UNIVERSITY OF DEVELOPMENT STUDIES

FACTORS INFLUENCING BANKING DISTRESS IN GHANA: A CASE STUDY OF SELECTED RURAL BANKS

BY

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DECLARATION

I hereby declare that this dissertation is my own work and that, to the best of my knowledge, it contains no material previously published by another person or 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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William Angko (Supervisor) ..... Signature 2/10/17 Date

DEDICATION

Dedicated to my lovely Family especially my mother

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ABSTRACT

Banking institutions play a vital role in developing economies especially from the perspective of mobilization of funds and subsequent provision of capital for economic development. The saving and investment gap in rural regions of developing economies has led to the establishment of rural banks in these developing economies. Specifically in Ghana, there has been an upsurge in the establishment of rural banks currently standing at 140. A major constraint facing rural banks is financial distress. By and large, distressed banks face liquidity and solvency problems. This phenomenon has the potential to affect the smooth operation of the banking sector. Building on current research, this study was primarily undertaken to identify the determinants of financial distress among selected rural banks in Ghana. Related objectives were to assess the measures employed by regulatory authorities to curb financial distress and to assess the degree of distress among selected banks. To achieve the research objectives, both primary and secondary data spanning 2010-2014 were collected from the published financial statements and management staff population units of the respective banks respectively. Specifically, management staff of the sampled rural banks were interviewed to get their views about the causes of financial distress as well as the relative effectiveness of distress management measures. Additionally, the logit model was used to assess the level of distress of selected rural banks. Based on the outcome of the study, it was established that the determinants of distress are poor management, adverse economic conditions, inadequate supervision, information asymmetry regarding customers, and under capitalization. Also, distress management measures were identified as financial assistance, poor supervision, change in composition of management, liquidation of distressed banks and the formation of mergers and acquisitions. Two banks out of the four banks selected in the study were found to be in distress. From a policy and practical perspective, the findings of the study demonstrate the need for proper banking supervision, collaboration among financial institutions to reduce the level of information asymmetry, proper management decisions, the creation of a stable macro-environment and adequate level of capitalization to curb banking distress.

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List of Abbreviations

ADB:	Agricultural Development Bank
BCC:	Bank for Credit and Commerce
BED:	Bank Examinations Department
BHC:	Bank for Housing and Construction
BOG:	Bank of Ghana
BSD:	Bank Supervision Department
C:	Cedi
DFI:	Development Finance Institution
ERP:	Economic Recovery Programme
FI:	Financial Institution
FINSAP:	Financial Sector Adjustment Programme
FSAC:	Financial Sector Adjustment Credit
GCB:	Ghana Commercial Bank
MBG:	Merchant Bank Ghana
NBFI:	Non-Bank Financial Institution
NIB:	National Investment Bank
NPA:	Non Performing Asset

NPART:	Non-Performing Assets Recovery Trust
NSCB:	National Savings and Credit Bank
SCB:	Standard Chartered Bank
SDCI:	Securities and Discount Investments
SOE:	State Owned Enterprise
SSNIT:	Social Security and National Insurance Trust
SSB:	Social Security Bank
TB:	Treasury Bill
CAMEL:	capital, asset quality, management, earnings, and liquidity

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The development of a country essentially depends on the development and growth of all economic activities. The financial system is the ultimate medium for achieving economic growth and development of a country, and it is involved with the channeling of financial resources from the surplus to the deficit sector. Non-Banking Financial Institutions play a very important and significant role in the development of the financial support to the people by offering a range of products and services. They compete with the commercial banks by providing similar services and hence put pressure on the commercial banks to become more efficient and responsive to the needs and requirements of their customers (Subina and Goswami, 2012). This means if the financial system of an economy is repressed and distorted, it can intercept and destroy impulse of development.

Moskow (1995) contends that banking industry by nature of its activities, is among the most heavily regulated financial sector in both developed and developing countries. As financial intermediaries, banks assist in channeling funds from surplus economic units to deficit ones to facilitate business transactions and engender economic development. Since these funds are earned by third parties, prudence demands that such funds should be efficiently managed to boost the confidence of depositors in the banking industry.

However, where the bank fails to pay back or execute its duties, obligations and responsibilities, the problem arises and the act of savings, investments and economic growth will be stifled.

Banking distress occurs when a bank experiences illiquidity or insolvency resulting in a situation where depositors anticipate loss of their deposits and consequent breakdown of contractual obligations. The problem of banking distress has been witnessed in Ghana across several types of banks such as merchant banks, commercial banks and universal banks (Adeji and chakravati, 2012). This development has often led to the emergence of mergers and acquisitions in the banking industry. Mergers and acquisitions are done in order to arrest systems decay, restoration of public confidence, building of strong, competent and competitive players in the global arena, ensuring longevity and higher returns to investors. Considering the inability of most Ghanaian banks to perform well due to operational hardship, expansion bottlenecks as a result of heavy fixed and operating costs coupled with volatility between deposits and lending rates, the banking sector reforms embarked on by the Bank of Ghana in the year 2008 even led to the acquisition of banks such as the acquisition of Intercontinental bank by Access Bank. However, the problem of banking distress is very pronounced in the rural banking sub sector of the banking industry. This was affirmed by the parent body of all rural banks in Ghana, ARB Apex Bank in its report in 2014. This report revealed that twenty rural banks are in distress and had to be bailed out to a tune of 5.7 million in 2014 to ensure their survival and continuity in the banking industry.

Management of distress however requires financial information of which financial statements play a key role. Hermanson et al. (1983) opine that financial statements

analysis draws attention to significant relationships and trends. The authors further maintain that information obtained from such analysis is useful in assessing past performance and current financial positions which is the consequence of prior decisions. Oforegbunam (2011) is of the view that financial ratios analysis in most cases provides the analyst with clues and symptoms of underlying conditions. Ratios when properly analyzed and interpreted can also point the way to areas requiring further investigations and inquiry.

Against this background, this study among other objectives has the basic intent to apply financial ratio analysis based on a logit model to determine the extent of bank distress of rural banks in Ghana. What are the causes of banking distress in Ghana? What measures are employed to control the incidence of banking distress and to what extent are the measures employed address the problem of distress? Can ratio analysis be used to predict banking distress? These questions constitute the core focus with which this study grapples with.

1.2 Statement of the Problem

The problem of distress in the banking industry has been a worldwide phenomenon. Kama (2010) demonstrates the pervasive nature of banking distress worldwide. According to the author, banking distress has been witnessed in countries such as Spain in the era between 1979 and 1982, the United States within the same timeframe leading to the merging of 1,506 thrift banks, 111 terminated and 65 liquidated, and the United Kingdom between 1973 and 1976 where 18 fringe banks were either reconstituted or merged. In Ghana, several banks especially rural banks are plagued with liquidity constraints due to poor management and improper

internal controls (Ghana News Agency, 2015). This problem of banking distress in Ghana has also been underscored by the Association of Rural Banks, Apex Bank, the parent bank which oversees the operations of the rural banks under the tutelage and supervision by the Bank of Ghana in its report on February 2014. This report highlighted that about 20 rural banks are in distress further noting that 64 rural banks were satisfactory, 49 were fairly, and 12 were performing marginally whilst six were unsatisfactorily. It follows that bank distress is a phenomenon to be understood in Ghana and a threat to be controlled.

Previous studies in Ghana have examined the problem of financial distress but however limited in scope. Annoa (2014) for instance conducted an empirical study where she examined the causes of financial distress in the construction industry in Ghana. Major causes of financial distress according to the author in the context of the construction industry are cost control issues and project funding issues. Since this study derives its findings from the construction industry, findings may not be generalizable to other economic settings thus creating a research gap.

Mahama (2015) in a related study assessed the state of financial distress of a sample of 10 listed companies in Ghana by employing the Altman's Z-score. The findings of the study revealed that six companies were financially sound but the other four showed a greater degree of distress. However, this study was an industry-wide study but not limited to a specific industry. In addition, the study did not examine the causes of distress and did not explore the relationships between various financial ratios and financial distress and thus reveals a research gap.

Given the negative implications of the development of banking distress such as bank closures which invariably affects economic growth coupled with the paucity

of knowledge in scholarly literature on the phenomenon of banking distress, it becomes imperative to examine the financial health of banking institutions so as to ascertain the levels of distress. Unfortunately, however, not enough studies have been conducted in Ghana to address these gaps and hence the need for this study.

1.3 Statement of Hypothesis

The following have been hypothesized for authentication in the course of this research study:

HYPOTHESIS ONE

H_0: Banking distress is not independent of management incompetence.

H_1: Banking distress is independent of management incompetence.

HYPOTHESIS TWO

H_0: There is no significant effort to curb distress in Ghanaian Rural banks by regulating authorities.

H_1: There is significant effort to curb distress in Ghanaian Rural banks by regulating authorities.

HYPOTHESIS THREE

H_0: Performance of bank is not independent of regulating regimes.

H_1: Performance of banks is independent of regulating regimes.

HYPOTHESIS FOUR

H_0: Regular supervision is not a factor against deterioration in the condition of the financial institution.

H_1: Regular supervision is a factor against deterioration in the condition of the financial institution.

HYPOTHESIS FIVE

H_0: Ratio Analysis cannot be used to predict distress in the Ghanaian rural banks.

H_1: Ratio Analysis can be used to predict distress in the Ghanaian rural banks

1.4 Research Objectives

The general objective of this study is to examine the problem of banking distress in the banking sector of Ghana. Specific objectives that will be pursued are:

1. To examine the major factors of financial distress in the Ghanaian banking sector and the degree of distress in the banking industry.
2. To highlight measures that have been employed by regulatory authorities to manage distress in the banking sector and their relative effectiveness.
3. To assess the extent to which efficient financial ratios are in predicting distress in the banking sector.

1.5 Research Questions

To achieve these stated core objectives, the following research questions will be posed.

1. What are the major causes of financial distress in Ghana's banking sector?
2. What measures are employed by regulatory authorities to curb banking distress and to what extent are these measures efficacious?
3. Can financial ratios be employed to determine banking distress?

1.6 Significance of the study

This study is significant for several reasons. First due to the paucity of knowledge pertaining to the dynamics of banking distress in Ghana, it will create a knowledge base on banking distress in Ghana. Such knowledge base will be of invaluable benefit to policy makers including banking sector regulators. Since banking distress is not limited to only rural banks but can generally be described as a pervasive phenomenon, the outcome of the study will be of much relevance to all banking industry players such as non-bank financial institutions. Overall, the outcome of the study and consequent recommendations will have beneficial impact for the national economy due to the cascading effect of the financial sector on other sectors of the economy. For instance a general good standing of financial institutions will mean their ability to let people have access to credit which in itself engenders economic growth and prosperity. Again, the study serves as a potential source of reference material for researchers intending to undertake studies in areas related to banking and finance, economics or its facsimile. Put differently, the study contributes to the existing literature on the subject of banking distress.

1. 7 Scope and limitations of the study

The study emphasizes on the problem of banking distress in the Ghanaian banking industry using rural banks as a case study. The study area covers all the rural banks across various geographic boundaries in Ghana. There are some limitations to the study. First, the study will rely solely on samples drawn from the rural banks population unit to derive its findings. This category of sample limits the ability to generalize findings to other bank population settings. In other words, the external validity of the study is limited in scope.

Stake (1995, pg. 8-9) provides a contention which reinforces this limitation to the study.

The author contended that:

"The real business of case study is particularization, not generalization. We take a particular case and come to know it well...There is emphasis on uniqueness...we emphasize placing an observer in the field to observe the workings of the case, one who records objectively what is happening but simultaneously examines its meaning and redirects observation to refine or substantiate those meanings."

The busy schedules of some respondents to respond to the research questionnaire constituted a limitation. Another limitation was the possible subjectivity in the responses of respondents. Within the scope of qualitative research, analysis of data can be extremely subjective and prone to various preconceptions. Much as the research attempts to be objective in its analysis, there is a high possibility that cultural and social perspectives could influence the findings.

The study is also limited longitudinally. Over time, the findings of the study may not be applicable due to cohort effects. Time will not allow for a longitudinal study of the same population unit of rural Banks. Notwithstanding these limitations quality was not compromised

1.8 Organization of the study

The study comprises five chapters: Chapter one deals with the general background and introduction to the study, the problem statement, the objectives of the study and related research questions as well as the scope and limitations of the study. Chapter two presents the literature review of key relevance to the study. Both theoretical and empirical frameworks were considered. Chapter three outlines with the methodology employed in the study. This involves the description of research design and the research instrument as well as the population and sampling techniques. The tools of data analysis will also be outlined. Chapter four encapsulates the analysis and discussion of results. The analysis and discussions essentially center on the research objectives and related research questions outlined in the introductory part of the Study. The last chapter, chapter five presents a summary of the study, its conclusions and recommendations as well as the suggestions for future research based on the peculiar findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents relevant and related literature on the various objectives set out to be achieved by this study as presented in Chapter One. In particular, the review is organized into theoretical and empirical headings. The theoretical review covers the concept of banking distress as well as the theories on the causes of banking distress. On the other hand, the empirical review covers the major causes of financial distress in the Ghanaian banking sector and the degree of distress in the banking industry. The empirical literature does not also lose sight of the measures employed by regulatory authorities to manage distress in the banking sector and their relative effectiveness. Furthermore, the review highlights the extent to which efficient financial ratios are in predicting distress in the banking sector. The chapter culminates with a summary of the literature and outlines the research gaps and how the current study fulfills these gaps.

2.2 History Perspective of Banking in Ghana

Formal banking began in Ghana (then Gold Coast Colony) in 1896 with a branch of the Bank of British West Africa (Fry 1976) followed by Barclays Bank DCO in 1917 (Crossley and Blandford, 1975). Both banks were operated and supervised as branches of their London head offices. The first indigenous bank was the Gold Coast Cooperative Bank, which was established in 1945. Its main business was to support the marketing societies to buy cocoa from the farmers. Its registration was cancelled in 1961 and its operations absorbed into the Ghana Commercial Bank

(Republic of Ghana 1970 in Appiah 2008). In 1953, the Bank of Gold Coast was established by statute as the first indigenous commercial bank with some central bank functions. In 1957 the central banking functions and the commercial banking functions were separated between the Bank of Ghana and the Ghana Commercial Bank respectively (Steel and Andah, 2003).

At the time of independence, the Banking Industry in Ghana consisted of three (3) banks namely, Agricultural Development Bank, Barclays Bank of Ghana and Ghana international Bank. The industry has grown over the years. As at 30th June 2017, there were 37 commercial banks, one hundred and twenty six (126) Rural and Community Banks and forty one (41) Non-bank Financial Institutions, including fourteen (14) Savings and Loans Companies (Bank of Ghana, 2017)

The first formal micro finance institution in Ghana arose out of the micro savings product of the Post Office system. The institution was upgraded to the Post Office Savings Bank under the Savings Bank Act 162 (Act 129), to operate independently within the Post Office system. It attained full bank status as National Savings and Credit Bank in 1972 under National Redemption Council (NRC) Decree 38. The new management abandoned the use of the network of the Post Office system and developed its own, leading to the destruction of the micro savings product (Anim 2000)

Long before reforms, governments in sub-Saharan Africa attempted to diversify the institutional structure of the formal financial system. They established specialized banking and non-banking institutions (Aryeetey, 2008). According to Aryeetey (2008), central banks were challenged to create commercial banks, merchant banks, development financial institutions and a number of non-banking

and specialized finance institutions including insurance institutions and provident funds. For their lending operations, banks have always been characterized by relatively high value and longer duration loans which require formal institutions that governments created and yet they failed to solve the problem of the huge financial gap. Aryeetey, (2008) states that the difficulty of trying to reach small borrowers with large formal institutions among others, led to poor banking practices that eventually weakened many banks and made reforms compelling. He further argues that in contrast, individual savings collectors known all over West Africa made advances to their regular clients. These advances were usually low value, very short term (less than one month), provided interest free and disbursed immediately. Many analysts were of the view that combining the banks' capital with the intrinsic advantages of the informal agents could result in solving the financial gap problem. (Aryeetey, 2008).

2.3 Meaning of Banking

A bank is a financial institution that provides banking and other financial services to their customers. A bank is generally understood as an institution which provides fundamental banking services such as accepting deposits and providing loans. There are also non- banking institutions that provide certain banking services without meeting the legal definition of a bank. Banks are a subset of the financial services industry. A banking system also referred as a system provided by the bank which offers cash management services for customers, reporting the transactions of their accounts and portfolios, throughout the day (Jadhav, 2003).

2.4 Types of Banks in Ghana

The Bank of Ghana (BOG) generally classifies financial institutions into banks and non-banks. The banks are those financial institutions which are duly licensed to operate as banks. On the other hand of the classification is non-banks institutions which do not have the license to operate as banks, but play a very critical role in resource allocation within the economy.

Rural banks which is the focus of this study falls under banks. Rural banks (RBs) are unit banks owned by members of the rural community through the purchase of shares and are licensed by BOG to provide financial intermediations in the rural areas, (Steel and Andah, 2004). The RBs operate as commercial banks under the Ghanaian Banking Law 1989 (PNDCL 225), except that they cannot assume foreign exchange operations and the acceptance of valuable properties such as gold (Steel and Andah, 2004). Association of Rural Banks (1992) states the following as some of the aims of RBs:

(1) To facilitate rural savings mobilisation;

(2) To offer credit and other banking services to rural producers;

(3) To act as an instrument for rural development;

In pursuance of the above objectives, the BOG has for instance identified agriculture as a critical factor and consequently; it has mandated that agricultural loans should represent at least 50% of any RB's loan portfolio at any particular point in time adding that cottage industry, and trading and transport should have a maximum allocation of 30% and 20% respectively (BOG, 1985).

The Table below gives the categories of the other non-banking financial institutions in Ghana

Table 1: License issued

	LICENSE	CORE LINES OF BUSINESS
1	Discount House	Trading in short-dated financial securities intermediation between banks, commerce and industry for call deposits to invest in short-dated financial securities.
2	Leasing and Hire-Purchase Companies	Financing the acquisition of equipment, vehicles and consumer durable, etc. through finance lease and/or hire purchase.
3	Savings and Loans Companies	Deposit-taking and lending to individuals, groups, business enterprises, consumer credit and hire purchase financing.
	LICENSE	**CORE LINE OF BUSINESS**
4	Mortgages Finance Companies	Lending funds for residential and commercial property acquisition, up grading of existing property and taking a mortgage on the property financed. Dealing in Securities collateralized by such mortgages.
5	Building Societies	Mobilizing funds from members for the purpose of assisting members to acquire residential properties and land. Loans extended are secured by Mortgage on the property.
6	Acceptance Houses	Financial institutions which specialize in accepting bills drawn on them under credit established in favour or approved customers. The substantial part of the business of these houses should consist of accepting bills to finance the trade of others. As acceptors, these houses have to honour

		and pay the bills drawn at maturity. Basically they should be companies mainly engaged in trade bills and operating in the money market to supplement the discount houses and banks in the short-term market.
7	Finance Companies	Provide consumer credit, business finance and subscribing to short-term securities.
8	Credit Union	Financial co-operatives formed to mobilize savings from and lend to its own members.

Source: PNDC LAW 3281, 1993.

2.5 Theoretical review

Aatonen (2012) argues that a literature review provides an overview of the key concepts and theoretical perspectives that are pertinent to a research study. The concept of financial distress is underpinned by several theories some of which are delineated below.

2.5.1 Cash Management Theory

Cash management theory is primarily concerned with the management of cash flows into and out of a firm; cash flows within the firm and cash balances held by the firm at a particular time by financing deficit or investing surplus cash. Short-term management of corporate cash balances is a major preoccupation of every firm. The imperativeness of this is highlighted by the fact that it is difficult to predict cash flows accurately particularly the inflows and there is no perfect coincidence between cash outflows and inflows (Aziz & Dar, 2005). In this context, Pandey (2005), contend that during some periods, cash outflows will exceed cash

inflows because payments for taxes, dividends or seasonal inventory will accumulate.

At other times, cash inflow will be more than sales and debtors may realize in large amounts promptly. The lack of a balance between cash inflows and outflows would mean failure of cash management function of the firm. Persistence of such an imbalance may cause financial distress to the firm and hence business failure (Aziz & Dar, 2006).

