not able to mop up enough savings. In response to the problem of mobilizing enough savings, many banks have devised mechanisms of generating savings. Among the mechanisms for savings mobilization identified by bank's include moving from shop to shop to collect daily deposits, the use of the Susu scheme, sending agents to economic zones to mobilize savings, among others. It is evident that the bank uses a number of mechanisms to mobilize savings. Apart from the traditional of mobilizing savings where customers walk to the bank to save, there are other ways through which the bank mobilizes savings. In addition, the bank moves from shop to shop to collect deposits. This mode of mobilizing savings is done through special arrangement with the customer. Customers who qualify must have a high sales

turnover. Other mechanisms of savings identified were the Susu scheme where Susu collectors go from home to home and from workplace to workplace to collect small daily deposits

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2.9 THE IMPORTANCE OF DEPOSIT MOBILIZATION IN GHANA (THE PERSPECTIVE OF THE BANK)

First, making finance activities. Those activities are good in wealth distribution, which can be useful for another party who needs the money. In sample nowadays, financing activities in property, car, trading, etc. are the type financing which distributed by the banks from depositor to the borrower.

Depositor acts as a people, who have more money. Borrower acts as a people, who have less money. Bank has a function as an intermediation institution who mobilizes the depositor's money. In the financial systems nowadays, financial markets have the important functions to mobilize the money. In financing activities, banks have several purposes, which are targeted. First, banks would like to get positive return on financing. Positive return will cover the net private factor in another financing; will be used for banking development, and for profit sharing between banks and depositor.

Second is provision of working capital. Next is shifting of funds into productive hands. “Moreover, the last is to stabilize bank performance in order to be a backbone of national economy. So does bank in financial market, investment functions are usually performed by Treasury Office of the bank. Treasury invests deposit for ensuring optimum utilization of available resources, rising additional resources required for meeting credit demands, and also managing market and liquidity risks”(Nissanke 1998).”. All of those purposes are the bank's strategy to make bank survive in operation of the deposit mobilization, which affected to the states economic.

2.10 INTERNAL ENVIRONMENTAL FACTORS FOR SUCCESSFUL RURAL BANKS DEPOSIT MOBILIZATION

Equity to asset ratio or capitalization is related to rural banks deposit mobilization. “Even though leverage (capitalization) has been demonstrated to be important in explaining the performance of financial institutions, its impact on bank deposit accumulation is low. 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 mobilization, however increased profitability does not always lead to gigger deposit mobilization” (Molyneux, 1993). “Moreover, an increase in capital may raise expected earnings by reducing the expected costs of financial distress, including bankruptcy” (Berger, 1995).

Another micro determinant of rural banks deposit mobilization is liquidity. “The faster an asset can be turned into money, the more liquid it is”(Freixas et. al 1998). Liquidity from the banks point of view is the “ability of the bank to meet its day to day withdrawals. Banks by accepting short term deposits (liabilities) and lending them to borrowers by loan commitments (assets) have the obligation to keep part of the deposits to meet daily demands for money” (Hull 2003). “Where the bank has enough cash to meet daily demand for money then it is liquid”(Freixas et. al. 1998). “This is not in any way a measure of soundness of the bank regarding its capital adequacy ratio. The latter is the ratio of the bank’s paid up capital and accumulated reserves (adjusted capital) to total asset, less risk free assets plus off balance sheet assets” (adjusted asset base) (GCB, 2002). A bank can be liquid but not necessarily solvent (Basel II). “Households and firms who are the bank main depositors are also affected by the concept of liquidity. The latter is based on their motives and preferences. Liquidity preference on the part of household/firms is the desire to hold money other than

assets. Thus, it is the unwillingness on the part of potential savers to part with money based on three motives; transaction, speculative and precautionary”. (Keynes 1964). “Keynes identifies that people keep money rather than investing it for the purpose of meeting daily transactions and/or making a purchase of securities they speculate to appreciate in value and/or meeting unforeseen expenditures. Speculation is higher in the developing countries with persistent inflation. In such economies people keep money in assets and these affect deposits banks receive. In an economy of political and future uncertainties lots of precautions have to be taken. People keep money and/or any form of assets rather than deposits with the banks to deal with unexpected situations such as making unplanned journeys, sickness and bereavement.

Expenditure affects liquidity and it is inversely related to deposit mobilization”.(Keynes 1964).

Again, many researches have found return on asset to be significantly related to rural banks deposit mobilization. The known measures of banks deposit 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 deposit performance 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).

Robinson (2006) has indicated that “for many years, product design was neglected in micro finance. Now the pendulum has swung, and product design is too often overemphasized by managers who sometimes appear to think that the race is won by the provider with the largest number of products. Well-designed savings products are essential, but they are only one element in a much larger set of requirements for successful mobilization of savings from the public- many of which tend to be overlooked as increasing emphasis has been placed on designing multiple products. Product delivery is far more difficult than product design. Convenience of branch location and opening hours; attitudes of managers and staff toward clients; information systems, space use, asset-liability management, liquidity, and cash management; efficiency of operations (for example, short waiting periods for savers who want to deposit or withdraw): quality of administration; quality of the loan portfolio; trustworthiness of the institution: and many other factors are crucial to capturing and maintaining public savings. Getting the structure and operations of these interlink ages right which requires experienced, skilled management at all levels-is far more important than a wide range of products. The race is generally won by the institution that demonstrates the best delivery of a few well-chosen products”.