The theory as adapted to this research is interested in theories and principles adapted by banks and financial institutions for cash management. It is worthy of note to know that cash management has increasingly drawn attention among academics and practitioners in recent times. In Ghana and the other developing African countries increasing interest in this field is related to the liberalization of the money market, technological progress, and multinational business. These changes have forced several financial institutions to critically review cash management strategy and consequently, also cash management policies and responsibilities. These factors have resulted into demand for various kinds of cash management services, either from within or purchased from external service providers. Markets for money instruments, derivatives and common funds have grown rapidly along with the new technology to provide greater scope for cash management. In modern cash management, the emphasis is usually on the part of the cash management which is responsible for money market operations. Individuals or firms responsible for the cash management function are primarily concerned with short-term financial activities. In a dynamic money market environment, it is more imperative than before to know how to further improve the company's cash position, including managing accounts receivable, improving cash

flow, transferring funds, and controlling cash disbursements. In addition, firms should understand the basic principles of short-term investment, including investment policies, available instruments, as well as investment strategies and techniques to minimize the cash management costs or to maximize profits. To invest properly on an almost daily basis, financial managers must forecast the amount of funds that will be required to meet payments as the institutions must maintain sufficient cash to handle immediate disbursements. Firms must also employ modern techniques to improve overall returns on invested funds.

2.5.2 Credit Risk Theory

Credit is the provision of goods and services to a person or entity on agreed terms and conditions where the payments are to be made in a later period with or without interest. During the contract period, not all debtors will repay their dues as and when they fall due. With the failure of the debtor to repay the due on scheduled period, the lender becomes exposed to credit risks which in turn lead to default. Credit risk is therefore the investor's risk of loss, financial or otherwise arising from a borrower's failure to pay dues as agreed in contractual terms (Nyunja, 2011).

The extent of preparedness for bad debt to advances is adopted as proxy for asset quality. This values reflects changes in the soundness of the bank loan portfolio and credit quality. Therefore it is regarded an indicator of credit risk of banks. Heffernan (1996) in his submissions defined credit risk as the risk that an asset or a loan becomes irrecoverable in the case of outright default, or the risk of delay in the servicing of the loan. Credit risk can have multiplier effect thus leading to distress and ultimate bankruptcy (Bessis, 2002). The higher the provision for bad debt to

advances ratio, the higher the credit risk and the higher the buildup of unpaid loan and interest. Furthermore, present value of the asset decays, thereby deflating the solvency of a bank. In the words of Kosmidou (2008), poor asset quality can have adverse impact on bank profitability, reducing interest income revenue, and by increasing the provisions cost.

2.5.3 Entropy Theory

According to the Entropy theory otherwise known as Balance Sheet Decomposition Measure Theory, one way of examining firm's financial distress could be a careful look at the changes occurring in their balance sheets (Aziz and Dar, 2006). The theory applies the Univariate Analysis (UA) and Multiple Discriminant Analysis (MDA) in examining changes in the structure of balance sheets. According to Natalia (2007), UA is the use of accounting based ratios or market indicators for the distress risk assessment. In the context of the UA, the financial ratios of each company therefore are compared once at a time and the distinction of those companies through a single ratio with a cut-off value is used to classify a company as either distressed or non-distressed (Monti & Moriano, 2010). MDA involves the analysis of more than one variable at the same time (Slotemaker, 2008). The use of MDA seeks to address the inherent weaknesses with UA.

According to Memba and Job (2013), single ratios associated with UA do not capture time variations of financial ratios. The implication here is that accounting ratios have their predictive ability one at a time and it is impossible to analyze for example rates of change in ratios over time. Also single ratios may yield inconsistent results if different ratio classifications are applied to the same firm. Again there exists a multi collinearity, that is a correlation among many accounting

variables and so interpretation of a single ratio in isolation may be misleading. The single ratio is not able to capture multidimensional interrelationships within the firm. Lastly, since there exists variations between the probabilities of failure for a sample and population, specific values of the cut-off points obtained for the sample will not be valid for the population (Natalia, 2007). Consequently, if a firm's financial statements reflect significant changes in the composition of assets and liabilities on its balance sheet, it is more likely that these changes will become uncontrollable in the foreseeable future; one can foresee financial distress in these firms (Aziz & Dar, 2006)

2.5.4 Gambler's Ruin Theory

In his seminal work, W. Feller (1968), developed the Gambler Ruin Theory. The theory is based on the probability theory where a gambler wins or loses money by chance. From the perspective of the theory, the gambler starts out with a positive, arbitrary amount of money where the gambler wins a dollar with probability p and loses a dollar with probability (1-p) in each period. The game continues until the gambler exhausts all money (Epsen, 1999). By analogy, the firm can be likened to the gambler playing repeatedly with some probability of loss continuing to operate until its net worth goes to zero. With an assumed initial amount of cash in any given period, there is a net positive that a firm's cash flows will be consistently negative over a run of periods obviously leading to bankruptcy (Aziz & Dar, 2006). According to Memba and Job (2013), the major weakness of this theory is that it assumes a company starts with a certain amount of cash. Epsen (1999) has also outlined variant limitations of the theory. According to him, the theory assumes implicitly when predicting bankruptcy that a company has no access to security

markets and the cash flows are results of independent trials and managerial actions cannot affect the results.

Chances for learning are excluded, since knowledge of past outcomes cannot be meaningfully applied to novel situations. A `win' correlates to an increase in the stock of gambling chips, while a loss decreases the resource base. Wins and losses evolve according to a random process. The player quits gambling either when their reserve of resources is completely depleted, or when they are no longer willing to risk losing more, or when they have accumulated sufficient gains to satisfy their requirements. In the words of Alex, Julian, Richard and David (2011) the influences on survival duration at the table is some combination of accumulated resources, chance and future expectations. Gambler's ruin theory predicts an inverted-U-shaped pattern of exit rates over a firm's first few years in business. This is because exit rates are comparatively low in the first period because of the `celebratory of start-up capital' effect. Therefore firms which experience a series of negative shocks at startup draw upon their initial reserve of resources in order to stay in the game for a little while, with a view to estimating their probability of success. Nevertheless, at certain point in time pending on chance, resources and expectations the resources become exhausted for the unsuccessful gambler/ enterprise and there is no choice but to quit. This inverted U-shaped pattern of exit rates has been observed in the previous literature by Frank (1988), and this has been explained in terms of random processes governing the fortunes of promising businesses (Levinthal, 1991). Initial judgement may reveal that Gambler's Ruin model is difficult to reconcile with learning since, by definition, the individual cannot learn to play a game of pure chance. However, although entrepreneurial learning is argued to be widespread (Politis, 2005), the Gambler's ruin model has

validity in the entrepreneurial context for four reasons. The first is that, even though the entrepreneur may be alert to learning opportunities, circumstances rarely repeat themselves in a similar format from which definite lessons may be drawn. This implies that either a skill or luck is correctly interpreting unclear signals. Second, the skill-sets required to develop a new business may vary at commencement when the requirement may be to make a sale; somewhat later perhaps when ensuring a payment has to be made; later still perhaps when an employee has to set up. All these are different skill-sets, and the opportunities for learning from experience may be modest. Thirdly, most individuals start only one or two businesses so the opportunities to learn from previous businesses are minimal. Finally, learning the `correct' lessons may also prove particularly difficult for expectant individuals who are very likely to attribute lack of success in their business to third parties. For all these reasons entrepreneurial learning is open to question and therefore not a basis for rebuffing the lottery element in Gambler's Ruin (Frankish et al., 2011).

2.6 Types of financial ratios

Financial ratios have traditionally been categorized into five classes namely a) liquidity ratios, b) assets management ratios, c) debt management ratios, d) profitability ratios and e)market value ratios.

i. LIQUIDITY RATIOS

Liquidity refers to a firm's ability to meet its current obligations as they come due. Therefore, the evaluation of liquidity focuses on the relationship between the current assets and the current liabilities. The ability of a firm to meet its current obligations is an important factor in evaluating short-term financial strength. Firms

that do not have enough cash on hand to pay bills as they due will lose discounts, will eventually be forced into bankruptcy.

These ratios have different classification from different authors. For instance, Weston et al (1987) classified liquidity ratios into two:

i) Current ratios

ii) Quick or Acid test ratios.

CURRENT RATIO

The current ratio, sometimes called working capital ratio, measures the relationship between total current assets and total current liabilities at a specific date. The current ratio is computed by dividing the total current assets by the total current liabilities:

$$\text{Current Ratio} = \frac{current\ Assets}{current\ liabilities}$$

A low ratio may indicate that the firm would be unable to meet its short-term debt in an emergency. A high ratio is considered favorable to creditors, but may indicate excessive investment in working capital items, that may not be producing income for the firm.

Analysts often contend that the current ratio be at least two is to one. In other words, a firm should maintain GHC2.00 of current assets for every GHC1.00 of current liabilities. Although such a rule is one standard of comparison, it is arbitrary and subject to exceptions and numerous qualifications in the modern approach to

statement analysis. Deviations from the 2:1 rule nevertheless indicate an area in which additional tests are needed to evaluate the firm's liquidity.

QUICK RATIO

One of the criticisms of the current ratio is that it overstates the short-term liquidity by including inventory and prepaid amounts in the numerator of the calculation. However, these items are not as liquid as cash, marketable securities, notes receivable, or account receivable. Inventories are typically the least liquid of a firm's assets, and hence they are the assets on which losses are most likely to occur in the event of liquidation because they must first be sold, and then cash collected, before cash is available. Also, most prepaid expenses, are to be consumed and cannot be readily converted into cash. For these reasons, inventories and prepayments are excluded in the quick ratio computation. Thus, the quick ratio, sometimes called the acid test ratio, is a more stringent or rigorous measure of short term liquidity and include only cash and the near-cash assets. The quick asset is computed as follows:

$$\text{Quick Ratio} = \frac{cash + marketable\ securities + net\ receivable}{cash\ liabilities}$$

The higher the ratio, the more liquid the firm is considered. A lower ratio may indicate that in an emergency, in an emergency, the company would be unable to meet its immediate obligations. For a number of industries, a quick ratio of a 1 to 1 is considered satisfactory.

It should be noted that despite the fact that both current ratio and quick ratio are used to measure the adequacy of the firm's current assets to satisfy its current

obligations as of the balance sheet date. The ratios however, ignores how long it takes for a firm to collect cash which is an important aspect of the firm's liquidity.

ii. **ASSET MANAGEMENT RATIOS**

This group of ratios are designed to measure how effectively the firm is managing its assets. They are also known as performance ratios because they measure the performance of a firm by indicating how effectively it utilizes its resources. Assets like assets, stocks, receivables and so on are the resources of a firm and each is compared with sales to determine the rate at which inventory is turned over a year. If a firm has too many assets, then their interest expenses will be too high and hence their profits will be depressed. On the other hand, if assets are too low, then profitable sales may be lost. The asset management ratios include i) Inventory turnover ratio, ii) Average collection period, iii) Fixed asset turnover, and iv) total asset turnover, Malkiel (2013).

INVENTORY TURNOVER

Inventory turnover measure how many times the average number of Ghana Cedi invested in inventory is recovered (turned over) through sales during a period. It is considered good management to hold as little inventory as possible without losing sales and to turn that inventory as rapidly as possible. The inventory turnover ratio is used to indicate adequacy of inventory and how efficiently it is being managed. It is computed by dividing the cost of goods sold by the average inventory balance.

$$\text{Inventory Turnover} = \frac{cost\ of\ goods\ sold}{Average\ Inventory\ Ballance}$$

Cost of goods sold, rather than sales, is used in the numerator because:

1. It is a measure of the cost inventory sold during the year, and
2. The cost measure is consistent with the cost basis of the denominator.

It should be noted that the size of the investment in inventory and inventory turnover are dependent upon such factors as the type of business and time of year. In Inventory management careful consideration must be given to the cost (for storage space and insurance) and risk (damaged and obsolete goods) that are incurred while goods are being held against the amount of sales that may be lost if a sufficient amount of goods is not held.

Inventory turnover is often more informative when Ghana Cedi amounts are converted to a time basis to show the average number of days it takes before the inventory is sold. The computation is given thus:

$$\text{Average Number of Days Needed to Sell} = \frac{365}{Inventory\ turnovcer}$$

Inventory with a high turnover is less likely to become obsolete and decline in price before it is sold. A higher turnover indicates greater liquidity, since the inventory will be converted into cash in a short period of time. However, given the nature of the firm's business, a very turnover may indicate that the company is carrying insufficient inventory and is losing a significant amount of sales.

AVERAGE COLLECTION PERIOD

The average collection period (ACP) is used to approve accounts receivable, and it is computed by dividing average sales into accounts receivable to find the number of tied in the receivables. Thus, ACP represents the average length of time that the firm must wait after making a sale before receiving cash.

It is represented by the following equations.

$$\text{Average collection period} = \frac{Receivable}{Average\ Sales\ per\ day} = \frac{receivables}{Annual\ sales\ per\ 360}$$

The ratio is used as an indicator of how successful a firm is in converting its receivables into cash needed for operations and debt payments. While others use the data to assets management's efficiency in credit-granting and collection policies.

FIXED ASSETS TURNOVER

This measures the utilization of plant and equipment and it is the ratio of sales to fixed assets:

$$\text{Fixed Asset Turnover Ratio} = \frac{Sales}{Net\ Fixed\ assets}$$

High ratio indicates efficient utilizations of fixed assets and low ratio indicates underutilization of fixed assets.

TOTAL ASSETS TURNOVER

This measures how efficiently assets are used to generate sales revenue. It relates net sales to average total assets to show how many times in a period the assets were turned over in generating sales. The formula for the asset turnover ratio is:

$$\text{Asset turnover} = \frac{net\ sales}{Average\ total\ assets}$$

Since the net sales were generated over a period of time, the average total assets employed during the same period is once again used as the denominator in order to make the relationship valid. The higher the asset turnover, the more efficiently the assets were utilized. The result is more profitable firm, and one that is capable of paying its obligations as they come due.

It should be noted that some analyst computes the ratio by dividing Net sales by total assets available at the end of the year.

iii. **DEBT MANAGEMENT RATIOS**

This group of ratios shows the extent to which a firm uses debt financing and the amount of debt a firm uses in its capital structure is referred to as leverage.

Leverage ratios measure the extent to which a company uses debt and the impact of leverage on the firm's ability to meet its interest payments. The most basic measure of leverage is the debt ratio, Shin and Adrian (2008).

The extent to which a firm uses debt financing has three important implications

1. By raising funds through debt, the owners can maintain control of the firm with a limited investment,

2. Creditors look to the equity, or owner-supplied funds, to provide a margin of safety. If the owners have provided only a small proportion of total financing, then the risks of the enterprise are borne mainly by creditors,
3. If the firm earns more on investments financed with borrowed funds then it pays in interest, then the return on the owners' capital is magnified. The ratio includes: -

iv. **DEBT RATIO**

The debt to total asset ratio shows the percentage of the firm's total assets that have been financed by debt. It measures the margin of safety that creditors in case the firm is liquidated.

The lower the ratio the greater the asset protection for creditors. The higher the ratio, the greater the risk concerning the firm's ability its obligations as they come in due. The debt to total assets ratio is computed as follows:

$$\text{Debt to Total Assets Ratio} = \frac{total\ Debit\ (liabilities}{total\ Assets}$$

The debt to equity ratios measures the relationship of the firm's assets provided by its creditors to the amount provided by its stock holders (through investment and retained earnings). The ratio is computed by dividing total liabilities by total stock holders' equity:

$$\text{Debt to Equity Ratio} = \frac{total\ Liabilities}{total\ stock\ holders'\ equity}$$

Firms with large amounts of fixed assets and stable cash flows typically have high debt-to-equity ratios, whiles less capital intensive firms normally have lower debt-to-equity ratio.

DEBT TO TOTAL CAPITALIZATION.

This ratio is concerned with the importance of long-term debt in capital structure of the firm. The ratio is calculated by dividing long-term debt by total capitalization and it is expressed as a percentage. Long-term debt includes debentures, bonds and so on, while capitalization (total value of the firm) consist of loan capital and shareholder's funds. It is often called the structure ratio. The formula is given thus:

$$\text{Debt to Total Capitalization} = \frac{Long-term\ Debt}{total\ capitalization}$$

2.7 Empirical review

2.7.1 Examining and ascertaining the major factors of financial distress in the Ghanaian rural banking sector and the degree of distress in the rural banking industry.

Studies on banking sector crises have also highlighted out the general behaviour of some macroeconomic and financial sector indicators before, during and after a banking crisis. Garcia-Herrero (1997) found that monetary and credit aggregates become more unstable during a crisis, depending on the number of banks affected and their share of total deposits; income velocity usually tends to fall before a banking crisis and increase afterwards though not to previous levels; the money multiplier tends to increase prior to a crisis and decline during it. However, the origins of this rise depend on whether there is a fall in the reserve-to-deposit ratio

stemming from a reduction in reserve requirements or from the reduction in excess reserves of distressed banks. The decline in the multiplier may be due to a rise in the currency- to- deposit ratio because the public lacks confidence in the banking system. In the Ghanaian context the currency -to- deposit ratio has traditionally been high, rising in the period 1975-83 and with more variability than in the period after the beginning of the financial sector reforms from 1987 onwards. Demirguc-Kunt and Detragiache (1997) argue that banking crises tend to erupt when the macroeconomic environment is weak, particularly when growth is low and inflation is high Ghana's conditions between 1977 and 1983 showed negative real GDP growth, poor terms of trade, negative real interest rates, high inflation, negative annual budget balances, a low private sector credit to GDP ratio and poor debt collection by banks.

Moral hazard is also widely reported in the literature as a major cause of banking distress. Moral hazard becomes even more acute when the bank lends to projects connected to its own directors or managers (insider lending). In such cases the incentives for imprudent (and fraudulent) bank management are greatly increased in that all of the profits arising from the project are internalized (in the case of loans to unconnected borrowers the project returns are split between lender and borrower), whereas that part of the losses borne by depositors or taxpayers are externalized. Not surprisingly, insider lending is a major cause of bank failure around the world (Caprio, 1997, pp. 6-7). Moral hazard can be constrained by strict regulation and prompt action to close banks as soon as they become insolvent, but regulatory authorities are often pressured to exercise "forbearance": i.e. delay in enforcing regulations or closing insolvent banks (Garcia, 1996, pp. 25-29)

Informational asymmetries can also affect the financial soundness of a bank through the adverse selection of its borrowers. Higher lending rates and a greater volatility in expected rates of return to borrower's projects can lead to a decline in the average quality (i.e. creditworthiness) of the pool of loan applicants willing to borrow from the bank. The more creditworthy applicants are driven out of the market by higher lending rates. A prudently managed bank would therefore be wary of raising real lending rates too high because of the likely adverse impact on loan quality. Instead it would ration credit (Stiglitz and Weiss, 1981). But if it has to pay above market interest rates to mobilize funds (because, for example, it is perceived as a poor credit risk), the bank's scope for not raising lending rates may be limited without cutting margins to levels insufficient to generate profits. The bank may be trapped in a cycle of high deposit and high lending rates which lead to high loan default rates, which in turn further raises deposit rates through its impact on the perceived soundness of the bank

Since the mid-1980s, indigenous private banks and Non-Bank Financial Institutions (NBFIs) including rural banks have gained a significant foothold in the banking and financial markets in Ghana. The financial sector had previously been dominated by few foreign and government-owned banks. The indigenous private banks could provide important benefits to their economies and assist the objectives of financial liberalisation, by enhancing competition, encouraging improvements in services delivery and expanding access to credit, especially to SMEs and rural communities. But more specifically, in the Ghanaian context, the attainment of these benefits the attainment of these benefits has been minimised because the indigenous banks have been susceptible to financial distress. Many of these indigenous private banks in Ghana have failed mainly because of high non-performing loans due to

mismanagement. Informational asymmetries have been blamed for poor loan quality, which further contributed to moral hazard and adverse selection in developing countries (Graphic online, 2011).

2.7.2 Measures employed by regulatory authorities to manage distress in the rural banking sector and their relative effectiveness.

In a move to resolve problems of distress, Usdin and Bloom (2012) have suggested the use of professionals who are independent of the pressures inherent in managing a company (including internal, emotional or family pressures) and are available to analyze and advise a company in a difficult financial position. Such professionals include Turnaround specialists, Attorneys specializing in advising distressed companies, and Accountants specializing in assisting distressed companies. Collard (2010) emphasize the relevance of a Turnaround specialist in turning the fortunes of a distressed company around indicating that the specialist must conduct fact-finding to assess the situation and then prepare a plan to fix the problems. He came out with a five stage turnaround process: management change, situation analysis, emergency action, business restructuring, and return to normal. Bhunia et al. (2011) argue that a spontaneous protective effort could be accommodated if the company is anticipated to be proceeding in the direction of potential bankruptcy and this can help alleviate the financial distress to all investors and decrease the costs of bankruptcy. They however pointed out that resolving corporate distress may result in conflict of interest between shareholders (who would want the company to invest risky but high return projects so that firm value would rise) and creditors (who require low risk projects since it leaves them with low value). Usdin and Bloom (2012) argue that the first step on this path to recovery is to look at the early

warning signs as they appear. The injection of fresh capital has been used in Ghana to turn the fortunes of distressed companies around. This was particularly used under the Merchant Bank deal. Fortiz Private Equity Fund Ltd. was to inject adequate capital to address the solvency and liquidity challenges facing the bank and implement a turnaround strategy to ensure that the bank continues to operate normally (Bank of Ghana, 2013). The Bank of Ghana also indicates that the strategy includes listing the bank on the GSE within three years. Could it be said then that continuous listing of a company on the stock exchange is sign of financial soundness? The case of Enron and other world cases of bankruptcy prove otherwise.

2.7.3 Assessing the extent to which efficient financial ratios are in predicting distress in the rural banking sector.

Nam and Jinn (2000) employed thirty-three traditional financial ratios when developing the statistical model as an early warning sign of impending financial distress. Their investigations covered the financial ratios that measure profitability, turnover, growth, growth, productivity, fixed charge coverage, solvency, leverage and liquidity. The study established that the measures of firm's ability of serving short-term debts, financial expense to sales ratio and receivable turnover ratio comprise the prediction model.

Ang, Cole and Lin (2000) employed two financial ratios namely operating expense-to-sales ratio and annual sales-to-total assets ratio as the measurement of agency costs. The usage of the two ratios was to ascertain how effectively the firm can control operating expenses and how well the firm can utilize its assets respectively.

Ang et al. (2000) established that poor performance firm will generally have a high ratio of expense-to-sales.

Gombola and Ketz (1983) reported that cash flows from operation ratios provide certain information that is not explained by other accrual ratios. In this context, Suntraruk (2010) contrasts the findings of Gombola and Ketz (1983) with the Altzman model. According to Suntraruk (2010), Gombola and Ketz (1983) argue that Altzman bankruptcy model should be used with a caveat because it lacks the inclusion of cash flow ratios.

Gentry, Newbold, and Whitford (1987) subscribe to the observation of Suntraruk on the use of accrual ratios. According to Gentry *et al.* (1987), in addition to the accrual ratios, the cash flow ratios can be accounted for in order to explain the financial health or illness of a particular firm.

Gilbert et al. (1990) noted that cash flow variables have a significant predictive ability in the financial distress models.

Charitou et al. (2004) in an empirical evidence contend that the bankruptcy prediction model essentially contains the three financial variables: a cash flow ratio, profitability variables and financial leverage variables provides a relatively high accuracy rate of classification one year prior to the actual bankruptcy.

Chaganti, Mahajan, and Sharma (1985) reported that a larger board can prevent firms from corporate bankruptcy. They found that bankrupt firms on average exhibit smaller boards than the non-bankrupt firms.

Dalton, Daily, Johnson and Ellstrand (1999) in an empirical study sought to answer why larger boards show less proclivity of bankruptcy, a finding which has been

previously established by Chaganti, Mahajan, and Sharma. Dalton et al. contended that the larger board has more capabilities to solve problems and positively affects firm performance. The logical extension of this claim is that larger board can enhance firm performance whereas the smaller board can increase the probability of financial distress.

Mensah (1984) in a study reported that the probability of financial distress substantially increases in economic recessionary periods and that the incidence of financial distress is apparent at least three years before the event.

Appiah (2011) examined the phenomenon of bankruptcy prediction from a developing economy perspective using the Altzman z-score model. This industry-wide study employed data of 15 failed and non-failed companies. The results indicate that the Altzman z-score is applicable in predicting bankruptcy in Ghana depending on the nature and size of the company in question.

Ohlson (1980) employed the logit model for bankruptcy prediction among the US industrial companies. Following this study, he identified four statistically significant factors namely size of the company, financial structure, performance and current liquidity. Additionally, he finds that error rates of the models can be improved by employing timely financial data.

Liou and Smith (2007) examined the relationship between financial distress and macroeconomic factors for UK manufacturing industry. They found that several macroeconomic variables such as interest rate, industrial production index and producer price index are significant and related to financial distress

Hill and Snell (1989) established that ownership structure significantly affects performance. Consistent with this, Fama and Jensen (1983) and Morck, Shleiferad and Vishny (1988) advocate that management together with Directors and Officers should hold a substantial proportion of their firm's equity. Dennis and McConnel (2003) observe that this arrangement where managers partly own their firms' shares can better align their goals with those of the firms' stakeholders.

Pi and Time (1993) reported that firms with separated leadership structure consistently outperform those with combined structure.

Wang, Jeng, and Peng (2007) found that when the CEO does not double as the Board Chairman, the firm's performance increases. Consequently, it is obvious to believe that the probability of financial distress tends to increase with the presence of CEO duality.

Suntraruk (2010) applied a logistic regression analysis to a dataset of 45 matched pairs of financially distressed and healthy firms over the period of 2000 to 2009. Results from the study indicate that the final model includes four financial ratios namely the return on assets, debt-to-equity ratio, current ratio and cash flow from operation-to-net income and three governance variables, the CEO duality, managerial ownership and institutional ownership. Further, the finding shows that there is no significant impact of macroeconomic variables on financial distress.

According to Jahur and Quadir (2012), the common causes of financial distress and business failure are often a complicated mix of problems and symptoms. According to them, the most significant causes of financial distress in nascent companies are capital inadequacy where the business did not start with enough capital and has struggled from day one. Jahur and Quadir (2012) further observe that the

probability that innovation will drive a firm to financial distress is high especially where the competitors introduce innovative and competitive products which reduce the attractiveness of the company's products and services.

Memba and Job (2013) undertook a study to analyze the causes of financial distress using Weighted Mean Score and Factor Analysis. It was established that the main causes of financial distress are endogenous variables which had the highest Weighted Mean Score as compared to exogenous variables. Endogenous variables included improper capital decision, inadequacy of capital and poor accounting records. Exogenous variables included price wars with rivals, high credit interest rate and unfavorable change in government policy.

Westgaard, Vander, and Wijst (2001) employ the logit approach in order to predict bankruptcies in the Norwegian business sector and concluded that the model is able to predict defaults sufficiently well. The significant determinants of default were identified as cash flow to debt, liquidity, solidity, financial coverage as well as size and age.

Shunway (2001) uses dataset of 300 bankruptcies spanning the period 1962-1992 for which hazard models yield solid forecasting results. He concludes that many accounting based ratios in previous static models become insignificant when employed in hazard models. In contrast, market variables such as a firm's market size, past stock returns and the idiosyncratic standard deviation of its stock returns are found strongly related to default. Moreover, he reports that his estimates are consistent unlike logic models.

2.7.4 Early warning signs for banking distress

An overview of the pertinent literature suggests that foremost indicators of bank distress can be grouped into three central categories. The first comprises of standard balance sheet and income statement financial ratios. It includes the so-called CAMEL variables which means "capital, asset quality, management, earnings, and liquidity". These variables are very common in the "supervisory risk valuation and early warning systems" used by supervisory agencies around the world. Asset quality indicators usually play a significant role in early warning simulations, particularly in models that focus on the medium to long term horizon. In the short run, profitability, liquidity, and solvency indicators provide supportive information on a bank's financial condition. There is a relatively comprehensive agreement in the literature and among finance experts that the CAMEL indicators are useful in rating banks in terms of their financial susceptibility, and supervisors often combine these indicators to come up with an assessment of a bank's security. However, there is no clear agreement in the literature on how exactly to combine the various CAMEL indicators into a "base-line" valuation of bank soundness, and these measures are rarely re verified on actual distress situations. Moreover, there is also some evidence that traditional CAMEL grades have certain limitations in predicting bank failure (Rojas, 2001), and need to be complemented by other indicators.

The second category of leading indicators of bank distress consists of market prices of financial instruments, such as bank stocks. Findings based on U.S. bank data suggest that market price-based indicators contain valuable prediction based information about bank distress that is not contained in the CAMEL indicators

(e.g., Flannery, 1998; Curry, Elmer, and Fissel, 2003). However findings based on non-U.S. banks are less definite (e.g., Bongini, Laeven, and Majnoni, 2002; Čihák, 2007).

The third category of principal indicators contains less common, measures of bank risk and financial strength, such as deposit rates (see, e.g., Kraft and Galac, 2007) or indicators depicting the economic environment in which the banks operate. There are two main potential uses for early warning systems. The first one relates to consolidation of role and relevance of rules in banking supervision, and diminishing the scope for discretion in decision making. The second involves market discipline.

Hypothetically, a well-functioning supervisory risk assessment and early warning system could be associated with a set of corrective actions that get increasingly stronger as the bank reaches more trigger points. With a few exceptions, most notably the Federal Deposit Insurance Corporation (FDIC) in the United States (FDIC,2003;), there is as yet no such spontaneous and direct link in most of the supervisory risk assessment and early warning systems with formal prompt corrective action frameworks. Financial institutions labelled or branded as potentially risky by the systems are characteristically subjected to more frequent supervisory surveillance and on-site examination before implementation of prescribed and official actions is commenced. However, as the reliability of the systems' output increases, it would be useful to establish such a direct link between the output and official corrective action, to limit the extent for supervisory forbearance. Indeed, an examination of supervisory early warning systems around the world indicates that although supervisory authorities have been moving towards

more formal, structured and risk-focused techniques for ongoing banking supervision, there is still substantial possibility for deviations.

With respect to the EU scenario, there are additional motives for moving towards a more rules-based framework. If such a framework, requiring supervisors to intervene at certain activate points, were employed at the EU, it would give more confidence to supervisors in one EU member country that appropriate intervention will take place by supervisors in another EU member country. Nieto, Mayes, and Wall (2008) in their submissions provide a summary of the prompt corrective action (PCA) framework employed by the U.S. FDIC. They argue that implementing a PCA-like framework might be able to resolve some of the issues relating to the coordination among the national supervisors in Europe. Of course, wisdom is required as regards the use of this early warning system, because a mere mechanical application could create rooms for banks to bypass the framework by innovative accounting or other types of misreporting. Also, the early warning system of course cannot applied rigidly forever. As suggested in a different context by King, Nuxoll, and Yeager (2006), it needs to be reevaluated and reassessed to meet the needs of new developments in the system.

An important feature of the financial stability framework in the EU is that supervisors in individual EU member countries have different approaches to dealing with weak banks (Čihák and Decressin, 2007). These cross-country variations may be necessary for small banks with mostly local operations, but they may become an issue for the large cross-border financial institutions (LCFIs) that dominate the EU financial landscape. The legal, regulatory, and supervisory

frameworks have not been able to keep up with this rapidly growing cross-border emergences.

The second potential use of the early warning system is seen in publishing banks' performance with respect to the early warning system which would also enhance market discipline. It would make clear to the depositors, creditors, rating agencies, and other market participants at which point a bank is becoming financially vulnerable. Eventually, this would lower the burdens to be shared in the case of a failure. Along these lines, and invoking the Maastricht criteria that serve as benchmarks for good macroeconomic performance (Lannoo 2008). This finding is consistent also with recent surveys of supervisory and regulatory practices by Čihák and Tieman (2008), showing that there are still significant differences between the regulations "on the book" and their implementation in the field. The EU has a established banking system with some 8,000 banks. Within this group, major LCFIs are emerging. Forty-six LCFIs hold about 68% of EU banking assets; of these, 16 key cross-border players account for about one-third of EU banking assets, hold an average of 38 percent of their EU banking assets outside their home countries, and operate in just under half of the other EU countries for introducing "Maastricht criteria" for financial institutions. As with the Maastricht criteria, which set debt and deficit limits for public finances and seek balanced budgets in the medium term, European authorities should in his view agree on a set of easily understandable standards to measure the quality of a bank's finances. These criteria could include liquidity, the regulatory capital prerequisite, asset diversification ratios, and measures of good business governance. In each case, there would be a minimum rate as well as a target rate a more ambitious standard to which banks should aspire in the long term.

A vital aspect of these proposals is that the "benchmark" of sound bank management practices would be based on a set of measures that the relevant readers can comprehend, and this information would be continuously disclosed. The difference from conventional rating agencies would be that these standards would be more crystal clear and more available to financial analyst. These objectives should not be too difficult to calculate, as bank analysts commonly use them. Therefore, a bank that uses depositors' funds for risky trading conditions would have a higher cost of financing than a bank with a low risk profile, as other banks would be hesitant to lend to this bank and customers to deposit their savings there. In other words, this could stimulate peer pressure and market discipline.

2.8 Overview of Bank distress in Africa

Financial distress has plagued several local banks across Africa, many of which have been closed down by the regulatory authorities or have been restructured under their supervision. According Brownbridge (1998) In Kenya two local banks and 10 NBFIs were closed or taken over between 1984 and 1989; between 1993/94, five local banks and 10 NBFIs were taken over and two more local banks in 1996. In Nigeria four local banks were put into liquidation in 1994 and another had its license suspended, furthermore in 1995 13 local banks were taken over by the Central Bank of Nigeria (CBN). Many more local banks has since then been distressed and subject to some form of "holding action" imposed by the CBN and Nigeria Deposit Insurance Corporation (NDIC). The Bank of Zambia (BOZ) closed three local banks in 1995, including the local subsidiary of Meridien BIAO, a bank which had been founded in Zambia in the 1980s and had expanded into an international bank with subsidiaries in many African countries Brownbridge (1998). One more Zambian local bank was closed in 1991, but was later

restructured and re-opened. The Bank of Uganda (BOU) closed down a local bank in 1994 and took over two for restructuring in 1995.

In the submissions of Brownbridge (1998), failed local banks accounted for 23% of total commercial bank assets in Zambia. In Kenya in 1993/94 around 11 per cent of the total assets of banks and NBFIs was held by the failed local banks, while in Nigeria and Uganda the failed local banks accounted for 8% and 6% respectively of bank assets. The cost of these bank failures are often difficult to estimate: much of the data is not available in the public domain, while the eventual cost to depositors and taxpayers of most failed banks will depend upon how much of the failed banks' assets are eventually recovered by the liquidators. The costs are almost certain to be substantial. A statement in the Kenyan parliament in October 1995 revealed that the Central Bank of Kenya (CBK) lost a total of KSh 10.2 billion (equivalent to 3.8 per cent of 1993 GDP) from frauds involving the "political banks" (Economist Intelligence Unit, 1995, p. 13). The CBK had provided KSh 17.8 billion (equivalent to 6.6 per cent of GDP) in liquidity support to three of the failed banks in 1992/93.The provision of liquidity support to banks was the major cause of the loss of monetary control and the subsequent inflation during this period. According to the Ghana business news (2015), Five Rural Banks in the Central Region are currently facing eminent liquidity challenges as a result of bad management and improper internal control by their various managements and Board of Directors. This was made known by the President of the Central Regional Chapter of the Association of Rural Banks Mr. Acquah Arhin, when he addressed the 25th Annual General Meeting (AGM) of the Bawjiase Area Rural Bank at Awutu Bawjiase.

2.9 Major causes of Bank Distress

Several reasons across the globe has been identified as potential causes of banking distress and failure, however this review will attempt at highlighting some of the major causes of bank failure in African countries and Ghana inclusive.

Among several causes of Bank distress and ultimate failure, environments in which banks operate are notorious for affecting their performance and can impact on their strategic positioning. The environment represent events outside the scope and influence of the banks. The environment refers to the legal, political, economic, technological, and social landscapes in which banks operate. Usually banks do not have control over these factors although they can anticipate changes in the external environment and situate themselves purposefully to take advantage of them. The environment can further be divided into industry-specific determinants and macroeconomic determinants. The industry-specific determinants are only specific to the banking sector such as bank concentration, price elasticity and advancement in the banking sector. The macroeconomic-specific determinants reflect the general macroeconomic and market conditions in the country. This study however considers certain micro economic conditions to assess the how management decisions within this scope contributes to banking distress.

2.9.1 Credit liquidity:

Credit risk simply put is the risk that the promised cash flows from loans and securities held by financial Institutions may not be paid in full (Al-Smadi & Ahmed, 2009). Credit risk is the main cause of bank distress and failure, and the most visible risk facing banks' managers (Gup et al, 2009). Rose and Hudgins (2008) opinioned that credit risk is the probability that some of the financial

institution's assets, especially its loans, will reduce/plummet in value and perhaps become valueless. Demirguc and Huizinga (2000) submitted that about 70% of bank business in Ghana is made up of credit. Therefore credit risk he emphasized is the most dominant risk faced by banks in Ghana. Credit risk is a major determining factor in interest rate spread. The lower the risk the lower the interest rate spread and vice versa.

Ngugi's (2001) reported that when the profit margin are at stake, banks sustain a widening spread. Faced with a rising credit risk due to distress borrowing and poor macroeconomic conditions, banks charge a higher risk premium on their lending rate.

2.9.2 Insider lending

The main cause of distress to many of the failed local banks in at least half of the bank failures recorded across Africa has been identified as insider lending Brownbridge (1998). Insider loans has accounted for a substantial proportion of the bad debts within financial institutions. Most of the larger local bank failures in Kenya, such as the Continental Bank, Trade Bank and Pan African Bank, involved extensive insider lending, often to politicians and public office holders. Insider loans accounted for 65% of the total loans of the four local banks liquidated in Nigeria in 1995, virtually all of which was unrecoverable (NDIC, 1994). Almost half of the loan portfolio of one of the Ugandan local banks taken over by the BOU in 1995 had been extended to its directors and employees. The threat posed by insider lending to the soundness of the banks was exacerbated because many of the insider loans were invested in speculative projects such as real estate development, breached large-loan exposure limits, and were extended to projects which could not

generate short-term returns (such as lodging suits and trading centers), with the result that the maturities of the bank's assets and liabilities were imprudently mismatched. The high incidence of insider lending among failed banks suggests that problems of moral hazard were especially acute in these banks. Several factors contributed to this. First, politicians were involved as shareholders and directors of some of the local banks. Political connections were used to obtain public-sector deposits: many of the failed banks, particularly in Kenya, relied heavily on wholesale deposits from a small number of parastatals. Because of political pressure, the parastatals which made these deposits are unlikely to have made a purely commercial judgement as to the safety of their deposits. Moreover, the availability of parastatal deposits reduced the need to mobilize funds from the public. Hence these banks faced little pressure from depositors to establish a reputation for safety.

Abuse of political offices also facilitated access to bank licenses and were used in some cases to pressure bank regulatory agencies not to take action against banks when violations of the banking laws were discovered. All these factors reduced the safety on imprudent bank management. Furthermore, the banks' dependence on political favors meant that they were under pressure to lend to the politicians in return for the assistance given in obtaining banking licenses, etc. most of the largest insider loans made by failed banks in Kenya were to prominent politicians. Secondly, most of the failed banks were undercapitalized, in part because the minimum capital requirements in force when these banks were setup were comparatively low. Owners had little of their own funds at risk should their bank fail, which created a large disparity in the potential risks and rewards of insider lending. Bank owners could invest the bank's deposits in their own high-risk

projects, in view that they would make large profits if their projects turned successful, but would lose little of their own investment if they were not profitable. According to Brownbridge (1998) Of the 13 distressed local banks taken over by the CBN in 1995, all except one had paid-up share capital which barely exceeded the minimum required by law of N50 million and N40 million, for commercial and merchant banks respectively, at the end of 1994. The average paid-up share capital of the four commercial banks taken over by the CBN was N51 million compared with an average of N94 million for all 36 private-sector commercial banks, while the average paid-up share capital of the nine merchant banks taken over by the CBN was N52 million compared to an average of N68 million for all 48 private-sector merchant banks. The paid-up share capital of these 13 failed banks amounted to an average of only about 4 per cent of their total loans.