According to CGAP (1998) “institutional governance, ownership and reputation of the microfinance institutions is key factors for successful deposit mobilization. Prior to offering voluntary deposit services, MFIs must ensure that they have the institutional structures that allow them to mobilize savings legally. “Institutional capacity requires that adequate governance, management, staff and operational structures are in place to provide savings services”. (Ledgerwood, 1998) Moreover, Klaehn (et al, 2002) expound that the “vision, commitment and disposition of the pro poor institutions are critical in successfully

mobilizing deposit from the public”. The study also added that strong professionalism in how to manage savings among the management and staff of the institutions is also a pillar for their success. According to McKee et al, 1998 “the capacity of the institution’s personnel is the most important factor of getting yes on saving mobilization”. She also stated “An appropriate governing body or bodies should be in place to oversee the MFIs management. In effect, it should be the board that makes the final judgment as to whether the other preconditions- client demand and institutional capacity- have been met.” (McKee et al, 1998) Moreover, said that “organizational structure of the deposit taking microfinance institution is also critical”. CGAP (1999) cited that “the closer the MFI gets to its clients, the larger the number of depositors with access to the facilities”. Proximity to pro poor clients and depositors drastically reduces the transaction cost of the institution. It also ensures building the trust and confidence. Risk management framework of the rural bank is another dimension that should be carefully dealt with while thinking of deposit mobilization. The risks can range from liquidity risk; where the MFI cannot be able to meet the immediate withdrawal demands of the clients. Such incidence will result in loss of confidence among pro poor clients.

According to Klaehn (et al, 2002), “MFIs should implement strong policies and practices for credit screening and risk analysis so that the loans financed by savings will return back”. CGAP (1998) cited that in order to manage the risk properly, “deposit taking microfinance institution should implement strict borrower screening, diversifying the loan portfolio, monitoring borrowers and following sound provision policies”. Asset and liability management is the core of conventional banking business. The same is true for rural banks if they are taking deposit from the public. Brom (2009) expounds that even “the biggest microfinance institutions need to pay attention to their balance sheet to manage financial risks”. Sound asset and liability management is critical to help MFIs asses and

manage financial risk. On the other hand, the importance of market research and strong management information system has also been stressed in most scholarly articles on the performance of deposit mobilization. In addition, security and internal control of the institution has to be strengthening while going for voluntary deposit.

2.11 THE EXTERNAL ENVIRONMENTAL FACTORS WHICH DETERMINE DEPOSIT MOBILIZATION IN GHANA.

2.11.0 INTRODUCTION

The external environmental factors which have been discussed in this study include the macroeconomic factors which are; deposit interest rates, taxation, open market operation or money supply, inflation, income levels, government expenditure, and liquidity reserve requirements

2.11.1. INTEREST RATE

“Interest rate is the price for money that depositors receive from the bank. This is the opportunity cost of capital that savers/borrower receive/pay by lending to/borrowing from the financial intermediaries. With regards to deposit mobilization the ruling interest rates attracts more deposits when it is comparatively higher than the rate of investment. In the developing countries the trend of the government has been the use of interest rate ceilings as a regulatory mechanism to provide cheap credit to SMEs” (World Development Report (1989). “Regulation of interest rate below the competitive market interest rates by government legislation leads to capital flight by the international investors especially where portfolio investment is significant and withdrawal of deposits domestically” (Gilbert et al, 2001). This hypothesis further argues that “freeing interest rate as part of the liberalization policy will promote deposit mobilization and ensure efficient allocation of credits to the sectors where returns can be maximized” (Laurenceson, 2004). The above arguments

confirm that, high interest rates attract savers to save more and this increases the rate of deposits banks receive.

2.11.2 TAXATION

Fiscal policy relates government revenue to its expenditure. “In Ghana taxation is the main source of government revenue and the effectiveness of which rests on its ability to generate required revenue and support investment”. (Tanzi,1991). Taxation is often defined as "the levying of compulsory contributions by public authorities having tax jurisdiction, to defray the cost of their activities". No specific reward is gained by the tax payer. Where the tax system is effectively designed to widen the base rather than imposing a high rate on the tax payers, all other things being equal, disposable income will be high and deposits will increase proportionately. Russel, (1999) acknowledges that “a tax system with high incidence on investment income reduces capital formation. On the contrary, tax subsidies increase disposable income and the ability to save more for future investment”. Hussain, (2000) advocates for “tax holidays on dividends for a period of time sufficient to boost local capital formation and increase savings. The above arguments suggest that tax policy in a country has an impact on deposit mobilization and a developing country aimed at boosting local savings must have efficient tax policies”.

2.11.3 GOVERNMENT EXPENDITURE

Government expenditure refers to all monetary expenditure on goods and services made by the government on behalf of the community. It includes both recurrent and capital expenditure on items like health, education, administration and so on. The recurrent expenditure refers to the expenditures that occur at regular intervals in the annual budget of the government. These expenses include expenditure on defense, administration and debt servicing particularly payment of interest on loans, road maintenance, and cost of health

and education services. Sahoo et al (200 I) in the Indian case “accepts that “saving is the engine of growth. Expenditure that creates jobs ensures regular income and savings, hence, bank deposits increase. On the other hand, expenditure on investment such as importation of capital goods, development of institutional and infrastructure facilities which aid private sector investments may generate employment and multiplier on savings and output in the long run. Where the latter situation holds, all things being equal, deposit mobilization will increase”.

Generally, an Increase in government expenditure injects more money into the hands of the people and assuming no change in inflation and tax rates as well as demand for more goods and services, more income will be available for savings and deposits will increase accordingly. Also, where expansionary government expenditure leads to increase in domestic borrowing, interest rates on loans increase and all other things being equal, more deposits would be attracted.

2.11.4 RESERVE REQUIREMENTS

“Out of every deposit that commercial banks receive from depositors, a proportion is set aside in accordance with the central bank directives. This reserve neither forms part of the loanable funds nor earns interest and serves as a form of liability to the commercial banks. The central bank is the repository of reserve and uses it to facilitate interbank clearance as well as bailing out banks in time of crises”.(Beim et al, 2001). “Reserve is revenue to government by making it possible to reduce the amount of interest bearing coupons that government would have issued thereby reducing cost of debt servicing. Conversely, it is an implicit tax on banks with the incidents of it being borne by depositors. This accounts for the reason why central Bank in Ghana mostly has high reserve ratios on bank deposits. High reserve requirements affect bank operations in two main ways. On one hand, it induces

banks to impose high interest rates on loans to enable them to cater for future interest rate risks, market and liquidity risks” (Hull, 2003). On the other hand, it compels banks to pay lower interest rates on savings to enable them to pay for administrative and other overhead costs. Lower returns on savings discourage deposit mobilization in an economy.

2.11.6 INFLATION

“Banks in their quest to boost deposits and increase self-sufficiency must analyze the behavior of depositors in a period of inflation. The latter is the persistent increase in the general price level for a specified period of time. Thus, it is a fall in the market value of money (purchasing power) as a result of persistent rise in prices. Real value of money declines resulting in benefit to debtors and loss to creditors” (Brealey and Myers 2003).

“From the monetarist point of view inflation is demand pull and an exogenous rise in money supply is the causality. In the short run an increase in money supply induces demand above supply of goods and services which causes prices to rise until the market adjusts to the equilibrium. The structuralist, however, argues from the effect of changes in the socio-political, economic and institutional structures with the view to increasing growth in the economy of market failures”. (Kirkpatrick and Nixon, 2002). Beim expresses the most popular view held by economists by characterising an inflationary period as the period of uncertainty, distortion of capital gains and negatively impacts on the real interest rates making markets difficult to allocate resources efficiently (Beim et al., 2001). Investors with surplus funds hold on to assets which can appreciate in value rather than money whose value are frequently eroded away. “Empirical evidence from Latin American countries as stated in the World Development Reports indicates that inflation is an implicit tax on depositors and has the capacity to reduce profits through low deposit rates. A strong correlation exists

between real interest rates and inflation as both can impact on deposits and savings”. (World Development Report, 1989).

2.11.7 INCOME LEVELS

Income level is another macroeconomic factor that affects deposit mobilization in Ghana.

“The Trade Union Congress (Ghana) stipulates that incomes in Ghana are very low despite the growth in the Gross Domestic Product (GDP)” (Trade Union Congress Report, 2004).

According to the UN report as stated by the TUC an average Ghanaian with a household of four earn 65 US cent as daily per capita income and less than \$1 a day with the exception of those in the top 20 of the income distribution living in Accra. “The GDP growth rate is 4.2 with the GDP per capita income of the country being US \$ 390. These have negatively affected national savings (Gross Domestic Savings (GDS) to be as low as

9.8 as a percentage of GDP while Gross Domestic Investment (GDI) is 24.1. of the GDP (Sowa, 2004). Incomes in Ghana differ greatly in accordance with the type of work and the place of work. The Ghana Living Standard Survey (GLSS) conducted in 2000 reveals that 86.2 of the population are in the non-formal wage employment while 13.8 are in the formal employment” (Ghana Statistical Service, 2000). This implies that formal wage employment employs less than a quarter of the labour force. Meanwhile, these are the very people dealt with by commercial banks. The people who are in non-formal wage employment should by all indications have the ability to save more numerically

2.12 COMPULSORY Vs. VOLUNTARY SAVING PRODUCTS

According to CGAP (1997) “the requirement of compulsory savings and voluntary savings implies opposing view on saving behavior of the poor”. Commonly, compulsory saving assumes that either the poor should be taught to save or the institution uses it as collateral.

On the other hand, voluntary saving reflects that the poor actually saves and appropriate financial service should be provided. “The compulsory savings approach typically clients with little or no choice of savings products (and often with no returns on their savings)” (Robinson, 2001) Mostly compulsory savings are locked in until the client repays its loan before having access to its accumulated deposits. In some cases compulsory saving is not accessible unless the client decides to drop out. Moreover, the only time client can have a compulsory saving option is only when they borrow.

Therefore, according to Robinson (2001) “compulsory saving raises client cost of loans and mostly it does not meet the needs of client’s income”. CGAP (1997) has made it clear that “institutions should start to separate savings and loans and the institutions should not try to teach clients how to save”. Instead they should teach their staff and try to understand the saving patterns and behaviors of clients and develop appropriate product.

2.13 CHALLENGES OF DEPOSIT MOBILIZATION IN GHANA

2.13.1 OUTREACHING RURAL SAVERS

In Ghana, Banks are faced with many challenges in their desire to mobilize more deposits. More than 60 of the population lives in the rural areas in isolated villages. It therefore become cost ineffective to have bank branches that can conveniently provide door step financial services to the rural inhabitants hence, their concentration in the urban and the southern part of the country (Jones et al, 2000). In many instances bank are forced to close down their branches. Gockel (2003) observed that “between 1989 and 1998, then SSB closed down 32 rural branches and Barclays and Ghana Commercial Bank closed down 16 each for the purpose of cost reduction”. He further observed that none of the newly established banks in the 1990s had branches outside the cities of Accra, Kumasi or Tarkoradi. Banks therefore battle with the problem of how to effectively harness the large

volume of deposits left in the rural areas. On the other hand Rahman(1998) shows that “lack of proximity is one of the major reasons for not depositing with formal financial institutions”.