The third factor contributing to insider lending was the excessive concentration of ownership. In many of the failed banks, the majority of shares were held by individuals or families who failed to give the Bank managers sufficient independence in making operational decisions. A more diversified ownership structure and a more independent management might have been expected to impose greater constraints on insider lending, because at least some of the directors would have stood to lose more than they gained from insider lending, while managers would not have wanted to risk their reputations and careers.

2.9.3 Lending to high-risk borrowers

Another major factor contributing to bank failure was lending, at high interest rates, to borrowers in high-risk segments of the credit market. This involved elements of moral hazard on the part of both the banks and their borrowers and the adverse

selection of the borrowers. It was in part motivated by the high cost of mobilizing funds. Because they were perceived by depositors as being less safe than the established banks, local banks had to offer depositors higher deposit rates. They also had difficulty in attracting non-interest bearing current accounts because they could offer few advantages to current account holders which could not also be obtained from the established banks. Some of the local banks relied heavily on high-cost interbank borrowings from other banks and financial institutions, on which real interest rates of over 20% were not uncommon.

The high cost of funds meant that the local banks had to make high earnings from their assets; for example, by demanding high lending rates, with consequences for the quality of their loan portfolios. The local banks almost unavoidably suffered from the poor selection of their borrowers, many of whom foreign banks had denied because they did not meet the strict loan worthiness criteria demanded of them. Because they had to charge higher lending rates to compensate for the higher costs of funds, it was very difficult for the local banks to compete with the foreign banks for the "prime" borrowers (i.e. eligible borrowers). As a result, the credit markets were segmented, with many of the local banks operating in the most adverse sectors, serving borrowers prepared to pay high lending rates because they have no access no alternative sources of credit. High-risk borrowers often include other banks and NBFIs which were short of cash and prepared to pay eccentric interest rates for interbank deposits and loans. In Nigeria some of the local banks were heavily exposed to finance houses which collapsed in large numbers in 1993, as well as to other local banks (Agusto and Co., 1995). This resulted to bank distress having domino effects due to the extent to which local banks lent to each other.

Within the segments of the credit market served by the local banks, there were probably good quality (i.e. creditworthy) borrowers as well as poor quality risks. however serving borrowers in this section of the market requires a critical loan appraisal and monitoring systems, not least because informational error are perilous: the quality of debtors' financial accounts are often poor, many debtors lack a track record of successful business, etc. The problem for many of the failed banks was that they did not have adequate proficiency to screen and supervise their borrowers, and therefore distinguish between good and bad risks. In addition, credit procedures, such as the documentation of loans and loan securities and internal controls, were frequently very poor. Managers and directors of these banks often lacked the necessary expertise and experience (Mamman and Oluyemi, 1994).

Recruiting good staff is often difficult for the local banks because the established banks usually offer the most talented bank officials better career prospects. Moreover, the rapid growth in the number of banks in countries such as Nigeria outstripped the supply of experienced and qualified bank officials

2.9.4 Macroeconomic instability

Challenges of poor loan quality faced by local banks are compounded by macroeconomic instability. During the 1990s, inflation reached in Zambia 191 per cent, in Kenya 46 per cent, in Nigeria 70 per cent, and in Uganda 23%. With interest rates liberalized Nigeria being in exception, financial lending rates were also high, with real rates fluctuating between positive and negative levels, often in an unpredictable manner, because of the volatility of inflation (Collier, 1993.). Macroeconomic instability would have had two important consequences for the loan quality of the local banks. First, high inflation increases the instability of

business profits because of its fickleness, and because it normally involves a high degree of variability in the rates of increase of the prices of the specific goods and services which make up the overall price index. The prospect that firms will make losses rises, as does the probability that they will earn handout profits (Harvey and Brownbridge, 1998). This strengthens both adverse selection and adverse motivations for borrowers to take risks, and thus the probabilities of bad debt.

Another consequence of high inflation is that it makes loan appraisal more difficult for the bank, because the feasibility of potential borrowers depends upon unpredictable developments in the overall rate of inflation, its individual components, exchange rates and interest rates. Moreover, asset prices are also likely to be highly volatile under such conditions. Hence, the future real value of loan security is also very uncertain.

2.9.5 Liquidity support and practical regulation

Deposit insurance schemes were not essential factors in contributing to moral menace in the failed banks. Kenya and Nigeria have provided deposit insurance since the late 1980s, but only for deposits below a specified minimum amount (Popiel, 1994). Many of the distressed banks' deposits were not insured, because they were too large or because they were from sources not covered by the insurance scheme. But the inclination of the monitory agencies to support distressed banks with loans, rather than close them down, was perhaps an important contributor to moral hazard. Many of the failed banks in Ghana, Kenya, Uganda and Zambia had been able to borrow heavily from their respective Central Banks for several months, and in some cases for more than a year, before they were closed.

The degree of imprudent management in the failed banks indicates that there were serious deficiencies in bank directive and supervision. When many of the banks were set up in the 1980s or early 1990s, banking legislation was outdated and monitory Bank supervision departments were seriously understaffed. In Ghana, Kenya and Nigeria, many banks avoided being inspected for long periods because, the rapid expansion of banks in the second half of the 1980s overwhelmed supervisory capacities (Kariuki, 1993, Popiel, 1994). Furthermore, political pressure was brought to bear on Central Banks to exercise regulatory forbearance. The Central Banks often lacked sufficient independence from the government to refuse liquidity support to politically connected banks and to strictly enforce the banking laws. In particular, for those banks with strong political connections, the expectation that regulators could be pressured to exercise forbearance must have seriously undermined discipline and incentives for prudent bank management.

2.10 Financial Policies in Ghana and their contributions to Bank Distress

Major financial sector reforms has been implemented in Ghana since the late 1980s, involving financial liberalization and institutional reforms (Adjetey, 1978,). Financial sector reform was essential because the pre-reform financial sector policies of government control over financial markets, together with a severe and protracted economic crisis, had severely dented the financial system, leading to both loss of financial capital and bank distress.

The banking sector namely commercial and development banks comprises the major part of the financial system in Ghana (Adjetey, 1978,). While Ghana's financial sector reforms are similar in nature to those currently being implemented in many other African countries, Ghana's reforms have been under way for longer.

and have been implemented with perhaps greater determination and consistency, than in some other countries. Some of the policies include

1. **Interest Rate Policy**

This literature reviewed the interest rate policies of the nineteen century alongside it's consequence on banks. The Bank of Ghana determined the structure of bank interest rates, including minimum interest rates for deposits and maximum lending rates (Adjetey, 1978). Priority sectors, such as agriculture, received favorable lending rates: in some cases these were lower than the minimum savings deposit rates (Leite 1982). The structure of interest rates set by the Bank of Ghana made no allowance for loan maturity or risk; undeniably incentives for banks to extend credit were often perverse because riskier sectors such as agriculture were accorded a special rate. Nominal interest rates were held below prevailing inflation rates in most years and, when inflation accelerated in the second half of the 1970s and early 1980s, real interest rates were highly negative

2. **Credit Controls**

According to the Centre for Policy Analysis (1996), Based on an annual credit plan drawn up by the Bank of Ghana, Sectorial credit guidelines were imposed on the banks to make available credit towards the priority sectors of agriculture, manufacturing and exports: these usually took the form of maximum permitted percentage increases in the stock of loans to each sector, with priority sectors accorded larger increases than non-priority sectors. However, the sectorial credit dictates were not strictly enforced. Since 1981 an additional policy stipulated that lending to agriculture should comprise a minimum of 20% of total loans, with deficits to be transferred to the ADB. Foreign companies were required to obtain Bank of Ghana permission to access loans from domestic banks.

3. **Demonetization exercises and anti-fraud measures**

Gockel (1995) pointed out in his submissions that the series of measures taken by the government during the late 1970s and early 1980s battered public confidence in the holding of currency and bank deposits. The most severe were two currency appropriations in 1979 and 1982, initiated in an attempt to shrink the money in circulation and therefore inflation, but the public were also discouraged from holding bank deposits by a number of measures aimed at countering fraud. Banks were mandated in 1979 to provide information to the authorities about customers at the authorities' request. In 1982 accounts in excess of C50, 000 were frozen pending investigation for fraud or tax liabilities, bank loans for the financing of trade inventories were recalled and compulsory payment by cheque was introduced for business transactions above C1000.

4. **Prudential Regulation and Supervision**

The 1970 Banking Act provided the regulatory framework for the banking industry (Centre for Policy Analysis 1996). This imposed minimum paid up capital requirements for foreign and locally owned banks of C2 million and C0.5 million respectively which was subsequently raised to C0.75 million

The bench mark capital requirements were worth very little by the early 1980s because of inflation. At the end of 1983, the minimum paid up capital for a local bank was equivalent to only $16,000. Banks were also obligated to maintain capital and reserves of at least 5% of their total deposits rather than risk assets which would be more relevant as an insurance against bankruptcy.

2.10.1 Contributions of pre-reform policies to bank distress

Some of the policies reviews and financial institutions reforms in Ghana during the eighties took their toll on the banks and affected their performance in more ways than is yet understood however at that time the impact were not so significant since other possible causes of bank distress were readily diagnosed by the regulatory Bank. Some of the effects of the pre reform policies include.

Decline in Financial Depth

Aryeety and Gockel (1990) submitted that the Ghanaian economy experienced very severe loss of financial depth as the broad money/GDP ratio, which had been comparatively consistent at around 20% from 1964-74, rose momentarily in the mid-1970s (to a peak of 29% in 1976) and then collapsed to 12.5% in 1983. Furthermore bank deposits became less profitable relative to cash: the currency ratio rose from 35% in 1970 to 50% in 1983, Bank deposits amounted to only 7.4% of GDP in 1984, having fallen from 19.5% of GDP in 1977. Aryeetey and Gockel (1990), in a study of the informal financial sector, found that street banking was increasing in contrast to formal sector intermediation. The main causes of the decline in financial depth included the sharply negative real deposit rates, which discouraged savers from holding financial assets. The currency appropriations of 1979 and 1982, the freezing of bank accounts and the decree authorizing the government to demand details of customers' bank accounts from banks, all served to eat into public confidence in holding domestic currency and using the banking system, instead encouraging the use of informal financial intermediaries and the holding of savings in the form of tangible assets, such as buildings and construction materials, or foreign assets. Long waiting times in banks, a consequence of inefficiency and the lack of large denomination bank notes, also deterred the public

from depositing cash in banks. Moreover the banks were deterred from active deposit mobilization because interest rate controls and the very high statutory reserve and liquid asset requirements prohibited banks from investing depositors' funds into remunerative outlets. At times the banks refused to open new time and savings deposit accounts and refused to pay interest on accounts above a certain amount (Leite, 1982).

1. **Decline in Lending to Priority Sectors**

Despite the fact that financial sector policies aimed to support priority sectors through the use of sectorial credit guidelines and preferential interest rates, the release of credit to these sectors declined quickly in real terms. Credit to the whole of the non-government sector that is including priority and non-priority sectors amounted to only 3.6% of GDP in 1983, having fallen from 9.8% in 1977 (World Bank, 1986). The main reasons for the decline in credit supply were the fall in financial depth mentioned earlier combined with crowding out by the government's borrowing requirements, which reduced the combined volume of funds which banks had to lend to all non-government borrowers, including public enterprises. The government took 87% of net domestic credit in 1983 while the total volume of bank lending fell, the sectorial credit dictates were not always functional in ensuring that the desired sectorial distribution of credit was realized. Though credit to agriculture were expected to exceed the stipulated minimum of 20% of total loans, there is subjective evidence suggesting agricultural loans were diverted to other uses, such as trading. Credit to other priority sectors often fell short of the maximum permitted under the credit thresholds while that to non-priority sectors often exceeded their ceilings (World Bank, 1986).

Banks were not eager to allocate available funds to priority sectors because of the lending rate controls which never allowed them compensate for lending risks, or transactions costs. Banks had strong motivations not to extend credit to potentially risky borrowers but to invest in government securities instead, since the latter offered the same, or almost the same, interest rates, but unlike the former were both liquid and virtually risk free.

2. Financial Distress among Public Sector Banks

Financial distress afflicted all the public sector banks in the 1980s. The DFIs seemingly ran into serious snags first, while the occurrence of distress in the two main commercial banks – Ghana Commercial Bank and Social Security Banks (SSB) was delayed until the mid1980s (NPART 1994). All the banks were declared bankrupt by non-performing assets (NPAs) and had to be restructured in 1989-91, when a total of GHC62 billions of NPAs was identified in the banking system and replaced by Bank of Ghana bonds or offset against liabilities of the banks to the BOG or the government. Most of the NPAs were transferred to the Non-Performing Assets Recovery Trust (NPART) in 1991. The NPAs included non-performing loans, letters of credit and equity investments which yielded no income. Non-performing loans amounted to GHC32 billion, representing 41% of all unpaid loans to the non-government sector (Kapur et al, 1991,). Of the GHC50.4 billion of NPAs which were eventually transferred to NPART in 1991, GCB, BHC and SSB accounted for 28%, 25% and 25% respectively. Loan losses would probably have been much greater had not lending been curtailed by the high liquid reserve requirements and credit ceilings imposed in the 1970s and 1980s.The DFIs also suffered heavy losses from foreign exchange exposures: since they converted

foreign currency liabilities into domestic currency assets without compensations for the risk involved.

The main reason for the losses incurred by the public sector banks was that they had been pressured into extending finance to unbankable projects to meet developmental and political objectives. The banks were very exposed to political pressure because the government had the authority to appoint and dismiss the banks' executives and managers. The economic crisis and the radical changes in economic policy implemented during the 1980s also contributed to the deterioration in the banks' asset portfolios. Certain projects financed by banks were cut short due to lack of foreign exchange to purchase inputs. Importers to whom letters of credit had been extended by the commercial banks, were not able to meet obligations following the large exchange rate devaluations which began in 1983.

Around 47% of the NPAs transferred to NPART had been extended to SOEs, many of which were not economically sustainable. The government had provided guarantees for some of the loans extended to SOEs but these had not been honored. The other 53% of NPAs transferred to

NPART were accounted for by private sector creditors or joint ventures between the private sector (including foreign companies), traditional councils and the banks. These were mainly medium and small scale companies in import substituting industries. Many of these projects were not properly appraised by the banks providing the finance, some were clearly only marginally viable, if viable at all, and the collateral provided had little resale value. Loan documentation was inadequate, as was loan monitoring and little effort was made to recover many of the bad debts.

NPART (1994) gave a detailed account of the problems which led to the collapse of four projects financed by the BHC, NIB and SSB. The problems afflicting these

projects included inappropriate technical design, equipment breakdowns, and disputes between shareholders, withdrawal of foreign partners and the unavailability of inputs. Most of the assets owned by these companies consisted of equipment which had been left lying around in fields without maintenance for years after the collapse of the projects and hence were virtually worthless when eventually auctioned by NPART.

Corruption and fraud contributed to the scale of the banks' losses with politically connected borrowers being able to access unsecured loans which would not have been given to them on commercial grounds and to avoid pressure to repay. During the Acheampong regime in the

1970s, loan applicants obtained notes from military officers and took these to bank managers: If the manager did not comply he risked being sacked over the radio. Many of the BHC's bad debts had been extended to military personnel. Public banks continued in operation through the 1980s despite the poor quality of their asset portfolios. GCB and SSB were able avoid liquidity shortages partly because the very high reserve requirements imposed in the 1970s and the credit ceilings in the 1980s forced them to hold large volumes of liquid assets. But the DFIs, whose asset portfolios were both longer term and more badly impaired than those of the commercial banks, and which had the additional burden of foreign currency denominated liabilities, were worse affected by financial distress and suffered liquidity shortages in the early 1980s Both the BHC and NIB required booster of equity and loans from the BOG to maintain liquidity and boost capital, however this only allowed further large losses to be suffered in the second half of the decade. The true state of the banks' balance sheets was concealed by the failure to make adequate provisions for NPAs and to suspend growing unpaid interest as

income. Hence banks appeared solvent, according to the data in their published accounts even though the capital adequacy levels of some banks were very low. When suitable accounting techniques would have revealed that losses had completely eroded capital. The extent of the financial distress in these banks was only revealed when investigative studies were carried out in 1987 in preparations for the Financial Sector Adjustment Programme (FINSAP)

2.11 Overview of recommendations for banking regulation and supervision

Well managed local banks have potentials to bring significant benefits to financial markets while their failures have severe implications for taxpayers and depositors (brownbrdig 1998).

The challenge facing regulatory banks is to allow local banks enough freedom to take prudent risks in lending to potentially difficult segments of the credit market, while avoiding unprofessional, reckless and fraudulent lending in a similar way as characterized many of the failed banks Hempel (1999).

Regulatory policy reforms should encompass two elements: first, strengthening supervision and the enforcement of prudential rules, especially in the area of credit risk; and second, ensuring that the regulatory framework enhances, rather than diminishes, incentives to bank owners and managers for prudent management. This has brought most features of their banking regulation into line with international best practice.

If the new banking regulation is to be effective, close supervisions of the banks by the supervisors, principally of their asset portfolios, and the imposition of penalties on banks which violate the regulations, are necessary Sanusi (2010).

Brown bride (1998) pointed out that Regulators must learn to focus attention on identifying potential debts issues in the banks, and make sure that banks properly

classify loans according to determined criteria based on the loan servicing record and make suitable accommodations for non-performing loans. Unless this is done, the capital adequacy requirements are practically meaningless.

Quality of bank management should also be evaluated by on-site inspectors; Regulators should insist on changes when shortages in personnel or procedures are discovered. They should also be alert for early warnings of banking distress, such as offers of very high deposit rates, rapid expansion of assets and late submission of bank returns to the regulatory banks, and intensify supervision when these are detected (Popiel, 1994,). Regulation and supervision, however, cannot realistically be expected to provide the main defense line to thwart bank failure. Skills needed by supervisors are scarce in Africa (Caprio 1996), since they require long periods of training, and retaining, qualified supervisors have become difficult because of the salary differentials between public and private sectors creating a lack of man power in government owned Banks.

Effective regulation has always been impeded by political interventions. As such, regulatory policy should not rely absolutely on the imposition of provident rules and regulations, but should focus on harmonizing the incentive structure facing the owners and managers of local banks with prudent and honest management (Caprio, 1996). Reforms should also aim to insulate the regulators from political interference in operational decisions.

There are several ways in which the incentive structure can be reformed to reduce moral hazard in banks. First, the minimum capital prerequisite to start a bank should be raised so that owners have more of their own treasuries to lose if their bank fails. This would have the additional advantage of forcing some of the local banks to merge thus diluting the concentration of shareholdings in individual banks.

Stringent rules limiting shareholdings by single individual or related individuals would also reinforce this process. Larger, better capitalized banks with a more diversified share ownership would be less susceptible to pressure from individual directors for insider loans.

Such bank directors would then have greater motivations to hire experienced and competent bank managers.

Secondly, new entry should be limited by requiring applicants for bank licenses to meet stricter criteria in terms of their capital resources, appropriate expertise and probity. This would have several advantages. It would raise the franchise value of holding a bank license, and thereby would increase motivations on bank owners to avoid bankruptcy or other engagements, breaching banking laws, which would result in their losing their license (Caprio, 1996). Higher entry requirements would also reduce the number of very small and weak banks which lack capital and human resources and have a poor reputation; These banks face the highest deposit costs and lend at the bottom end of the credit market, where hostile selection pressures are at their strongest,. Effective supervision will also be more practicable if the number of banks is limited, as supervisory resources will not be so thinly spread. A policy of restricting entry and thereby competition, however, might lead to a less efficient financial sector, but some trade-off between incentives for greater efficiency and motivations for judicious management may be unavoidable.

Thirdly, moral hazard could be moderated by enforcing regulatory controls to cap real deposit interest rates, through two channels. As moral hazard is a positive function of borrowing costs (Stiglitz and Weiss, 1981), lower deposit rates would reduce the enticements on bank owners to adopt high-risk lending strategies. In

addition, bank profits, and thereby the banks' franchise value, could be raised if deposit rate controls curtailed competition among banks for deposits, enabling banks to increase their interest rate margins. Deposit rate controls would, however, need to be implemented with care and flexibility to avoid reducing deposit rates to negative real levels and inducing disintermediation (Hellmann et al., 1995).

Fourth, limits should be imposed on the bulk of funds which a bank can mobilize from a single source. The reasoning for this would be to restrict the extent to which banks can rely on large deposits made by public-sector institutions subject to political influence, and which do not therefore make a commercial judgement over the soundness of the bank holding their funds. Limits on the size of deposit holdings would force these banks to diversify their source of funds. They would therefore have to rely more on mobilizing deposits in the market, without the help of political connections, which would entail establishing a better reputation for prudent management. Banks that are unable to establish such a reputation would mobilize less deposits, and therefore have less money to lose in the event of bankruptcy.

Fifth, regulatory policy reforms should reduce the implicit protection provided to bank owners through regulatory tolerance. Bank owners have few incentives for poor management if they expect the government to bail out insolvent banks, or allow them to continue operating while insolvent with liquidity support from the regulatory Banks or public sector deposits. Insolvent banks should not receive liquidity support from the regulatory Bank but should be closed down or taken over by the regulators as soon as their insolvency becomes apparent. Banks which are undercapitalized but still solvent should be subject to holding actions until capital adequacy is restored. Penalties should be imposed for violations of the banking

laws. If distressed banks are reformed with aid from government, the existing shareholders should not profit. Losses incurred by the bank should be charged against the shareholders' capital before the bank is restructured, so this prevents shareholders from being bailed out with public funds.

The difficulty with this approach is that political pressure often favors regulatory tolerance, which reduces the reliability of the strategy with bank owners. To send clear signals to bank owners, compel regulators to act decisively and protect them from pressures for tolerance, a clear set of guidelines stipulating the actions to be taken by the regulators in the event of bank distress should be drawn up and made public (Glaessner and Mas, 1995).

The rules should, specify the minimum capital adequacy ratio below which a bank will be taken over by the regulatory banks. They should also set out mandatory penalties, including dismissals of managers and revocation of bank licenses, for specified violations of the banking laws.

These policy measures will not be functional unless regulators have sufficient political independence to actually enforce the rules. Insulating regulators from political interference almost a herculean task and will not be achieved simply by passing legislation giving regulatory Banks greater authority to act independently of national finance sector. What is also needed is to create institutional mechanisms which give the senior management of Central Banks some protection against being reprimanded by the government for taking regulatory actions which threaten banks with political supports

2.12 Synthesis of the Literature

From the review of the literature, the problem of financial distress is accounted for by several factors. Managerial decisions, ownership structure of firms and cash flow constraints are widely reported in the literature as predictors of financial distress. Also different methodologies have been employed to determine the level of financial distress of firms. These models have their unique strengths and weaknesses. However, there appears to be a broad consensus that the best models apply cash flow, liquidity, profitability and leverage components in determining financial distress. In the context of Ghana, very few studies have been conducted on the problem of financial distress. Again, the financial distress of rural banks has not been explored in Ghana in the scholarly literature. Previous studies in Ghana have used either quantitative or qualitative approaches in isolation in examining financial distress. Clearly, there is a methodological gap as far as determining the causes of financial distress and the extent of distress of banks is concerned. Further, no attempt has been made to examine the efficacy of the various measures of controlling financial distress. The present study fills these research and methodological gaps by focusing on the distress of rural banks, examining the causes of financial distress, determining the relative effectiveness of measures to contain financial distress and approaching the study from both quantitative and qualitative research design perspectives. Furthermore, the review will assist in the interpretation of the study results.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter primarily explains the methodology that was employed to investigate the research study. The chapter delineates on the research design, population and sampling techniques, mode of data collection, the description of the research instrument, ethical considerations, test for validity and reliability as well as the tools of data analysis.

3.2 Research design

Creswell (2009) characterizes a research design as the framework and the process for research that cover decisions from extensive assumptions to in-depth procedures for the collection and analysis of data. The initial phase in the planning of a research design paradigm is determining the appropriate research approach or strategy for the study. According to Bryman and Bell (2015: 49) research design gives a suitable framework for the collection and analysis of data and therefore reflects in the decisions about the precedence being given to the research process. They posited that research design indicates the methods through which the research questions as well as objectives will be answered. These will include the source of data collection, the limitation and the ethical issues that might appear during the execution of the research. There are generally two approaches to research. These are quantitative and qualitative (Bell, 1997; Leedy &Ormrod 2010: 136, 182). According to King *et al.* (1994), qualitative research approach is more personal whiles quantitative is more statistical. According to Harwell (2011) quantitative

research methods attempt to maximize objectivity, reliability, and generalizability of findings and are typically interested in prediction. He further maintains that integral to this approach is the expectation that researcher will abandon his personal biases so as to ensure objectivity in undertaking a research study and consequent conclusions. Quantitative method is frequently described as deductive in nature consisting in the fact that inferences can be generated about the attribute of a given population through testing of statistical hypotheses.

Creswell, (1994) conceptualizes quantitative research as type of research that is best suited to analyzing and explaining a phenomenon by collecting numerical data that are analyzed using mathematically based methods in particular those drawn from statistical fields. A major limitation of the use of quantitative method is its inability to explore a problem in a comprehensive manner. For example the quantitative method cannot tell anything about the issues relating to say the causes of banking distress or reveal anything about the effectiveness of measures to avert banking distress. Saunders et al (2003) provides a contention which is consistent with this claim by noting that quantitative methods are too shallow to allow for any in depth understanding of a research problem. Following from these research perspectives, both qualitative and quantitative designs were employed in the study. The choice of the inclusion of qualitative approach is consistent with Mcleod (2008) contention that the qualitative research deals with a phenomenon which occurs on an individual or personal level considering how people consider and feel about particular problems and how they deal with these problems. This is particularly so as some of the research objectives in this study were addressed by exploring the central issues qualitatively. Data triangulation was also employed in the study. Triangulation is defined as the mixing of methods or data so that diverse viewpoints

or standpoints cast light upon a topic. Olsen (2004) contends that triangulation is not merely aimed at validation but at deepening and widening one's understanding of a given issue. Creswell and Clark (2007) recommend mixed methods of data collection that using both quantitative and qualitative methods to strengthen the validity of the conclusions of any research. Thus the inclusion of banking managers in the study provides a means by which research findings can be validated and corroborated. More so, most previous studies focused on the findings derived from only quantitative analysis and the inclusion of the views of bank managers seeks to address this gap.

3.3 Population and sampling techniques

Population is generally defined as the total number of elements of a particular unit of study from which the researcher can choose a proportion of the study unit called sample and from which inferences can be made. Polit and Hungler (1999, p.37) defined population as an aggregate or totality with all the objects, subjects or members that conform to a set of specifications. This study is delimited to cover the study of four rural banks only. The focus on the rural banks is informed by several reasons. First, ease of access to data and relevant information required for analysis and acess and cooperation from banking staff with respect to provision of relevant insight and information on the subject matter. (Yin, 2003) suggested that case studies are suitable for investigating a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident

Eisenhardt (1989) also advocates the use of case studies noting that the case study approach typically focuses on understanding the dynamics present within single settings; this view is taken to support the case study approach adopted in this thesis.

A Sample refers to a proportion of the population that the researcher can use to make inferences about the whole population. LoBiondo-Wood and Haber (1998) defined sampling as the process of selecting a portion of the population to represent the entire population. In selecting the sample of rural banks, purposive sampling was employed. Purposive sampling also called judgmental sampling is a type of sampling technique where subjects are selected based on the knowledge of the population and the purpose of the research study. In all four rural banks were sampled. 10 respondents were drawn from each sampling unit and thus making a total of 40 respondents. Financial data for the quantitative aspect of the study were limited to cover a period of five years spanning 2010 to 2014.

To establish the robustness of the ratio analysis in predicting banking distress, two banks considered as having good financial standing and two other distressed banks will be selected for the study. The two non-distressed banks in this regard are Akwapim rural bank and Ga rural bank, based on BOG assessment reports 2013. The two distressed banks are Juabeng rural bank and Atwima Kwannwoma rural bank. The use of four different rural banks with different financial standing is to create a diversified and varied sample composition. The use of a sample of four different banks is said to be a case study for the entire population. This assumption of the representativeness of the sample is particularly so in the case of homogenous populations. In this study the population is relatively homogenous given the fact that the respondents are all drawn for the same research purposes and are operating

in the same field of business who have similar experiences. Heiser and Meulman (1992) assert that if the populations are the same for the purposes of the study, they are collectively called homogenous meaning of one kind and different random samples from homogenous will be called homogenous as well. Time and other resource constraints justifies the use of sample in the study.

3.4 Description of research instrument

The research instrument that was employed in the study is questionnaire. This questionnaire was designed to reflect the key variables with which the study focuses on. The questionnaire consisted of two sections. The first section elicited information on the causes of banking distress in the banking sector. The second part solicited data on the measures adopted to control banking distress in the banking sector. The third part dwells on information on the efficacy of these methods of containing the problem of banking distress from the perspectives of sampled respondents. Both open and closed ended questions were included in the questionnaire. The inclusion of open ended questions is to allow for greater degree of expression from respondents.

3.5 Data sources and collection

Both primary and secondary sources of data were employed in the study. The primary source comprises the data that was generated from the respondents that were sampled from among rural banks. The secondary sources comprises materials sourced from published accounts, books, articles, journals and the internet which are of key relevance to the study. The secondary sources primarily aided in the design and preparation of the research questionnaire. For example, the review of

literature from secondary sources allowed for collection of major causes of banking distress in the banking industry identified in extant literature.

3.6 Data analysis

3.6.1 Examining and ascertaining the major factors influencing financial distress in the Ghanaian banking sector and the degree of distress in the banking industry.

This objective is a qualitative measure and was addressed by the questionnaire survey. Respondents were asked to explain in their views what factors drive financial distress in the banking sector. Descriptive statistics such as percentages were used to complement the analysis of data.

3.6.2 Measures employed by regulatory authorities to manage distress in the banking sector and their relative effectiveness.

Questions two is qualitative measure which was addressed by the questionnaire survey. Respondents were asked to indicate some of the measures employed by regulatory authorities to curb distress in the banking sector. Logical deductions based on the questionnaire survey were also made.

3.6.3 Assessing the extent to which efficient financial ratios are in predicting distress in the banking sector

The logit model developed by Zavgren (1985) is used to analyze this objective. As outlined earlier, the logit model begins with the calculation of seven financial ratios. These seven financial ratios are identified as ratio of inventory to sales ratio which is an efficiency measure of the firm, receivables to sales which is also an

efficiency measure, cash marketable securities to total assets ratio which measures the liquidity of the firm, quick assets to current liabilities which is also another measures of firms' liquidity operating income to TA-CL(Total Assets : Current Liabilities) ratio which is also an efficiency measure, long term debt to TA-CL ratio which measures efficiency and sales to NWC + FA,(Net working capital + Fixed Asset) a variant measure of liquidity. Subsequent to the calculation of the ratios, each of the ratio is measured by a coefficient unique to that variable. The under listed shows the ratios and the respective coefficients in this context. Subsequent to this, each ratio is multiplied by a coefficient unique to that ratio and the coefficient can either be positive or negative. The resulting values are summed together(y). The probability of distress is calculated as the inverse of $(1+e^{y})$. Thus the probability of distress is derived as $1/(1+e^{y})$.

Explanatory variables with a negative coefficient increase the probability of bankruptcy because they reduce e^{y}toward zero, with the result that the bankruptcy probability function approaches 1/1 or 100%. In the same vein, independent variables with a positive coefficient decrease the probability of distress.

The logit model is deemed appropriate because it does not suffer from the problems associated with linear discriminate analysis such as the assumption of normality and similar dispersion measures. A variant position on the benefit of the logit model is that it is useful in making prediction therefore enables management and investors improved disclosure of trouble ahead and hence its use in the study.

The under listed shows the ratios and their respective coefficients.

Table 2: Logit model financial ratios and their respective coefficients

FINANCIAL RATIO	COEFFICIENT
Constant	+ 0.23883
Inventories/Sales	-0.108
Receivables/Sales	-1.583
(Cash + marketable securities)/Total Assets	-10.78
Quick Assets/current liabilities	+3.074
Income from continuing operations/Total Assets -current liabilities	+ O.486
Long-Term Debt/Total Assets -current liabilities)	-4.35
Sales/Net working capital + Fixed Assests)	+0.11
Y=	(Sum of coefficient *Ratio)
Probability of Distress =	$1/(1 + e^{y})$

Source: Adapted from Zavgren (1985)

3.7 Computer software

Data was collected and generated with the aid of the Statistical Package for Social Sciences (SPSS) software. In particular, excel was used to arrive at the financial ratios. In the case 4 of the interviews, data was tape recorded and later transcribed in order of similarity in themes.

3.8 Ethical Considerations

A research study could be interpreted as an intrusion into the private lives of sampled respondents. To ward off any sense of insecurity among respondents, they will be guaranteed of anonymity and also assured of confidentiality of data. In

addition they were assured that data collected would be limited to academic and research purposes. In addition, all works cited have been duly acknowledged to avoid the issue of plagiarism.

3.9 Validity and reliability of data

The study employs both primary and secondary data. The primary data is derived from the use of questionnaire survey whereas the secondary data is derived from the published annual financial statements of the sample of rural banks. The validity and reliability of the secondary data is underscored by the fact that these financial institutions maintain international accounting standards and are fully responsible for published data. To achieve validity and reliability of the primary data, pretesting of questionnaire was resorted to. Further the validity and reliability of the study is highlighted by its clear definitions of all concepts and constructs employed in the study.

3.10 Conclusion

All data collected both quantitative and qualitative will be analysed in line with research objectives to draw logical conclusions to the research.

Five hypotheses have been postulated for validation in the course of the research. Hypothesis one to four were tested by using Chi-square method, while the fifth hypothesis was tested by making use of logit model.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

In the preceding chapter, the various sources of data collection open to a researcher were examined as well as those used for this study.

Questionnaire was drawn and administered amongst the staff of Akwapim rural bank limited, Ga rural bank, Juabeng rural bank and Atwima kwanwoma rural bank limited. On the whole, a total number of ten questionnaires were given to Akwapim rural bank limited staff, ten to Ga rural bank staff, ten to Juabeng rural bank staff and finally ten to Atwima kwanwoma rural bank staff. All the questionnaires distributed were adequately completed and returned. Thus, all the questionnaires were used for analysis and testing of the hypotheses.

4.2 Data analysis and interpretation

The response to each question are analyzed and presented in tabular from for easy assimilation and interpretation.

Table 3 represents the responses of the respondents to the question.

Which of the following do you consider to be a major cause of distress in the Ghanaian rural banking sector?

Table 3: Major cause of distress in Ghanaian rural banking sector

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	total	Percentage %
Inept Management	7	6	8	4	25	62.50
Adverse Economic condition	1	1	1	2	5	12.50
Political Instability	0	1	0	0	1	2.50
Inadequate Supervision	1	0	1	2	4	10.00
Under capitalization	1	2	0	2	5	12.50
Total	10	10	10	10	40	100.00

Source: researchers field survey (2016)

Table 3 inept management is the major cause of distress in the Ghanaian rural banking sector. In table 3, 62.50% are of the view that inept management is the major cause, other

include adverse economic condition 12 .50%, political instability 2.50%, inadequate supervision 10. 00% and under capitalization 12.50%.

HYPOTHESIS ONE

H_0: Distress in rural banks is not independent of management incompetence

H_1: Distress in rural banks is independent of management incompetence

Level of significance= 0.05

Degree of freedom = (c – 1) (r - 1)

= (4-1) (5-1)

= (3) (4)

df = 12

Where C = column number

r = number of rows

df = degree of freedom

Critical values are drawn from χ^2 distribution tables

At a significance level of 0.05 and a degree of freedom of 12, the critical value =21.0

Table 4: Expected value table (x^2)

Observed frequency	Expanded frequency	fo – fe	$(fo - fe)^2$	$(fo - fe)^2/fe$
7	6.250	0.7 50	0.563	0.090
6	6.250	-02.50	0.063	0.010
8	6.250	1.750	3.063	0.490
4	6.250	-2.250	5.063	0.810
1	1.250	-0.250	0.063	0.050
1	1.250	-0.250	0.063	0.050
1	1.250	-0250	0.063	0.050
2	1.250	0.750	0.563	0.450
0	0.250	-0.250	0.063	0.252
1	0.250	0.750	0.563	2.250
0	0.250	-0.250	0.063	0.250
0	0.250	-0.250	0.063	0.250
1	1.000	0.000	0.000	0.000
0	1.000	-1.000	1.000	1.000
1	1.000	0.000	0.000	0.000
2	1.000	1.000	1.000	1.000
1	1.250	-0.250	0.063	0.050
2	1.250	0.750	0.563	0.450
0	1.250	-1.250	1.563	1.250
2	1.250	0.750	0.563	0.450
				$X^2 = 9.202$

The computed value ($x^2 = 9.202$) is less than the critical value (21.00)

Thus, we do not reject the null hypothesis that "banking distress is independent of management incompetence".

Table 5 presents the response of the respondents to the question.

Is the role of the regulatory authorities in the management of distressed rural banks in Ghana effective?

Table 5 Assessment of the role of regulator authorities

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	Percentage %
Yes	7	6	9	8	75.00
No	3	4	1	2	25.00
Total	10	10	10	10	100.00

Source: Questionnaire distributed

Table 5 above indicates that 30 or 75.00% of the respondents are of the view that, the role of the regulatory authorities in the management of distressed

Banks is effective, which 10 or 25.00% are of the view that, the role of the regulatory authorities in the management of distressed banks is not effective.

HYPOTHESIS TWO

H_0: There is no significant effort to curb distress in Ghanaian Rural Banking Sector by regulating authorities.

H_1: There is significant effort to curb distress in Ghanaian Rural Banking sector by regulatory authorities.

Level of significance = 0.05

Degree of freedom = (c-1) (r-1)

= (2-1) (2-1)

df =1

At a significance level of 0.05 and a degree of freedom of 1, the critical value is 3.84.

Table 6 Expected value Table (x^2)

fo	fe	fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
9	8	1	1	0.125
7	2	5	25	12.500
1	8	-7	49	6.125
3	2	1	1	0.500
				$X^2 = 19.25$

The computed value (x^2=19.25) is greater than the critical value (3.84).

Thus, we reject the null hypothesis (H_0) and accept alternative- hypothesis (H_1), which says that, "there is significant effort to curb distress in Ghanaian Rural Banking sector by regulating authorizes"

Table 7 represents the response of the respondents to the question.

Some school of thought have argued that banks could perform better without regulation and regulatory authorities. Do you agree?

Table 7 The need for regulatory authorities

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	total	Percentage %
Yes	0	0	3	2	5	12.50
No	10	10	7	8	35	87.50
Total	10	10	10	10	40	100.00

Source: Questionnaire distributed

Table 7 above indicates that 35 or 87.50% of the respondents are of the opinion that banks cannot perform better without regulation and regulatory

Authorities, which 5 or 12.50% are of the opinion that banks can perform better without regulation and regulatory authorities.

HYPOTHESIS THREE

H_0: Performance of rural bank is not independent of regulating regimes.

H_1: Performance of rural bank is independent of regulatory regime.

Level of significance = 0.05

Degree of freedom df = (c - 1) (r - 1)

= (4 - 1) (2 - 1)

= (3) (1)

df = 3

At significance level of 0.05 and a degree of freedom of 3, the critical value= 7.81

Table 8 Expected Value Table (x^2)

fo	fe	fo-fe	$(fo - fe)^2$	$(fo - fe)^2/fe$
0	1.25	-1.25	1.563	1.250
0	1.25	-1.25	1.563	1.250
3	1.25	1.75	3.063	2.450
2	1.25	0.75	0.563	0.450
10	8.75	1.25	1.563	0.179
10	.758	1.25	1.563	0.179
7	8.75	-1.75	3.063	0.350
8	8.75	-0.75	0.563	0.064
				$X^2 = 6.172$

The computed value ($x^2 = 6.172$) is less than the critical value (7.81).