2.13.2 REGAINING CONFIDENCE IN THE BANKING SECTOR

The Banking sector in Ghana has not fully regained the confidence that many customers lost; thus making deposit attraction difficult. This could be due to partly the attitude of bank staff towards customers and the government action of controlling the operations of the banks. In the early 1980s most depositors had their deposits frozen because of the government's decision to withdraw fifty cedi notes from the money in circulation. Depositors are therefore reluctant to deposit in the banks for the fear of suffering similar action. In other instances depositors have been subjected to bank officials brutalities in the country, leading to a loss of confidence in the banking system which has resulted in the low deposits that banks receive in Ghana.

2.13.3 UNSTABLE MACROECONOMIC CONDITIONS

Another problem militating against deposit mobilization in Ghana is the unfavorable macroeconomic environment with high inflation and reserve requirement and their associated low returns on deposits. In a period of high inflation, hedging is inevitably a prudent measure depositors pursue in order to enjoy future appreciation of value. Thus, more deposits are redirected into the purchase of real estate properties. The high reserve requirements of 44 (Bank of Ghana Statistical Bulletin- Up to January 2005,) compose of both secondary and primary reserves in addition to high tax and a 10 development levy reduced the volume of loanable funds which subsequently reduce returns on investment and deposits. Currently, the reduction of reserve requirement to 15 still has the tendency to erode loanable funds and reduce interest payments, thereby discouraging deposit mobilization.

Deposits are withheld in a period of unstable macroeconomic environment. CGAP (1998) has stated that factors such as hostile macroeconomic and financial sector environment; absence of regulatory framework tailored to the special characteristics of MFIs; and more sophisticated capabilities are among other things, the major challenges banks face in mobilizing savings.

2.13.4 INSUFFICIENT INSTRUMENTS

Currently, the main instruments used to attract deposits in Ghana range from the simple savings and current accounts that require unaffordable initial deposits, money remittances business, branch expansion, corporate imaging, negotiable interest rates, promotion and advertisements, overdrafts and loan facilities to complex internet, telephone and ATMs. These instruments in the first place are not sufficient to cater for the financial needs of all the settlements. They favour regular and formal service income earners than the informal workers such as artisans, fanners and other small scale operators who are the majority. Customers require literacy to utilize these instruments which majority of the population especially the rural inhabitants do not have. Also, Dowla and Alamgir (2003) noted that “low saving could reflect a supply constrained, as poor households have few alternatives to deposit cash savings or convert their savings into assets”.

In conclusion, this study is different from previous works done by others, because it examines core internal determinants of deposit mobilization by rural banks in Ghana and then assesses the quantitative importance of these determinants. Attention is drawn to the need to generate and mobilize scarce capital funds through the development of domestic financial institutions. Because of specialization, rural banks in particular assist in the efficient allocation of resources from surplus units to where they are most needed thus improving investment and bringing about economic growth. The focus is on deposits in rural banks, and its mobilization of these deposits and how the rural banks use these savings

for capital formation. Attention is drawn to rural banks because of their activities aimed at providing small to medium term capital aimed at reducing poverty. Added to this are two other reasons – the increasing number of rural banks in the country has significantly contributed to restoring the confidence of depositors in the banking system

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter covers the sources of data and the research design. It explains the type of data used for the study and the techniques employed in identifying the factors that influence the mobilization of deposits, identifies the challenges facing rural banks in deposit mobilization and offers recommendation. The validity and reliability of the data were also high –lighted.

3.1 SOURCES OF DATA

The research depended on mainly secondary sources of data.

3.1.1 Secondary Data

The data were sourced from 112 rural banks and were basically from the quarterly financial reports compiled by the secretariat of ARB Apex Bank.

3.2 RESEARCH DESIGN

“A research design is the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of the study” (Yin, 2003). The study combines both qualitative and quantitative techniques in analyzing data.

3.2.1 Qualitative Data

The qualitative technique involves a functional and systematic approach to appreciating the role banks play in economic development. It focuses on the theoretical reasons why people

save, the various savings products of rural Banks and the benefits of savings. These functions include mobilizing savings, allocating capital, facilitating the trading of risk, monitoring managers, and easing the trading of goods, services, and other financial contracts. This approach provides an analytical framework for understanding the contribution of the functions of banks to economic growth in Ghana. Each function is examined in the light of theories on how it may affect capital formation or technological innovation using savings. The functions performed by banks affect steady-state growth by influencing the rate of capital formation through the change of savings rate and reallocating savings gathered to more efficient capital formation technologies. This process has been developed to growth models by researchers including Rebelo (1991) and Romer (1990).

3.2.2 Quantitative Data

The quantitative approach takes after the mathematical models of earlier economists like Shaw (1973), and McKinnon (1973) who focus on money. It involves the use of regression analysis in estimating the relationship between rural banks deposits and variables that emerge as its determinants or explanatory variables. The rural bank deposit is the dependent variable, while Equity to Asset ratio (CAP), Liquidity Ratio (LRISK), Loan to Asset ratio (CRISK), Return on Asset (ROA) or profitability, Bank size, represent the independent variables. The choice of regression analysis is ideal because Koop (2006, p.49), argues that „it is the most important tool applied economists use to understand the relationship among two or more variables particularly in the case where there are many variables and the interactions between them are complex”.

3.3 SELECTION OF VARIABLES

This section deals with the analysis of variables for determining rural banks deposit mobilization. A summary of the variables and how they are measured is presented in table

3.1.

3.3.1 Dependent variables

In this study, rural banks deposit has been used as the dependent variable. Deposit represents the total accumulated amount of customer's financial savings with the rural banks. The performance of rural banks is best measured by the size of its deposit liabilities. A large portion of rural banks asset base is often finance by their deposit mobilization. For instance, a rural banks ability to lend more loans to its customers will be determined by the size of its deposit. The growth of the bank is therefore subject to its ability to mobilize more deposit at cheaper cost from the general public. In view of this it is worth studying and identifying the major determinants of efficient deposit mobilization.

It must also be quickly added that, management of customer's deposits is so much important that, failure to put in place good financial strategies may lead to a run on that particular rural bank.

3.3.2 Independent variables

The variables that determine rural bank's deposits mobilization are broadly categorized into two namely: internal or institutional – specific variables and external variables. The former variables reflect the characteristics of the bank that are as a result of management decisions such as equity to liquidity ratio, loan to asset ratio, and return on asset ratio. “The later variables of external factors do not reflect the features of the bank and are not related to bank management, but reflect the specifics of the industry and macroeconomic environment within which the bank operates” (Curak et al., 2012). However, due to data constraints in respect of external factors, the scope of this study is restricted to the banks specific factors. The following variables are included in the deposit determinants model: equity to asset ratio, liquidity ratio, loan to asset ratio, and return on asset ratio and bank size.

Table 3.1 Variables, definitions, notations and expected signs

Variable	Definition	Notation	Expected sign
Dependent variable			
Deposit mobilization of rural banks	Rural banks deposit mobilization	DEP	
Independent variables			
Capitalization	Equity capital divided by total assets	CAP	+
Liquidity	Cash and due from balances held at other depository institutions to total asset	LRISK	+
Loan to asset	Total loans divided by total assets	CRISK	+
Return on asset	Profit before interest and tax divided by total assets	ROA	-
Bank size	Natural logarithm of total assets	BSIZE	+

Source; the author's construction (2015)

3.3 TARGET POPULATION AND SAMPLING METHODS

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 consists of all Rural Banks in Ghana. According to 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 one hundred and twelve (112) rural banks in Ghana that existed between the years 2009 to 2013. A few of the Rural Banks have been left out because of insufficient or unavailable data.

3.4 MODEL SPECIFICATION

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

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

$$DEP_t = \beta_0 + CAP_{t-1} \beta_1 + BSIZE_{t-1} \beta_2 + LRISK_{t-1} \beta_3 + CRISK_{t-1} \beta_4 + ROA_{t-1} \beta_5 + \mu_t$$

Where DEP_t is the dependent variable and represents the total amount of deposits held by all rural banks for period t , CAP_t represents the equity to asset Ratio for period t , $BSIZE_t$ represents the natural logarithms of total assets, $LRISK_t$ represents Liquidity ratio for time t , $CRISK_t$ represents Loan to asset ratio and ROA_t also represents. Return on assets, μ_t represent the stochastic error term of the linear regression model. It also represents all the relevant variables, which were omitted from the model as well as the random errors from the estimation process. This may include variables from the external environment such as inflation, interest on deposit, exchange rate, investment income, and Gross Domestic Product (GDP), which is likely to influence the study. This is because some of these error variables can be influential as well as correlated to the variables under study. β represent the estimated parameters or represent the slope co-efficient to the dependent variable.

3.5 ESTIMATION PROCEDURE

This study used deductive approach as it tried to find the relationship that exist between real deposit, equity, liquidity, loans, profitability, and size within the Ghanaian economy. The multiple regressions are used to statistically establish the model for the study by expressing, testing operationally fit and examining the outcomes.

Under the ordinary least squares estimation (OLS) of regression models, the assumptions of no serial correlation of the error terms as well as a constant variance of the error terms are held. The logarithm values of the time series data were taken before Ordinary Least

Square (OLS) techniques were used for estimating a model for bank deposits. The logarithm is used in the model in order to transform the non-linear data into linear form. An econometric analysis of the determinants of financial savings (deposits) in banks is carried out with data covering 2009 to 2013.

3.6 ANALYTICAL TOOLS AND TECHNIQUES

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

3.7 DATA ANALYSIS METHODS

Creswell (2005) defined data analysis as a “process which involves drawing conclusions and explaining findings in words about a study”. Multiple regression analysis is conducted using Panel Least Squares regression with FEs, to determine the exact nature of the relationship that exist between deposits, equity, size, liquidity, loan and profitability of the selected rural banks over the period under study. Prior to the estimation of the regression line, descriptive analysis is used to describe the behaviour of the individual variables over the period under review.

3.8 VALIDITY AND RELIABILITY OF DATA

Reliability of data concerns its consistency. Thus, reliability refers to the extent to which the data is the same irrespective of their source. That is, the data specifically, the annual reports of the rural banks and publications of Association of Rural Banks Apex Bank were not at variance with each other and therefore were reliable. This study, however, is threatened by the fact that the data used was mainly from secondary sources and therefore any error from that data collection process will definitely affect the outcome. The methodology used for

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

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CHAPTER FOUR PRESENTATION OF DATA ANALYSIS AND DISCUSSION

4.0 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 deposit performance as presented in chapter three of the study. Then in section 4.3, the regression results of the study are presented. This looks at how the variables in the model explain the mobilization performance of rural banks. Finally, the challenges facing rural and community banks are presented.