Thus, do not reject the null hypothesis and reject alternative hypothesis, which says, banks could perform without regulation and regulatory authorities.

Table 9 represents the responses of the respondents to the question.

Do you agree that regular supervision is a factor against deterioration in the condition of rural banks?

Table 9 Roles of regular supervision

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	total	Percentage %
Yes	9	10	6	5	30	75.00
No	1	0	4	5	10	25.00
Total	`0	10	10	10	40	100.00

Table 18 above indicates that 30 or 75.00% of the respondents are of the opinion that regular supervision remains the most important component against widespread deterioration in the operating condition of rural banks.

While 25.00% are opinioned differently.

HYPOTHESIS FOUR

H_0: Regular supervision is not a factor against deterioration in the condition of rural banks.

H_1: Regular supervision is the most important component against widespread deterioration in the condition of the rural banks.

Level of significance = 0.05

Degree of freedom (df) = (c-1) (r-1)

= (4-1) (2-1)

= (3) (1)

df = 3

At significance level of 0.05 and a degree of freedom of 3, the critical value = 7.871

Table 10 Expected value table (x^2)

fo	Fe	fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
9	7.50	1.50	2.25	0.300
10	7.50	2.50	6.25	0.833
6	7.50	-1.50	2.25	0.300
5	7.50	-2.50	6.25	0.833
1	2.50	-1.50	2.25	0.900
0	2.50	-2.50	6.25	2.500
4	2.50	1.50	2.25	0.900
5	2.50	2.50	6.25	2.500
				X^2= 9.066

The computed value (x^2 = 9.066) is greater than the critical value (7.81)

Thus, we reject the null hypothesis (H_0) and accept the alternative hypothesis (H_1) which says, "Regular supervision is a factor against deterioration in the condition of rural banks "

Table 10 Represents the response of the respondents to the question. Are you aware of the Failed Banks (Recovery of Debts) and Financial Malpractice in Banks Decree?

Table 11 Failed bank and financial malpractice awareness

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	total	Percentage %
Yes	10	10	7	7	34	85.50
No	0	0	3	3	6	15.00
Total	10	10	10	10	40	100.00

Table 11 above indicates that 34 or 85.00% of the respondents are aware of the Failed Banks (Recovery of Debts) and financial malpractice in Banks decree, while only 6 or 15.00% of the respondents are not aware of the decree.

Table 12 represents the response of the respondents to the question.

Do you think that failed banks (recovery of debts) and financial malpractice decree has impacted the financial fortune of distressed banks?

Table 12 impact of failed bank and financial malpractices decree

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	Total	Percentage %
Positive	10	10	5	7	32	80.00
Negative	0	0	3	3	6	15.00
Blank space	0	0	2	0	2	5.00
Total	10	10	10	10	40	100.00

Table 12 above indicates that 80% out of 85% that are aware of the failed banks (Recovery7 of Debts) and Financial Malpractice Decree, said the impact is positive on the financial fortunes of distressed bank. 15% of the respondents are of the view that the impact is negative, while the remaining 5% left the place blank.

Table 13 represents the response of the respondents to the question.

Are you aware of the existence and role of the regulatory authorities in the banking system?

Table 13 Roles of regulatory authorities in the banking system

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	Percentage %
Yes	10	10	10	10	100.00
No	0	0	0	0	0.00
Total	10	10	10	10	100.00

Table 13 indicates that all the respondents, which is 100% of the response are aware of the existence and role of the regulatory authorities in the banking system.

Table 14 represents the responses of the respondents to the question.

Which of the following preventive measures should be adopted as steps taken to prevent distress in the nation's banking sector?

Table 14 Distress preventive measures

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	total	Percentage %
Establishing a loan recovery agency	0	1	1	2	4	10.00
Promoting political stability	1	0	0	1	2	5.00
Tackling the critical problem of poor management	1	2	5	2	10	25.00
Macroeconomic policy stability	1	1	2	1	5	12.00
All of the above	7	6	2	4	19	47.50
Total	10	10	10	10	40	100

Table 14 above indicates that all the respondents are of the opinion that all of the preventive measures can be used to prevent distress in the nation's banking sector. 10.00% are of the opinion that, the establishment of a loan recovery agency should be used as a preventive measure, 5.00% are of the opinion that promoting political stability should be adopted. Concerning macroeconomic policy stability, 12.50% of the respondents are in full-support of that.

25.0 % feel tackling the critical problem of poor management should be adopted and lastly, 47.50% are of the opinion that all the preventive strategies should be used for the prevention of distress in the rural banking sector.

Table 15 represents the responses of the respondents to the question. How would you assess your bank in the current- distressed or not distressed?

Table 15 Distressed syndrome assessment

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	total	Percentage %
Distressed	1	2	1	3	7	15.00
Not distressed	9	8	9	7	33	82.50
Total	10	10	10	10	40	100.00

Table 15 indicates that 82.50% of the respondents are of the opinion that. their bank is not in distress situation, while only 15.00% of the respondents says that their bank is in distress situation.

Table 16 represents the responses of the respondents to the question. Which of the following rural bank failure resolution option, do you recommend for distress management for the Ghanaian rural banking sector?

Table 16 Bank failure resolution option

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	Percentage %
Direct financial Assistance	1	0	2	1	10.00
Insured deposit transfer	1	1	1	1	10.00
Merger and Acquisition	2	3	4	2	27.50
Take-over management and control by APEX bank	4	5	3	5	42.50
Take-off (liquidation)	2	1	0	1	10.00
Total	10	10	10	10	100.00

Source: Questionnaire distributed

Table 16 above indicates that 42.50% of the respondents believe that take-over management and control by APEX bank should be used as a resolution option, 27.50% are of the believe that take-off (liquidation) should be used, 10.00% believe that merger and acquisition should be used. And finally, 10.00% believe that Direct Financial Assistance to Banks and Insured Deposit Transfer should be used.

Table 17 represents the responses of the respondents to the question. Which of the following supervisory actions with regard to distress management should be adopted in the management of distressed rural banks?

Table 17 Available supervisory action

Response	Akwapim rural bank limited	Ga rural bank	Juabeng rural bank	Atwima kwanwoma rural bank limited	Percentage %
Change of management	0	1	3	0	10.00
Liquidation of distressed banks	1	1	0	1	7.00
Suspension of banking license	0	1	2	1	10.00
Comprehensive supervisory intervention	5	4	2	6	42.50
All of the above	4	3	3	2	30.00
Total	10	10	10	10	100.00

Source: Questionnaire distributed

Table 17 above shows that 10.00% of the respondents believe that, change of management should be the best option, while 7.50% believe that liquidation of distressed banks should be used, 10.00% believe that comprehensive supervisory intervention should be adopted. while 30.00% of the respondents are of the opinion that all of the above supervisory

actions responsible for distress management should be used for the management of distressed rural banks.

Personal interview was conducted as a follow up to the questionnaire so that more detail information about some of the questions asked in the questionnaire can be obtain. Staffs of the Akwapim rural bank limited, Ga rural bank, Juabeng rural bank and Atwima kwanwoma rural bank limited were interviewed and some of their responses were as follows:

In response to the question, could banks perform better without regulations and regulatory authorities? The respondents who answered yes to the question gave the following reasons on why they think banks could perform better. That if rural banks are not regulated there could be more flexible and so could provide variety of services that are profitable to the banks. They argued further, government policy changes have been observed to be too frequent and inconsistent to achieve realistic objectives. In this manner, the performance trends of macro- economic aggregates are observed to move in an inverse manner.

In response to the question: Why is the number of distressed banks are on the increase despite the establishment of the regulatory authorities? Some of the respondents gave in the following. Lack of proper monitoring of the rural banks, too much insider's abuses/ boardroom scrambles, inadequate capital as well as lack of proper sanctioning of the distress syndrome by regulatory authorities.

According to some respondents, poor management significantly drives financial distress. For these respondents, manifestations of poor management take the forms of improper credit policies, impropriety in loan approval and poor implementation credit management

policies. Among these factors respondents who share these views in the context of poor management as a causual and common factor of financial distress impropriety in loan approval among rural banks. For most respondents, information asymmetry serves as a moderating variable between poor management and financial distress. Information asymmetry from the perspectives of respondents was defined as the usual lack of information or perhaps inadequate information concerning clients of the bank. By and large respondents hinted that information asymmetry may contribute to high non-performing loans

Adverse economic condition was identified as another driver of financial distress. In the view of respondents, a volatile economic environment such as poor economic growth, high inflation rates and high interest rates cause financial distress. In the opinion of some respondents, these factors serve as precursors to the emergence of such things as low demand for loan and non-performing loans. This finding regarding adverse economic conditions as a factor causing financial distress conforms to the finding by Liu and Smith (2007) who found interest rates and inflation rates to be positively related to financial distress. It is further consistent with the finding by Demirgu-Kunt and Detragiache (1997), Mensah (1994) and Memba and Job (2013) who also found adverse economic conditions such as high credit interest rates to be positively correlated with banking distress. However, the finding conflicts with the finding by Suntraruk (2010) who found no relationship between macroeconomic conditions and financial distress. Differences in sample sizes, differences in methodologies and variations in economic environments may partially account for these variations in findings.

Poor supervision was further identified as a cause of financial distress. For some respondents, supervision by regulatory authorities is sometimes not effective. According to

respondents, following a supervisory exercise from regulatory authorities are seldomly communicated to. Respondents were more apt to concede that supervisory feedback has rather been reactive as opposed to being proactive. This finding may highlight an existing fundamental problem in the supervisory apparatus of the regulatory bodies

It was again found out that under capitalization of rural banks also contribute to distress. However, most respondents agreed that the extent of the effect of this on banking distress is limited as compared to the other causes of financial distress. This finding pertaining to under capitalization of banks as a factor contributing to distress corroborates the assertion by Jahur and Quadir (2012) that capital inadequacy drives distress and for most part these banks did not start with adequate capital from day one of its inception and subsequent operation.

Hypothesis five shall be tested by using logit model. Four banks has been selected two distressed and two non-distress banks. The non-distress banks are Akwapim Rural Bank and Ga Rural Bank. The distressed banks are Juabeng Rural Bank and Atwima Kwanwoma Rural Bank Limited.

HYPOTHESIS FIVE

H_0: Ratio analysis cannot be used to predict distress in Ghanaian economy.

H_1: Ratio analysis can be used to predict distress in Ghanaian economy

Table 18: Akwapim rural bank limited five – year distress computations

	2010	2011	2012	2013	2014
CONSTANT	0.239	0.239	0.239	0.239	0.239
INVENTORIES/SALES	-0.0288	-0.0288	-0.0288	-0.0288	-0.0262
RECEIVABLES/SALES	-6.6928	-6.6928	-6.6928	-6.6928	-6.3503
CASH+MKT.SEC/TOTAL ASSETS	-3.0939	-3.4639	-2.7910	-3.2457	-3.4032
QUICK ASSETS/CUR.LIAB.	3.5601	3.5601	3.5601	3.5601	3.5903
INCOME FROM OPER./ (TA-CL)	0.0411	0.0411	0.0411	0.0411	0.0382
LONG-TERM DEBT/(TA-CL)	-0.0119	-0.0149	-0.0185	-0.0179	-0.0171
SALES/ (NWC+F.A.)	0.0308	0.0308	-0.0359	-0.0359	-0.0400
VALUE OF Y	2.0909	1.5165	1.2084	-0.1603	1.4502
PORBABILTY OF DISTRESS	0.11	0.18	0.23	0.54	0.19

Table 18 shows the five year distress computations of Akwapim rural bank. From Table 3 the probability of the bank becoming bankrupt in the year 2010 was 11% .The probability of bankruptcy for the year 2011 was 18%, that of 2012 was 23%, that of 2013 was 54% and finally that of 2014 was 19%. From the Table, the probability of bankruptcy of the bank is minimal. This finding confirms the validity of the logit model developed by Zavgren (1985). Hence the result confirms the contention that the logit model can be used to predict/ determine the level of banking distress. This is so because per the report by the APEX BANK, the parent body or rural banks, Akwapim rural bank is not included in the list of distressed banks (Bank of Ghana, 2014).

Table 19: Ga Rural Bank five – year distress computations

	2010	2011	2012	2013	2014
CONSTANT	0.239	0.239	0.239	0.239	0.239
VENTORIES/SALES	-0.0143	-0.0143	-0.0144	-0.0133	0.0098
CEIVABLES/SALES	-2.0518	-2.0518	-3.5683	-5.2924	-6.1517
SH+MKT.SEC/TOTAL SSETS	-7.0724	-7.0724	-6.4515	-5.4370	-4.7392
JICK SSETS/CUR.LIAB.	3.1772	3.1772	3.1843	3.2159	3.2308
COME FROM OPER./ A-CL)	0.1127	0.1127	0.1325	0.1316	0.1736
NG-TERM DEBT/(TA-.)	-35.0574	-35.0574	-37.1209	-32.4322	-31.5165
LES/ (NWC+F.A.)	-0.0255	-0.0255	-0.0250	-0.0293	-0.0326
LUE OF Y	1.5858	0.7538	1.6584	1.9926	1.7348
RBABILTY OF STRESS	0.17	0.32	0.16	0.12	0.15

Table 19 shows the five year distress computations of Ga rural bank. From Table 4 the probability of the bank becoming bankrupt in the year 2010 was 17% .The probability of bankruptcy for the year 2011 was 32%, that of 2012 was 16%, that of 2013 was 12% and finally that of 2014 was 15%. From the Table, the probability of bankruptcy of the bank is minimal. This finding confirms the validity of the logit model developed by Zavgren (1985). Hence the result confirms the contention that the logit model can be used to predict

the level of banking distress. This is so because per the report by the APEX BANK, the parent body or rural banks, Ga rural bank is not included in the list of distressed banks (Bank of Ghana, 2014). .

Table 20: Juabeng Rural bank five – year distress computations

	2010	2011	2012	2013	2014
ONSTANT	0.239	0.239	0.239	0.239	0.239
VENTORIES/SALES	-0.0337	-0.0337	-0.0337	-0.0337	-0.0261
ECEIVABLES/SALES	-4.2120	-4.2120	-4.2120	-4.2119	-6.3882
ASH+MKT.SEC/TOTAL SSETS	-3.6693	-3.6579	-3.6579	-3.6579	-2.6709
UICK SSETS/CUR.LIAB.	3.4928	3.4928	3.4928	3.4928	3.5794
ICOME FROM PER./TACL	0.0477	0.0469	0.0469	0.0469	0.0451
ONG-TERM DEBT/TA-L	-17.8258	-17.5274	-17.5274	-17.5274	-15.9447
ALES/NWC+F.A.	-0.0386	-0.0386	-0.0386	-0.0386	-0.0408
ALUE OF Y	-0.7538	-0.9446	-0.8954	-0.5754	-1.9926
ORBABILTY OF ISTRESS	0.68	0.72	0.71	0.64	0.88

Source: Appendix A

Table 20 shows the five year distress computations of Juabeng rural bank. From Table 5 the probability of the bank becoming bankrupt in the year 2010 was 68% .The probability of bankruptcy for the year 2011 was 68%, that of 2012 was 72%, that of 2013 was 71% and finally that of 2014 was 88%. From the above Table, the probability of bankruptcy of the bank is high. This finding confirms the validity of the logit model developed by Zavgren (1985). Hence the result confirms the contention that the logit model can be used to predict/ determine the level of banking distress. This is so because per the report by the APEX BANK, the parent body or rural banks, Juabeng rural bank is included in the list of distressed banks (Bank of Ghana, 2014).

e 21: Atwima kwanwoma Rural Bank Limited five – year distress computations

	2010	2011	2012	2013	2014
NSTANT	0.239	0.239	0.239	0.239	0.239
'ENTORIES/SALES	-0.0022	-0.0237	-0.0265	-0.0333	-0.0317
CEIVABLES/SALES	-26.0273	-27.0478	-24.6656	-27.0524	-24.8203
SH+MKT.SEC/TOTAL ASSETS	-64.8203	-5.3075	-5.9625	-6.7326	-6.8430
ICK ASSETS/CUR.LIAB.	4.3021	3.7876	3.7402	3.4958	3.5910
'OME FROM OPER./TACL	0.0700	0.0260	0.0299	0.0449	0.0372
NG-TERM DEBT/TA-CL	-49.8189	-17.1311	-19.6373	-26.7863	-22.0489
LES/NWC+F.A.	-0.0310	-0.0271	-0.0293	-0.0254	-0.0290
LUE OF Y	-1.0987	-0.7538	-1.3251	-2.0909	-1.4502
PORBABILTY OF DISTRESS	0.75	0.68	0.79	0.89	0.81

Source: Appendix A

Table 21: shows the five year distress computations of Atwima rural bank. From Table 6, the probability of the bank becoming bankrupt in the year 2010 was 75% .The probability of bankruptcy for the year 2011 was 68%, that of 2012 was 79%, that of 2013 was 89% and finally that of 2014 was 81%. From the Table, the probability of bankruptcy of the bank is high. This finding confirms the validity of the logit model developed by Zavgren (1985). Hence the result confirms the contention that the logit model can be used to predict/ determine the level of banking distress. This is so because per the report by the APEX Bank, the parent body or rural banks, Atwima Rural Bank is included in the list of distressed banks (Bank of Ghana, 2014).

4.3 RESEARCH FINDINGS

Five hypotheses have been postulated for validation in the course of the research. Hypothesis one to four were tested by using Chi-square method, while the fifth hypothesis was tested by making use of logit model.

Hypothesis one has to do with dependency or independency of management incompetence towards the occurrence of distress in the rural banking sector. At a significant level of 0.05 and the degree of freedom of 12, critical value was found to be 21 and the expected value calculated was 9.202. The computed value was less than the critical value, we do not reject the null hypothesis and reject the alternative hypothesis which state that "distress in rural banks is independent of management incompetence"

Hypothesis two deal with whether there has been significant effort by the regulatory authorities in overcoming distress situation in the Ghanaian rural banking sector or not. At significant level of 0.05 and degree of freedom of 1, the critical value was found to be 3.84

and the expected value calculated was 19.25. Therefore, because the computed value is greater than the critical value, we reject the null hypothesis and do not reject the alternative hypothesis which states that "there is significant effort to curb distress in the Ghanaian rural banking sector by the regulating authorities."

Hypothesis three looks into consideration whether there is existing correlation between regulating regimes and the rural banks' performance. At the significant level of 0.05 and a degree of freedom of 3, the critical value was found to be 7.81 and the expected value was 6.172. Hence, because the computed value was less than the critical value, we do not reject the null hypothesis and reject the alternative hypothesis that stated that "performance of rural bank is independent of regulating regimes"

Hypothesis four looks dealt with the role that regular supervision plays in relation to financial institutions condition. At the significant level of 0.05 and a degree of freedom of 3, the critical value was found to be 7.81 and the expected value was 9.066. Therefore, because the computed value was less than the critical value, we reject the null hypothesis and do not reject the alternative hypothesis that stated that "regular supervision is a factor against deterioration in the condition of financial institution"

Hypothesis five has to do with whether ratio analysis can be used to predict distress in the Ghanaian rural banking sector. Based on the probability of distress computation, the model was able to identify the banks that were already known to be distressed by the regulatory authorities. This was achieved by assigning higher probability of distress to distressed rural banks and lower probability of distress to the non-distressed rural banks. The probability of distress for non-distressed rural banks ranges between 11% and 54% while that of distressed bank ranges between 64% and 89%. Hence, based on the above classification, the alternative hypothesis which state that "ratio analysis can be used to predict distress in

the Ghanaian rural banking sector" has been accepted and the null hypothesis which stated the contrary has been rejected.

4.4 Measures employed to curb financial distress

A related objective of the study was to examine the measures employed by regulatory authorities to curb financial distress and their relative effectiveness in the context of controlling financial distress. Based on the questionnaire survey data, measures employed in this regard were identified as financial assistance to distressed banks, comprehensive supervisory interventions, and change in composition of management, liquidation of distress banks and merger and acquisition.