4.2 DESCRIPTIVE STATISTICS

Table 4.1 Descriptive Statistics of Independent Variables

Variables	CAP	LRISK	CRISK	ROA	BSIZE
Mean	0.04	16.39	45.01	2.27	15.62
Median	0.03	14.23	41.02	2.05	15.64
Maximum	0.056	2,664.49	4,973.33	69.40	18.85
Minimum	0.00	-1.66	0.00	-26.96	12.56
Std Dev	0.04	56.39	141.75	2.84	0.93
Observations	2238	2238	2238	2238	2238

Notes: CAP is the equity to asset ratio or capitalization, LRISK is the liquidity ratio, CRISK is the loan to asset ratio, ROA is the return on asset or profitability, BSIZE is the bank size. Source: Authors construction (2015)

Details of information on the mean of variables, the median of variables, the standard deviation of variables, Minimum, Maximum standard error as well as the total observations as reported by the data over the period 2009 to 2013 is presented in Table 4.1 above. It can be observed that dispersion of variables over the sample period is quite high. The total number of observation is

2238. The Table shows an average ROA of approximately 2.26%, meaning an average rural bank in the sample has been able to achieve an average return of 2.26% on its assets in the period under review. This is below the 2.35% mean ROA reported by Flamini et al. (2009) from their analysis of 389 banks in 41 SSA countries. However, while the maximum ROA of the 389 banks in SSA countries is 16.03% and minimum -11.57%, Table 4.1 above indicates that the maximum and minimum ROA are 69.41% and -26.97% respectively. Mirzaei et al.(2013) report from their study from emerging economies that the mean ROA and ROE are 1.43 and 13.385, respectively, for commercial banks and 1.52 and 12.78% respectively, for non-commercial banks. However, in advanced countries, they find 0.6 and 9.16% as mean ROA and ROE respectively, for commercial banks and 0.34 and 5.43% respectively for non-commercial banks. Compared to the mean ROA reported in Table 4.1 it can be observed that the RCBs are enjoying much returns which reinforces the position of the extant literature that “bank profitability in Africa is considerably high” (Flamini et al.,2009). The expectation is that high profitability will lead to increased deposit mobilization. A look at the mean of each of the explanatory variables appears relatively satisfactory. The study has further shown that equity to asset ratio of the RCBs has the highest mean and standard deviation an indication of its strong influence on deposit mobilization in Ghana.

4.6 TESTS FOR MULTICOLLINEARITY

Table 4.2 Pearson correlation matrix

Variable	CAP	LRISK	CRISK	ROA	BSIZE
CAP	1				
LRISK	-0.0032	1			
CRISK	0.0016	0.0021	1		
ROA	-0.1119	-0.0256	0.0026	1	
BSIZE	-0.5148	-0.0533	0.0170	0.2606	1

Notes: CAP is the equity to asset ratio or capitalization, LRISK is the liquidity ratio, CRISK is the loan to asset ratio, ROA is the return on asset or profitability, BSIZE is the bank size. Source: Authors construction (2015)

Table 4.2 shows the correlation matrix for the variables under review.

The coefficient correlation analysis of the explanatory variables was conducted to ascertain the level of interrelationship between the variables. It can be seen from the above matrix that the correlations among the various independent variables are very low, an indication that the problem associated with multicollinearity have been dealt with. Thus the analysis demonstrates a strong linear relationship between the variables.

4.3 REGRESSION RESULTS

The Table 4.3 summarizes the results of the empirical findings. The R-Square (Goodness-of-fit statistics) helps to determine whether the model adequately describes the data. For instance R-Square from the analysis of the Rural Banks deposit mobilisation stands at a high figure of 0.9745 indicating that 97.5% of total variation in the deposit mobilisation of the institutions can be explained or accounted for by the equity to asset ratio, liquidity ratio, loan to asset ratio, return on asset ratio and bank size. Apart from the R² figure of 97.5%, the results give the Durbin – Watson statistics of 2, and the F- statistic of 52%.

Table 4.3 Results of panel least regression Dependent variable: Deposit mobilization

R² = 0.97, Adj. R² = 0.97

Full model (2009Q1 -2013Q4)			
Variable	Coefficient	t- value	p- value
CAP (-1)	-0.0028	-0.2426	0.8083
LRISK (-1)	0.0430	4.9684	0.0000
CRISK (-1)	0.0445	3.2103	0.0013
ROA (-1)	-5.9300	-0.0093	0.9925
BSIZE (-1)	0.3757	15.6382	0.0000
Constant	9.2546	24.6824	0.000 ⁰

N=2238

Durbin – Watson stat = 2

F – statistic = 527.66**

Hausman test: $\chi^2 = 95.67^{****}$

Likelihood ratio (X^2) = 1,028.35***

Notes: CAP (-1) is the logged equity to asset ratio or capitalization, LRISK (-1) is the logged liquidity ratio, CRISK(-1) is the loan to asset ratio, ROA (-1) is the return on asset or profitability, BSIZE (-1) is the bank size.

Source: Authors construction (2015).

Furthermore, the results of this study show a significantly positive effect of most of the variables on rural bank performance as measured by their deposit mobilization. The result is statistically significant and in line with most studies on the determinants of bank deposit mobilization. The Table 4.3 above also reports the Hausman test, which suggests that the FEs model is the best estimation technique to be used for the analysis. The null hypothesis has been rejected by the regression results to indicate that the difference between the coefficient of the FE and RE models is not significant. This is buttressed by the fact that, the probability of the $\text{Chi}^2(X^2)$ is less than 0.05 ($X^2 95.67, df=5, p<0.001$). The significance level of 0.000 show that the probability of the values in the tables occurring by chance alone is less than 1%. It can therefore be concluded that the relationship between the dependent variable (Rural banks deposit) and the independent variables (equity to asset ratio, Liquidity, LA, ROA, and Bank size) is extremely unlikely to be explained by chance factors alone as indicated in this report. The model can therefore be relied upon for a good prediction of the results as it has been reported.

The equity to asset ratio also known as the capitalization of the rural banks was found to negatively insignificantly influence rural banks deposit accumulation meaning a rise in capital requirements might lead to lower levels of deposit and vice versa. This is in view of the fact that, a huge equity at the disposal of the rural banks makes the institutions feel reluctant to pursuing aggressive and expensive mobilization agenda for which reason the universal banks have relegated the industry to the background. Thus as rural banks accumulate more equity; they tend to focus their attention on their own funds to run their institutions rather than wasting resources to mob up excess liquidity in the system.

Again, the results indicated that liquidity ratio thus cash and due balances held at other financial institutions to total assets is positively correlated with rural banks deposit growth rate. This suggests that as liquid assets of rural banks increases deposit mobilization also increases and vice versa. A rural bank ability to mobilize more deposit from the public will reduce if its liquidity position is unacceptable. A strong liquidity position will mean that the bank is able to meet customer's withdrawal and other short and long term obligations of the bank. This makes customers to build strong confidence and trust in the institution there by finding it as the suitable place for storing their assets.

The coefficient of loan to asset ratio is positively and significantly related to rural banks deposit mobilization. A rise in the loan portfolio of the bank has a significant impact on the banks' ability to attract deposit from the general public and in the same vein a reduction in loan portfolio can reduce a banks deposit growth rate. Most deposit customers of rural banks have the desire to contract loans from the bank they save with after a certain point in time. The banks failure to meet this expectation will cause a sense of disappointment in the customers and hence may stop contributing or saving with the bank.

However, the banks' ability to deliver on its promises of providing loans to the clients has the potency of attracting several deposit customers.

Return on asset, representing profit before interest and tax, was found to have a negative relationship with bank deposit mobilization but the relationship is however insignificant according to the model in Table 4.3. An increase in profit leads to a decrease in rural deposit mobilization while a decrease in deposit mobilization can be attributed to fallen profitability. The insignificant nature of this fact could be due to the fact that in Ghana, the customers of rural banks are not ways better informed about the financial performance of a

rural bank. Besides rural depositors do not see any motivation in rural banks profit since they are not the ultimate beneficiaries of the profits.

The coefficient of size (log of assets) is positive and significant, suggesting size is important in explaining deposit performance of rural banks, with this finding being consistent with most studies of Western banks, where size has a positive influence on performance, which is often attributed to benefits achieved through economies of scale. But it is inconsistent 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”. Bigger banks are able to open branches at the convenience of depositors. As the rural bank gets closer to the people, more people are able to save.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter gives a summary of the results of the study and discussion of the conclusions drawn from the study, and provides recommendations for policy makers and for future research.

5.1 SUMMARY OF THE FINDINGS

The study used the case of the rural banking system in Ghana, and sought to empirically ascertain or investigate some of the micro determinants of rural banks deposits mobilization from the public using data collected from 2009Q1 to 2013Q4.

From the Panel Least Square regression results, the study finds that the main determinants of rural banks deposits accumulation in Ghana are; liquidity or liquidity risk, loan to asset ratio or Credit risk, and Log of asset or bank size. The results find a strong relationship among the desired variables.

The study has found out that equity to asset ratio or capitalization is inversely insignificantly related to rural banks deposit mobilization. This contradicts the researcher's expectation that a rise in capital could lead to an increase in deposit mobilization.

Again, the study has shown that, credit risk is instrumental to deposit mobilization. This is in line with the study's expectation. The correlation is so strong and pointing to the fact that, the larger the loan sizes the bigger the size of deposit mobilization and vice versa.

Furthermore, the result of the regression has revealed that, liquidity is significant and positively related to rural banks deposit mobilization. Liquidity is the cash and bank balances held with other depository institution.

One other finding of this study is that, the size of a bank is very significant in predicting deposit accumulation of a rural bank in Ghana. Bigger banks enjoy economies of scale which even makes them operate at lower cost of capital. Once again, this revelation confirms the researcher's expectation of positive correlation. This explains why bigger rural banks enjoy competitive advantage than the smaller ones and are able to mobilize more.

Finally, return on assets (ROA) representing the profitability of a bank has shown to be inversely less significant to rural banks deposit mobilization.

5.2 CONCLUSIONS

The general objective of this study is to examine whether equity to asset ratio or capitalization, liquidity ratio or liquidity risk, loan to asset ratio or credit risk, return on asset or profitability and log of assets or bank size are the factors that determine rural banks deposit mobilization in Ghana. The research included 112 rural banks in Ghana out of a total number of 137. These banks have been selected depending on the availability of their quarterly data from 2009Q1 to 2013Q4. Total observations made over the period were 2238.