According to the respondents, a common measure adopted by regulatory authorities for managing distressed banks is direct financial assistance to rural banks. This measure in the view of respondents is mostly resorted to when the bank (s) in distress condition faces a pronounced liquidity problem. According to the respondents, in the short run this measure is effective but limited in the long run. This is particularly so in the opinion of respondents when an already distressed bank undertakes imprudent decisions which affect the long run operation of the bank.

Comprehensive supervisory intervention was identified as another measure of managing financial distress. According to the respondents, this measure entails an intensive supervision of a distressed bank. Usually respondents indicate that the supervisory authority requires the bank to report frequently on its operations to the supervisory body. Report under intensive supervision could be on monthly, quarterly or half yearly basis.

A variant measure used by regulatory authorities to curb financial distress is change in composition of management of a distressed bank. This measure is usually resorted to when available evidence suggests that the distress in the bank is the result of improper management decisions. Most respondents share the view that this measure of managing distress in the banking sector is most effective relative to the other measures of managing distress.

Further, liquidation of distressed banks is another measure of managing financial distress. According to respondents, this measure is not usually employed to manage financial distress. In most cases, liquidation of a distressed bank is used when other mitigating measures pertaining to distress management have been exhausted. To illustrate this, for instance when financial assistance and supervisory measures are unable to avert the incidence of distress in a distressed bank.

Respondents again indicated that mergers and acquisitions are sometimes used to manage banking distress. This measure encompasses the combination of two more banks to work together. The rationale according to respondents brings about synergy that enhances firm performance, in this context the performance of banks. Most respondents contend that mergers and acquisitions can be more effective for curbing financial distress. In their view mergers and acquisitions presents a lot of benefits. Examples of this include risk diversification and technical efficiency brought about by the merging of two firms

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings of the study, conclusions and recommendations. The chapter concludes by providing suggestions for areas of further research.

5.2 Summary

This study was basically undertaken to examine the problem of financial distress amongst selected rural banks in Ghana. Specific objectives in the study were the determination of the causes of financial distress, the measures employed by regulatory authorities to curb financial distress and their relative effectiveness, and lastly to analyze the level of distress amongst selected rural banks. The study began by providing the context for which the current research problem is deemed necessary and helps to clarify to reader how the fulfillment of the research objectives and related research questions will be of relevance from the perspectives of both theoretical and practical application of knowledge. Subsequent to this, the study was situated in a theoretical perspective by drawing on the synthesis of relevant literature. To achieve the research objectives, data was adapted from published financial statements of selected rural banks. This data comprise secondary data spanning the period 2010-2014. Additionally, primary data was collected through interviews of management of selected banks to get their views on

the causes of distress as well as the effectiveness of the measures used to curb financial distress. The analytical technique involved the use of the logit model in the case of the secondary data and thematic narration of the interview data in the context of the primary data. Based on the outcome of the study, it was established that the causes of distress are poor management, adverse economic conditions, inadequate supervision, information asymmetry regarding customers, and under capitalization. Also, distress management measures were identified as financial assistance, poor supervision, change in composition of management, liquidation of distressed banks and the formation of mergers and acquisitions. Two banks out of the four banks selected in the study were found to be in distress with probability of distress roughly between 64% to 89%.

5.2 Conclusion

The study sets out to determine the causes of financial distress among rural banks, to identify distress management measures and effectiveness thereof, and to estimate the level of distress among selected rural banks. The study concludes that the causes of distress are poor management, adverse economic conditions, inadequate supervision, information asymmetry regarding customers, and under capitalization. Additionally, it is concluded that distress management measures employed by regulatory authorities are financial assistance, poor supervision, change in composition of management, liquidation of distressed banks and the formation of mergers and acquisitions. Two banks namely Ga rural bank and Akwapim rural bank examined in the study have minimal level of distress whereas the two other banks namely Juabeng rural Bank and Atwima rural bank have high level of distress.

5.3 Recommendations

Based on the findings of the study, the following recommendations are made for policy and practice.

1. It is suggested that policy makers undertake measures to stabilize the macroeconomic environment. Stability in the levels of inflation and interests rates are highly recommended in this context.
2. Regulatory authorities are to take steps to strengthen their supervisory role over rural banks. Decisions made following a supervisory exercise should be well communicated to the management of a particular distressed bank for the uptake of remedial action.
3. It is also suggested that the task of managing rural banks should be entrusted to people who have the requisite knowledge about banking related management issues.
4. To avoid information asymmetry regarding banking customers, it is suggested that banks take measures to promote high level of institutional collaborations.
5. The banks should be well capitalized to enhance their operations. This will entail retention of higher level of capital adequacy ratios.

5.4 Suggestions for future research

The findings of this study are based on the peculiar circumstances of the four sampling units that are the four selected rural banks in Ghana. Consequently, consistent with the general limitations of case study research, the external validity of the study is limited in scope. In other words, the extent to which the findings of the study can be applied to other population settings not examined in this study is

limited in scope. Future researchers are encouraged to adopt other samples from different population settings to examine the causes of financial distress and the extent of distress.

Additionally, time series studies are encouraged to measure stability or otherwise in research findings. This is particularly important so as to estimate the extent of improvement of distressed banks.

Further, it is recommended that samples be drawn from other forms of banking and nonbanking institutions to estimate the extent of distress in the banking sector.

Finally, it is suggested that other models of analysis be employed to estimate the extent of distress in the banking sector. Wittingham et.al (2006) rightly observes that, basing inference or conclusions on a single model may be misleading, because a rather different model may fit the data nearly as well. This will lead to the robustness and methodological rigor of these models.

REFERENCES

"Steel, William F.; Andah, David O. (2004). Micro and Rural Finance in Ghana : Evolving Industry and Approaches to Regulation. Africa Region Findings & Good Practice Infobriefs; No. 234. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/9705 License: CC BY 3.0 IGO."

Aaltonen, K. (2010). Stakeholder management in international projects (Doctoral dissertation, Aalto University).

Adeji E.A. and chakravati S. P. (2012). Banking industry liberalisation in Ghana. *Review of Development Finance*.2:2. 93-99.

Adjetey, SA (1978), The Structure of the Financial System in Ghana Research Department, Bank of Ghana.

AGUSTO & CO. (1995), *Banking Industry Survey* (Lagos)

Agusto and Co. (1995)."Banking Industry Survey".Lagos: Company Publication

Alex C; Julian F; Richard G. R. and David J. S (2011). Growth Path and survival Chances. *Science and technology policy research Electronic working paper*. **http://www.sussex.ac.uk/spru**

Al-Smadi, M. O., & Ahmed, N. H. (2009). Factors Affecting Banks' Credit Risk: Evidence from Jordan.Collage of Business, University Utara Malaysia, Malaysia.

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. The Journal of Finance, 55(1), 81-106.

Annoa, A. J. (2014). Financial Distress Related Causes of Project Delays in the Ghanaian Construction Industry. Ph.D. Dissertation, College Of Architecture and Planning Department Of Building Technology

Appiah, K. O. (2011). Corporate Failure Prediction: Some Empirical Evidence From Listed Firms in Ghana. China-USA Business Review, 10(1)

Appiah, M., (2008). Microfinance Development in Ghana: Achievements, Challenges and Issues for the way forward, *The Microfinance News.*

Aryeetey, E and Gockel F. (1990), "Mobilizing Domestic Resources for Capital Formation in Ghana: The Role of Informal Financial Markets", *AERO Research Paper.* 3.

Aryeetey, E., (2008). From Informal Finance to formal Finance in Sub-Saharan Africa: *Lessons from Linkage Efforts, IMF Institute and the Joint Africa Institute (Paper presented at High-Level Seminar on African Finance for the 21st Century)*

Aziz, M. & Dar, H. (2006). Predicting Corporate Financial Distress: Whither Do We Stand? Corporate governance, 6(1), 18-33.

Aziz, M. A., & Dar, H. A. (2004). Predicting Corporate Financial Distress: Whither do We Stand?. Department of Economics, Loughborough University.

Bank of Ghana (2013). Press Release: Acquisition of Merchant Bank Ghana Ltd. by Fortiz Private Equity Fund Ltd. Available on http://www.bog.gov.gh/privatecontent/Public_Notices/PRESS%20RELEASE%20%20Acquisition%20 of%20Merchant%20Bank%20Ghana.pdf. Retrieved on 30/11/2014

Bank of Ghana. (1985). Bank of Ghana Operational Manual for rural Banks. Accra, Ghana, J'Piter Printing Press Ltd.

Bell, C. (1997). Ritual: Perspectives and dimensions. Oxford University Press.

Bessis, J., (2002). Risk management in banking. John Wiley & Sons.

Bhunia, A., Khan, S. I. U., & Mukhuti, S. (2011). Prediction of Financial Distress – A Case Study of Indian Companies. *Asian Journal of Business Management, 3(3)*, 210–218.

Bongini, P., Laeven L. and Majnoni G. (2002). How Good is the Market at Assessing Bank Fragility? A Horse Race Between Different Indicators. *Journal of Banks and Finance*, Vol. 26, pp. 1011–31.

Brownbridge M. (1998) the cause of financial distress in Local Banks in Africa and implications for prudential policy. *United nations conference on trade and development*. 132, pp 1-40.

Bryman, A., & Bell, E. (2015). Business research methods. Oxford University Press, USA.

Bryman, A., & Bell, E. (2015). Business research methods: Oxford university press.

CAPRIO, Gerald, Jr. (1997), "Safe and sound banking in developing countries: We're not in Kansas anymore" Policy Research Working Paper, No.1739 (Washington, DC: World Bank).

CAPRIO, Gerald, Jr., and Lawrence H. SUMMERS (1993), "Finance and its reform" *Policy Research Working Paper*, No. 1171 (Washington, DC: World Bank).

Caprio, Gerard Jr., and Daniela Klingebiel. (1996). Bank Insolvencies: Cross Country Experience." Policy Research Working Paper 1620. World Bank, Washington, D.C.

Centre for Policy Analysis (1996), Macroeconomic Review and Outlook Accra

Chaganti, R. S., Mahajan, V., & Sharma, S. (1985). Corporate board size, composition and corporate failures in retailing industry. Journal of Management Studies, 22(4), 400-417.

Charitou, A., Neophytou, E., & Charalambous, C. (2004). Predicting corporate failure: empirical evidence for the UK. European Accounting Review, 13(3), 465-497.

Čihák M. and Tieman A. (2006). How Good is Financial Sector Supervision and Regulation in Europe?" *Euro Area Selected Issues Paper, International Monetary Fund Country Report Washington*. No. 06/288.

Čihák, M. (2007). Systemic Loss: A Measure of Financial Stability. *Czech Journal of Economics and Finance*. Vol. 57, No.1–2, pp. 5–26.

Čihák, M., and Decressin J. (2007). The Case for a European Banking Charter. *International Monetary Fund Working Paper*. No. 07/173.

Čihák, M., and TiemanA. (2008.) Quality of Financial Sector Regulation and Supervision around the World. *International Monetary Fund Working Paper, Washington. No. 08/190.*

Collard, J. M. (2010). Managing Turnarounds Requires Clear Thinking, Quick Action, and a Plan. *RMA Journal (March). Available on* http://www.StrategicMgtPartners.com/rmaphases.pdf. Retrieved on 21/11/2016.

COLLIER, Paul (1993), "African financial liberalisations", mimeo (Oxford: Centre for the Study of African Economies).

Creswell, J. W. (1994). *Research design: Qualitative & quantitative approaches*. Thousand Oaks, Calif: Sage Publications.

Creswell, J. W. (2013). Qualitative inquiry and research design: Choosing among five approaches. Sage

Creswell, J. W., & Clark, V. L. P. (2007). Designing and conducting mixed methods research.

Crossley, J., Blanford J., (1975).*The DCO Story*, Barclays Bank International Ltd., London

Curry T., Elmer P. and Fissel G., (2003). Using Market Information to Help Identify Distressed Institutions: A Regulatory Perspective." *FDIC Banking Review*. Vol. 15, no.3, pp. 1–16.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. Academy of Management journal, 42(6), 674-686.

Demirguc-Kunt A, Huizinga H (2000). "Financial Structure and Bank Profitability", Policy Research Working Paper Series 2430, the WorldBank.

Demirgüç-Kunt, A., and Detragiache E. (1997). "The Determinants of Banking Crises: Evidence from Industrial and Developing Countries." Policy Research Working Paper 1828. World Bank, Washington, D.C. Also forthcoming in IMF Staff Papers. 1998.

Denis, D. K., & McConnell, J. J. (2003). International corporate governance. Journal of financial and quantitative analysis, 38(01), 1-36.

ECONOMIST INTELLIGENCE UNIT (1995), *Country Report Kenya*, fourth quarter (Nairobi).

Eisenhardt, K. M. (1989). Building theories from case study research. Academy of management review, 14(4), 532-550.

Espen, S. (1999). Assessment of Credit Risk in Norwegian Business Sector (Doctoral dissertation, Master's Thesis, The University of Bergen, Bergen, Norway).

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. The Journal of Law & Economics, 26(2), 301-325.

FDIC (2003). The Federal Deposit Insurance Corporation (FDIC) Annaul Report. https://www.fdic.gov/about/strategic/report/2003annualreport/ar03full.pdf. Cited 1/1/2016

Federal Deposit Insurance Corporation (FDIC) (2003), "*Resolutions Handbook*." retrieved at: http://www.fdic.gov/bank/historical/reshandbook/index.html. 12/12/16

Feller, W. (1968). An introduction to probability theory and its applications: volume I (Vol. 3). London-New York-Sydney-Toronto: John Wiley & Sons.

Feller, W. (1968). An Introduction to Probability theory and its Applications. John Wiley and Sons, Inc. vol.1.

Flannery M. J. (1998). Using Market Information in Prudential Bank Supervision: A Review of the US Empirical Evidence," *Journal of Money, Credit and Banking*. pp. 273–302.

Frank, M. Z. (1988). An intertemporal model of industrial exit. Quarterly Journal of Economics, 103(2):333{344.

Frankish J., Coad A. Roberts R. G. and Storey D. J (2011). Growth Paths and survival chances. *Science and technology Policy Research working Paper*; 195

Fry, R., (1976) Bankers in West Africa, London, Hutchison, Benham

GARCÍA HERRERO, A. (1997). Monetary impact of a banking crisis and the conduct of monetary policy. ,*IMF Working Paper* 97/124.

GARCIA, Gillian (1996), "Deposit insurance: Obtaining the benefits and avoiding the pitfalls", IMF Working Paper, No. WP/96/83 (Washington, DC: International Monetary Fund).

Gentry, J. A., Newbold, P., & Whitford, D. T. (1987). Funds flow components, financial ratios, and bankruptcy. *Journal of business finance & accounting*, 14(4), 595-606.

Gilbert, L. R., Menon, K., & Schwartz, K. B. (1990). Predicting bankruptcy for firms in financial distress. Journal of Business Finance & Accounting, 17(1), 161-171.

Glaessner, T. and Mas I. (1995), "Incentives and the resolution of bank distress", *The World Bank Research Observer*, Vol. 10, No. 1 (February), pp. 53-73.

Gockel A. F. (1995), The Role of Finance in Economic Development: The Case of

Gombola, M. J., & Ketz, J. E. (1983). Financial ratio patterns in retail and manufacturing organizations. Financial Management, 45-56.

Graphic online (2011). Causes Of Distress Among Financial Institutions. https://www.modernghana.com/news/365159/. Cited 3/1/17

Gup, B. E., Avram, K., Beal, D., Lambert, R., and Kolari, J. W. (2007). Commercial Banking: The Management of Risk (3rd Ed.) Australia: John Wiley and Sons Ltd.

Harvey C. and Brownbridge (1998). *The impact of financial sector reform since independence*. James curvey ltd. Oxford.

HARVEY, Charles and Carolyn JENKINS (1994), "Interest rate policy, taxation and risk", *World Development*, Vol. 22, No. 12, pp. 1869-1879.

Harwell, M. R. (2011). Research design in qualitative/quantitative/mixed methods. CONRAD, Clifton F.; SERLIN, Ronald C. The SAGE Handbook for Research in Education: Pursuing ideas as the keystone of exemplary inquiry. 2ª Edition. Thousand Oaks, CA: SAGE Publications, 147-163.

Heffernan, S., (1996). Modern banking in theory and practice. *Chichester: John Wiley and Sons*.

Heiser, W. J., & Meulman, J. J. (1992). Homogeneity analysis: Exploring the distribution of variables and their nonlinear relationships. University of Leiden.

Hellmann T., Murdock K. and Stiglitz J. (1995), "Financial restraint: Towards a new paradigm", *Research Paper*, No. 1355 (Stanford: Graduate School of Business, StanfordUniversity).

Hempel S. 0. (1999): issuing concerning banks supervision, United States: New York university Press. (Second edition).

Hermanson, R.H., Strawser, J.R. and Strawser, R.H. (1987), Auditing Theory and Practice, Richard D. Irwin, Inc., Homewood, IL.

Hill, C. W., & Snell, S. A. (1989). Effects of ownership structure and control on corporate productivity. Academy of Management journal, 32(1), 25-46.

Hungler, B. P., & Polit, D. F. (1999). Nursing research principles and methods.

Jadhav, Narendra (2003), *Maximizing Development Benefits of Migrant Remittances: The Indian Experience,* Paper presented in a Joint DFID-World Bank Conference on Migrant Remittances, London (October 9-10).

Jahur, M. S., & Quadir, S. N. (2012). Financial distress in small and medium enterprises (SMES) of Bangladesh: Determinants and remedial measures. Economia. Seria Management, 15(1), 46-61.

Kama, U. (2010): Banking Sector Crisis and Resolution Options in Nigeria. The Bullion Vol. 34 No. 1 January, March.

Kapur, Ishan; Michael T Hadjimichael; Paul Hilbers; Jerald Schiff and Philipe Szymczak (1991), "Ghana: Adjustment and Growth 1983-91", *Occasional Paper No 86. International Monetary Fund,* Washington DC.

KARIUKI, P. W. (1993), "Interest rate liberalisation and the allocative efficiency of credit:Some evidence from the small and medium scale industry in Kenya", Ph.D. thesis (Brighton: Institute of Development Studies, University of Sussex).

King, G., Robert K. and Sidney V. (1994). Designing Social Inquiry: Scientific Inference in Qualitative Research. Princeton: Princeton University Press (1994).

King, T. B., Nuxoll D. A. and Yeager T. J, (2006). Are the Causes of Bank Distress Changing? Can Researchers Keep Up?" *Federal Reserve Bank of St. Louis Review*. January/February, pp. 57–80.

Kosmidou K., (2008),"The determinants of banks' profits in Greece during the period of EU financial integration", Managerial Finance, Vol. 34 Iss 3 pp. 146-159 http://dx.doi.org/10.1108/03074350810848036

Kraft, E. and Galac, T. (2007). Deposit Interest Rates, Asset Risk and Bank Failure in Croatia," *Journal of Financial Stability*. pp. 312–336.

Lannoo, K. (2008). The Maastricht Criteria for Banking. *CEPS Commentary*. www.ceps.eu. Retrieved 4th February

Leedy, P. D., & Ormrod, J. E. (2010). Planning and design.

Leite, S. P. (1982). Interest Rate Policy in West Africa. *Staff Papers International Monetary Fund. 29 (1)* pp48-76.

Levinthal, D. (1991). Random walks and organizational mortality. Administrative

Liou, D.-K., & Smith, M. (2007). Macroeconomic variables and financial distress. Journal of Accounting –Business & Management, 14, 17 –31.

LoBiondo-Wood, G., Haber, J., Cameron, C., & Singh, M. (2014). Nursing research in Canada: Methods, critical appraisal, and utilization. Elsevier Health Sciences.

Lobiono-wood G. and Harber J. (1998). Nursing research: methods, critical appraisal and utilization (4th ed.) st.louis, MO; Mosby.

Mahama, M. (2015). Assessing the State of Financial Distress in Listed Companies in Ghana: Signs, Sources, Detection and Elimination–A Test of Altman's Z-Score. European Journal of Business and Management, 7(3).

Malkiel B. G. (2013). Asset Management Fees and the Growth of Finance. *Journal of Economic Perspective.*27:3, 97–108

MAMMAN, H. and S.A. OLUYEMI (1994), "Bank's management issues and restoring the health of Nigerian banks through improving the quality of management/employees", *Nigeria Deposit Insurance Corporation Quarterly*, Vol. 4, No. 4, pp. 56-70.