Panel least regression with fixed effects has been used for analysis. The results of the findings suggest that, liquidity ratio, loan to asset ratio and bank sizes are significantly and positively determinants of rural banks deposit mobilization.

The conclusion from the study is that rural banks can improve their deposit mobilization performance by strategizing around these variables.

5.3 RECOMMENDATIONS

Following up on the findings that, liquidity position of a rural bank is significant to its deposit mobilization, it is recommended that the Bank of Ghana, being the main supervisory body should as a matter of policy strengthens its liquidity reserve requirements of the rural

banks by making sure that they keep enough cash and near cash assets. This will enable the banks to win the trust and confidence of their customers, hence increase in deposit mobilization.

Again, the above results suggested that a loan to asset ratio or credit risk is very crucial in rural banks deposit mobilization. The implication is that the credit management practices of the rural banks should be a matter of concern to all relevant authorities especially the Board of Directors. The right credit policies should be put in place to minimize credit risk. In view of this the banks will be able to grant more loans to attract bigger deposits.

Another significant revelation of this research is that, the size of a rural bank has an impact on its deposit mobilization. It is therefore implying that any rural bank that wants to be serious with deposit mobilization should reduce its dividend payout and apply portions of its profitability to increase its presence in the banking industry. Rural banks in Ghana do not usually commit part of their profits into village development. In many cases the huge profits declared are only paid as dividends. The rural savers therefore see rural banks as institutions belonging to the rich. However, evidence from the GCB Quarterly Economic Review, (2003) confirms that banks which are used as media for micro projects in the villages increase their rural customers. Rural banks would increase deposits should they apply part of their accumulated profits in developmental projects at the community level.

A further study into this area of research should take into consideration, an analysis of macroeconomic indicators on savings mobilization in different Region of Ghana. An extended research into this area of study, which will consider a cross-section of communities at both regional and household levels, will support the robustness or otherwise of the findings and conclusions drawn from this study; and for future policy direction for individuals, businesses, institutions of state, and other countries which share similar

economic conditions. It will help in the in-depth understanding of the nature and determinants of aggregate national savings and mobilization particularly in developing economies.

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APPENDIX

Dependent Variable: LOG(DEPOSITS)

Method: Panel Least Squares

Date: 07/31/15 Time: 13:08

Sample (adjusted): 2009Q2 2013Q4

Cross-sections included: 112

Total panel (unbalanced) observations: 1978

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.254602	0.374947	24.68244	0.0000
LOG(EA(-1))	-0.002837	0.011690	-0.242653	0.8083
LOG(LIQUIDR(-1))	0.043091	0.008673	4.968441	0.0000
LOG(LA(-1))	0.044572	0.013884	3.210352	0.0013
LOG(ROA(-1))	-5.93E-05	0.006314	-0.009386	0.9925
LOG(ASSETS(-1))	0.375715	0.024025	15.63827	0.0000

Effects Specification

		LIQUIDR		ROA		
Mean	0.041648	16.38776	45.01463	2.266676	15.62470	15.32156
Median	0.032062	14.23041	41.02680	2.052832	15.63673	15.33794
Maximum	0.561063	2664.494	4973.993	69.40952	18.85090	17.75337
Minimum	0.001377	-1.661603	0.000000	-26.96963	12.56259	11.76410
Std. Dev.	0.044459	56.39239	141.7538	2.840332	0.930379	0.953099
Skewness	5.857801	46.30071	33.05342	4.368152	-0.206221	-0.175478
Kurtosis	48.96999	2174.642	1105.949	159.2264	3.070583	3.086665
Jarque-Bera	209858.7	4.41E+08	1.14E+08	2283041.	16.32725	12.18602
Probability	0.000000	0.000000	0.000000	0.000000	0.000285	0.002259
Sum	93.20809	36675.82	100742.7	5072.821	34968.08	34289.66
Sum Sq. Dev.	4.421674	7113889.	44950563	18046.96	1936.361	2032.084
Observations	2238	2238	2238	2238	2238	2238

PEARSON CORRELATION MATRIX

	EA	LIQUIDR	LA	ROA	LOG(ASSETS)
EA	1.000000	-0.003227	0.001609	-0.111939	-0.514792
LIQUIDR	-0.003227	1.000000	0.002112	-0.025681	-0.053323
LA	0.001609	0.002112	1.000000	0.002562	0.017059
ROA	-0.111939	-0.025681	0.002562	1.000000	0.260630
LOG(ASSETS)	-0.514792	-0.053323	0.017059	0.260630	1.000000

	EA	LA	LOG(ASSETS)	LOG(DEPOSIT)
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Cross-section fixed (dummy variables)

Period fixed (dummy variables)

R-squared	0.974597	Mean dependent var	15.42674
Adjusted R-squared	0.972750	S.D. dependent var	0.902899
S.E. of regression	0.149047	Akaike info criterion	-0.903293
Sum squared resid	40.94253	Schwarz criterion	-0.521783
Log likelihood	1028.357	F-statistic	527.6618
Durbin-Watson stat	1.822525	Prob(F-statistic)	0.000000

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi -Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	95.672990	5	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LOG(EA(-1))	0.103260	0.061129	0.000038	0.0000
LOG(LIQUIDR(-1))	0.041930	0.051038	0.000006	0.0002
LOG(LA(-1))	0.109163	0.105739	0.000054	0.6422
LOG(ROA(-1))	0.009128	0.007268	0.000002	0.1684
LOG(ASSETS(-1))	0.944809	0.970435	0.000028	0.0000