Martin Brownbridge (1998). The causes of financial distress in local banks in africa and implications for prudential policy. *United Nations Conference on Trade and Development.132*

McLeod L. (2008). Understanding IS development and acquisition: A process approach PhD thesis (http://hdl.handle.net/10292/644), Auckland University of Technology

McLeod, J. O. H. N. (2013). Qualitative research: Methods and contributions. Bergin and Garfield's handbook of psychotherapy and behavior change, 6, 49-84.

Memba, F., & Nyanumba, J. A. (2013). Causes of financial distress: A survey of firms funded by industrial and commercial development corporation in Kenya. Interdisciplinary Journal Of Contemporary Research In Business, 4(12), 1171-1185.

Mensah, Y. M. (1984). An examination of the stationarity of multivariate bankruptcy prediction models: A methodological study. Journal of Accounting Research, 380-395.

Monti, E. N., & Moriano, G. R.(2010). A Statistical Analysis to Predict Financial Distress. Journal Service & Management, 45(2), 20-25.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. Journal of financial economics, 20, 293-315.

Moskow, M. H (2001): Regulatory Efforts to Prevent Banking Crises: Lessons from Recent Global Bank Failure EDI Development Studies

Nam, J. H., & Jinn, T. (2000). Bankruptcy prediction: Evidence from Korean listed companies during the IMF crisis. Journal of International Financial Management & Accounting, 11(3), 178-197.

Natalia, O. (2007). Corporate Financial Distress: An Empirical Analysis of Distress Risk (Doctorial Dissertation No. 3430, University of St. Gallen, St. Gallen, Switzerland).

NDIC (1994). Nigerian banks through improving the quality of management/employees". *Nigeria Deposit Insurance Corporation Quarterly*, Vol. 4, No. 4, pp. 56-70.

Ngugi, R.W., (2001). An Empirical Analysis of Interest Rate Spread in Kenya. African Economic Research Consortium, Research Paper 106

Nieto, M., Mayes D., and Wall L. (2008). Multiple Safety Net Regulators and Agency Problems in the EU: Is Prompt Corrective Action Partly the Solution? *Bank of Spain Working Paper*. No. 08/19.

NPART (Non-Performing Assets Recovery Trust) (1993-1994) Annual Report and Accounts Accra.

Nyunja, F. (2011). Credit Risk. KASNEB, January-March (1), 39-40.

Oforegbunam T. E. (2011). Benchmarking incidence of distress in the Nigerian banking industry on altman scale. *Serbian Journal of Management* 6 (2)

Ohlson, J. A. (1980). Financial ratios and the probabilistic prediction of bankruptcy. Journal of accounting research, 109-131.

Okpara, G. C. (2010). Investigation of the critical sources of investment finance in Nigeria: A factor analytical approach. American Journal of Scientific and Industrial Research, 1(2), 309-313.

Olsen, W. (2004). Triangulation in social research: qualitative and quantitative methods can really be mixed. Developments in sociology, 20, 103-118.

Outecheva, N. (2007). Corporate financial distress: An empirical analysis of distress risk (Doctoral dissertation, University of St. Gallen).

Pandey, I. M. (2005). What drives the shareholder value? Indian Institute of Management.

Pi, L., & Timme, S. G. (1993). Corporate control and bank efficiency. Journal of Banking & Finance, 17(2), 515-530.

Polit, D.F., Hungler, B.P. (1999). Nursing Research: Principles and Methods 6th ed. Philadelphia: J.B. Lippincott.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual frame- work. Entrepreneurship theory and practice, 29(4):399{424.

POPIEL, P. A. (1994) "Financial systems in sub-Saharan Africa: A comparative study", *World Bank Discussion Paper*, No. 260 (Washington, DC: World Bank).

Rojas S. L. (2001). Rating Banks in Emerging Markets: What Credit Agencies Should Learn from Financial Indicators. *Institute for International Economics Working Paper*. 01-6, May. Science Quarterly, 36(3):397{420.

Rose P. and Hudgins S. (2005). *Bank Management and Financial Services. 6th Edition.* New York: McGraw-Hill.

Sanusi Lamido Sanusi (2010) "The Nigerian Banking Industry: what went wrong and the way forward". *A Convocation Lecture delivered at the Convocation Square, Bayero University, Kano*, on Friday 26 February, 2010.

Saunders, M, Lewis, P. and Thornhill, A. (2003). Research Methods for Business Studies, 3rded.London: prentice Hall.

Shin S. H. and Adrian T. (2008). Liquidity and Leverage. *Working paper of Financial Cycles, Liquidity, and Securitization Conference*. IMF

Shumway, T. (2001). Forecasting bankruptcy more accurately: A simple hazard model*. The Journal of Business, 74(1), 101-124

Slotemaker, R. (2008). Prediction of Corporate Bankruptcy of Private Firms in the Netherlands (A Master's Thesis, Erasmus University, Rotterdam, Netherlands).

Smith, M., & Liou, D. K. (2007). Industrial sector and financial distress. Managerial Auditing Journal, 22(4), 376-391.

Spollen .P.O. (1997): Problems of Interference in banks, United Kingdom: Frank Cars and Co. Ltd. London

Stake, R.(1995). The art of case studyresearch. *Thousand Oaks, CA:Sage*. (pp.49-68).

Steel, W., Andah, D., (2003) Rural and Microfinance Regulation in Ghana: Implications for Development and Performance of the Industry. *Africa Region Working Paper. NO. 49 Washington; World Bank*

Stiglitz, J. E. and Weiss A. (1981), "Credit rationing in markets with imperfect information", *American Economic Review*, Vol. 71, pp. 393-410.

Subina S., and Goswami M. (2012). Effective Cloud Computing: Innovations and Challenges. *International Journal of Management Research and Review (IJMRR)*. 2 (10): 1800-1809.

Sukamolson, S. (2012). Fundamentals of quantitative research. Language Institute.

Suntraruk, P. (2010). The predictors of financial distress: evidence from nonfinancial firms listed in Thailand during 2000 to 2009.

Syal, M. S., & Goswami, M. M. Efficiency of Banks in Providing Financial Assistance to the Women Entrepreneurs: A Case Study.

Usdin, S. D. & Bloom, N. M. (2012). Identifying Signs a Company Is in Financial Distress. *The Legal Intelligencer, 245(80)*. Available on

http://www.flastergreenberg.com/media/article/380_Bloom_Usdin_Legal%20Intelligencer_20120425. pdf. Retrieved on 21/11/2016.

Vincent, F. (1999). Financing Higher Education In Nigeria The Role Of Nigerian Education Bank (Doctoral Dissertation, Ahmadu Bello University Zaria).

Wang, J. L., Jeng, V., & Peng, J. L. (2007). The impact of corporate governance structure on the efficiency performance of insurance companies in Taiwan. The Geneva Papers on Risk and Insurance Issues and Practice, 32(2), 264-282.

Westgaard, S., & Van der Wijst, N. (2001). Default probabilities in a corporate bank portfolio: A logistic model approach. European journal of operational research, 135(2), 338-349.

Weston J. F., Brigham E., (1998). "Finanţe manageriale", Economica. *Press, Bucureşti*,

Whittingham, M. J., P. A. Stephens, R. B. Bradbury, and R. P. Freck- leton. (2006). Why do we still use stepwise modelling in ecology and behaviour? Journal of Animal Ecology 75:1182–1189.

World Bank (1986), Financial Sector Review, World Bank, Washington DC.

Yin, R. K. (2003). Case study research design and methods third edition. Applied social research methods series, 5.

Zavgren, C. V. (1985). Assessing the vulnerability to failure of American industrial firms: a logistic analysis. Journal of Business Finance & Accounting, 12(1), 19-45.

APPENDIX A

FINANCIAL RATIOS OF SELECTED BANKS

Irms	Years	Inventory	Sales	Receivables	Cash	Marketable securities	Total assets
GA rural bank	2010	222691	1687333	2686827	2072910	5797350	11996112
GA rural bank	2011	247435	1874815	2985364	2303234	6441500	13329014
GA rural bank	2012	343376	2569840	4966330	2203159	8006600	17059659
GA rural bank	2013	450252	3669953	7916459	2367845	8122500	20799153
GA rural bank	2014	433859	4776202	10784102	2775058	8013110	24539325
Akwapim rural bank	2010	1110985	4169298	8149926	1927651	4082541	20941159
Akwapim rural bank	2011	1262483	4737838	9261280	2190513	5456002	23796772
Akwapim rural bank	2012	1434640	5383907	10524182	2489219	4512035	27041786

Akwapim rural bank	2013	1630273	6118077	11959298	2828659	6423587	30729303
Akwapim rural bank	2014	1782562	7346797	10862439	2707788	7502436	32342185
Juabeng rural bank	2010	1921330	6160472	13894714	5222122	5802404	32389159
Juabeng rural bank	2011	2065946	6624164	14940553	5615185	6239144	34935225
Juabeng rural bank	2012	2221448	7122757	16065111	6037833	6708757	37564758
Juabeng rural bank	2013	2388654	7658879	17274313	6492294	7213718	40392213
Juabeng rural bank	2014	2225050	9208397	20739855	5139375	6004950	44979693
Atwima kwanwoma rural bank	2010	205486	10205633	11254807	684526	254007801	42356822
Atwima kwanwoma rural bank	2011	2413558	11002571	12005981	702661	28451235	59214536
Atwima kwanwoma rural bank	2012	3024896	12335604	12457863	799526	32506544	60215864
Atwima kwanwoma rural bank	2013	3529756	11443241	13765362	805494	38241947	62521171
Atwima kwanwoma rural bank	2014	4430101	15101029	15504379	988846	46237272	74396817

Firms	Quick assets	Current liabilities	Long term debt	Operating income	Networking capital	Fixed assets	Current assets
GA rural bank	11070677	10710918	10357592	297967	-8208146	925434	2502772
GA rural bank	12300753	11901020	11508436	331,075	-9120162	1028261	2780858
GA rural bank	15859369	15310178	14929250	477,023	-12508008	1200290	2802170
GA rural bank	19304075	18452012	17499539	635630	-15271165	1495078	3180847
GA rural bank	22861193	21751420	20198857	995578	-17771708	1678132	3979712
Akwapim rural bank	19894051	17177846	10281	318365	13827278	1047108	3350568
Akwapim rural bank	22606876	19520280	14680	361778	15712816	1189895	3807464
Akwapim rural bank	25689632	22182137	20631	411112	-17855472	1352154	4326664
Akwapim rural bank	29192764	25206974	22786	467,173	-20290310	1536539	4916664
Akwapim rural bank	30510942	26122989	24439	488,448	-22050738	1831243	4072251

Juabeng rural bank	30088962	26481354	24209529	580282	-19960800	2400796	6458207
Juabeng rural bank	32353723	28474575	26031752	623959	-21463226	2581501	7011349
Juabeng rural bank	34788949	30617822	27991131	670924	-23078737	2775808	7539084
Juabeng rural bank	37407473	32922390	30097991	721,424	-24815847	2984740	8106543
Juabeng rural bank	41518014	35656038	34175424	865,575	-28290605	3461679	7365433
Atwima kwanwoma rural bank	54236548	38754263	41258779	518748	-36802811	601253	1951452
Atwima kwanwoma rural bank	58602455	47562031	45889653	624573	-45411666	714528	2150365
Atwima kwanwoma rural bank	60258777	49526003	48257417	657815	-47050188	785694	2475815

Atwima kwanwoma rural bank	61624157.33	54188787	51308887	769,098.43	-50409756.95	897014	3779030
Atwima kwanwoma rural bank	73480068.93	62901173	58268028	879,918.65	-58253890.31	916748	4647282

Firms	I/s	R/S	MKT+C	M+C/TA	QA/CL	IN/TA-CL	LTD/TA-CL	NWT+FA	S/NC+FA
GA rural bank	0.132	1.296	7870260	0.656	1.034	0.232	8.059	-7282712	-0.232
GA rural bank	0.132	1.296	8744734	0.656	1.034	0.232	8.059	-8091901	-0.232
GA rural bank	0.134	2.254	10209759	0.598	1.036	0.273	8.534	-11307718	-0.227
GA rural bank	0.123	3.343	10490345	0.504	1.046	0.271	7.456	-13776087	-0.266
GA rural bank	0.091	3.886	10788168	0.440	1.051	0.357	7.245	-16093576	-0.297
Akwapim rural bank	0.266	4.228	6010192	0.287	1.158	0.085	0.003	14874386	0.280
Akwapim rural bank	0.266	4.228	7646515	0.321	1.158	0.085	0.003	16902711	0.280
Akwapim rural bank	0.266	4.228	7001254	0.259	1.158	0.085	0.004	-16503318	-0.326
Akwapim rural bank	0.266	4.228	9252246	0.301	1.158	0.085	0.004	-18753771	-0.326
Akwapim rural bank	0.243	4.012	10210224	0.316	1.168	0.079	0.004	-20219495	-0.363
Juabeng rural bank	0.312	2.661	11024526	0.340	1.136	0.098	4.098	-17560004	-0.351

Juabeng rural bank	0.312	2.661	11854329	0.339	1.136	0.097	4.029	-18881725	-0.351
Juabeng rural bank	0.312	2.661	12746590	0.339	1.136	0.097	4.029	-20302929	-0.351
Juabeng rural bank	0.312	2.661	13706012	0.339	1.136	0.097	4.029	-21831107	-0.351
Juabeng rural bank	0.242	4.035	11144325	0.248	1.164	0.093	3.665	-24828926	-0.371
Atwima kwanwoma rural bank	0.020	16.442	254692327	6.013	1.399	0.144	11.453	-36201558	-0.282
Atwima kwanwoma rural bank	0.219	17.086	29153896	0.492	1.232	0.054	3.938	-44697138	-0.246
Atwima kwanwoma rural bank	0.245	15.582	33306070	0.553	1.217	0.062	4.514	-46264494	-0.267
Atwima kwanwoma rural bank	0.308	17.089	39047440	0.625	1.137	0.092	6.158	-49512743	-0.231
Atwima kwanwoma rural bank	0.293	15.679	47226119	0.635	1.168	0.077	5.069	-57337143	-0.263

Firms	I/r*-0.108	R/S*-1.583	M+C/TA* -10.78	QA/CL*3.074	IN/TA-CL*0.486	LTD/TA-CL* -4.35	S/NC+FA*0.11	Y Value	Prob. Dis
Ga rural bank	-0.014	-2.052	-7.072	3.177	0.113	-35.057	-0.025	1.5858	0.17
Ga rural bank	-0.014	-2.052	-7.072	3.177	0.113	-35.057	-0.025	0.7538	0.32
Ga rural bank	-0.014	-3.568	-6.452	3.184	0.133	-37.121	-0.025	1.6584	0.16
Ga rural bank	-0.013	-5.292	-5.437	3.216	0.132	-32.432	-0.029	1.9926	0.12
Ga rural bank	-0.010	-6.152	-4.739	3.231	0.174	-31.517	-0.033	1.7348	0.15
Akwapim rural bank	-0.029	-6.693	-3.094	3.560	0.041	-0.012	0.031	2.0909	0.11
Akwapim rural bank	-0.029	-6.693	-3.464	3.560	0.041	-0.015	0.031	1.5165	0.18
Akwapim rural bank	-0.029	-6.693	-2.791	3.560	0.041	-0.018	-0.036	1.2084	0.23
Akwapim rural bank	-0.029	-6.693	-3.246	3.560	0.041	-0.018	-0.036	-0.1603	0.54
Akwapim rural bank	-0.026	-6.350	-3.403	3.590	0.038	-0.017	-0.040	1.4502	0.19
Juabeng rural bank	-0.034	-4.212	-3.669	3.493	0.048	-17.826	-0.039	-0.7538	0.68

Juabeng rural bank	-0.034	-4.212	-3.658	3.493	0.047	-17.527	-0.039	-0.9446	0.72
Juabeng rural bank	-0.034	-4.212	-3.658	3.493	0.047	-17.527	-0.039	-0.8954	0.71
Juabeng rural bank	-0.034	-4.212	-3.658	3.493	0.047	-17.527	-0.039	-0.5754	0.64
Juabeng rural bank	-0.026	-6.388	-2.671	3.579	0.045	-15.945	-0.041	-1.9926	0.88
Atwima rural bank	-0.002	-26.027	-64.820	4.302	0.070	-49.819	-0.031	-1.0987	0.75
Atwima rural bank	-0.024	-27.048	-5.307	3.788	0.026	-17.131	-0.027	-0.7538	0.68
Atwima rural bank	-0.026	-24.666	-5.963	3.740	0.030	-19.637	-0.029	-1.3251	0.79
Atwima rural bank	-0.033	-27.052	-6.733	3.496	0.045	-26.786	-0.025	-2.0909	0.89
Atwima rural bank	-0.032	-24.820	-6.843	3.591	0.037	-22.049	-0.029	-1.4502	0.81

APPENDIX B

INTERVIREW GUIDE FOR BANKING STAFF OF SELECTED RURAL BANKS

TOPIC: FACTORS INFLUENCING BANKING DISTRESS IN GHANA: A CASE STUDY OF SELECTED RURAL BANKS

Dear Respondent,

My name is Mansur Abubakar Sani. I am currently studying for a Master of Science degree in Accounting at the University of Development Studies, Ghana. As part of the requirements of my master degree course, I am conducting a study on banking distress in the Ghanaian banking sector using some selected rural banks as a case study.

The findings of this study will provide information that could enhance the work of banking regulatory authorities in Ghana in general by helping;

Research Questions

Please tick ( ) where appropriate

1. To what statues do you belongs in the organization?

   Top ( ) Middle ( ) Lower ( )

2. Which of the following do you belong?

Akwapim rural bank limited ( )

Ga rural bank ( )

Juabeng rural bank ( )

Atwima kwanwoma rural bank limited ( )

3. How long have you been in the Bank?

Less than one year ( )

1 – 5 years ( )5- 10 years ( )

10 years and above ( )

4. Educational qualifications?

Diploma/ equivalent ( ) Bsc/ HND ( ) Msc/ MBA ( ) Professional certificate ( )

5. Which of the following do you consider to be a major cause of distress in the Ghanaian rural baking sector?

Inept management ( )

Poor Economic Condition (

Political instability ( )

Inadequate Supervision ( )

Under capitalization ( )

Some school of thought have argued that rural banks can perform better without regulations and regulatory authorities. Do you agree?

Yes ( ) No ( )

7. If yes to "6" above, explain how?

---

8. Are you aware of the Ghana failed banks (recovery of Debts) and financial malpractice in banks Decree.

Yes ( ) No ( )

9. If yes in "8" above, what is its impact on the financial fortunes of distress banks?

Positive ( ) Negative ( )

10. Do you think its implementation is a positive attempt towards sanitizing the banking system and restoring public confidence in rural banking?

    Yes ( ) No ( )

11. What can be taken to resolve the problem of distress in the Ghanaian rural banking system? Please list only

    _____

    _____

    _____

    _____

Macroeconomic policy stability ( )

15. Banking regulatory authorities to comprehend the causes of banking distress and recognize the need to take actions for effective operation of banks.

16. To find out the perceptions held by banking management on the efficacy of banking distress management measures.

17. To enlighten the management of rural banks and other banks about the causes of banking distress.

18. Kindly explain in your view the factors which cause financial distress

19. Which of these factors are the most dominant one sin the Ghanaian banking Industry context?

20. What measures are used by the regulatory authorities to control the problem of Banking distress?

21. To what extent are these factors able to address the problem of distress in the Banking industry?

12. Do you agree that supervision remains one of the most component against widespread deterioration in the operating condition of financial institutions?

Yes ( ) No ( )

13. If yes which of the supervisory actions should be adopted?

Changes of management ( )

Liquidation of Distress rural banks ( )

Suspension of rural banking license ( )

Comprehensive supervisory intervention ( )

All of the above ( )

14. Which of the following preventive measures should be adopted as a measure to prevent distress in the Ghanaian rural banking system?

Establishment of a Loan Recovery Agency ( )

Promoting political stability ( )

Tackling the critical problem of poor management ( )