

RISK MANAGEMENT: AN ANALYSIS OF GHANAIAN RURAL AND COMMUNITY BANKS

BY

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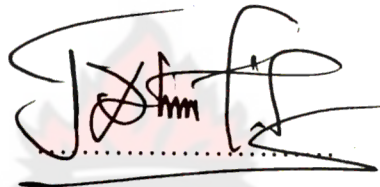
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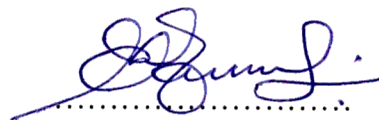
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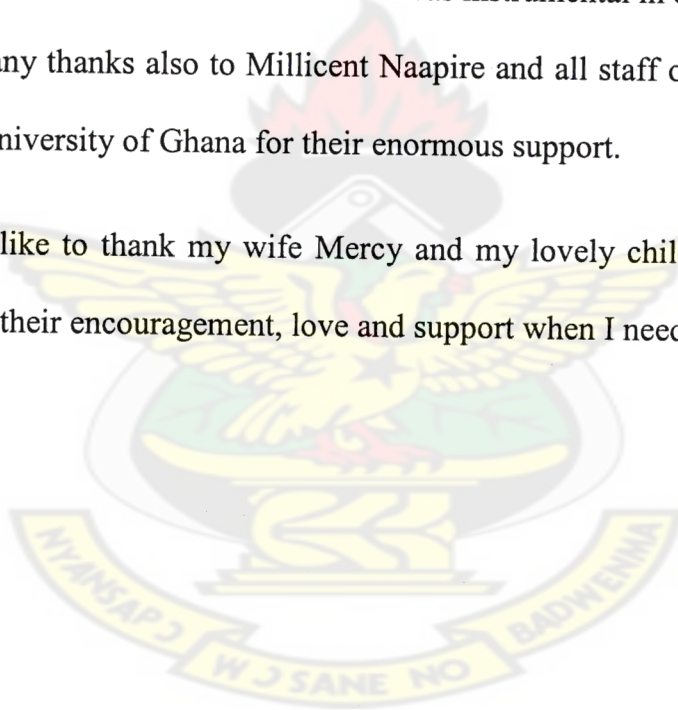


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Abstract

Over the years Risk Management has become the cornerstone of prudent banking practices across the globe. An effective and efficient risk management practice is therefore absolutely required in order to maintain financial soundness.

Despite the contributions of Rural and Community banks (RCBs) to the banking industry in Ghana, they continue to face a number of challenges such as competition, ineffective risk management among others. Risk management has consistently become the major challenge of RCBs in Ghana.

The purpose of the research therefore is to examine the extent to which Ghanaian RCBs deploy risk management practice in addressing the types of risk affecting their operations.

The study was based on a questionnaire survey involving two groups namely, respondents from RCBs and Bank of Ghana/ARB Apex bank. The RCBs respondents were selected from 47 out of the 126 rural and community banks using stratified sampling technique. 25 respondents were selected from 63 examiners and monitoring officers of the Bank of Ghana and ARB/Apex bank respectively.

The study revealed that the four most important types of risk facing Ghanaians RCBs are credit risk, Liquidity risk, operational risk and legal /regulatory risk. The finding also showed that RCBs in Ghana were not efficient in managing risk affecting their operations. Consequently, the study recommended the enforcement of the regulatory function, the establishment of risk management department in the RCBs, the appointment of proficient staff to manage and serve as Board members, and the intensive training of RCBs staff on risk management practices.

Chapter 1

1.0 Introduction

1.1 Introduction

The Chapter discusses the background and scope of the research, identifies and explains the research objectives and questions and hypothesis to be tested. The Chapter further discusses the limitations of this research and provides a summary for the rest of the research structure.

1.2 Background to the Research

Undoubtedly, Risk Management has become the cornerstone of prudent banking practices across the globe. Banks in the present day volatile environment faces greater risk exposures in the areas of credit, liquidity, foreign exchange, market and interest rate among others. These risks have different levels of impact on the performance of banks.

Chijoriga (1997) said the magnitude and the level of loss resulting from credit risk compared to others is mostly high to cause bank failures. Hence, banks needs to estimate the size of the potential loss in other stay within the acceptable prudential limits prescribed by the central banks. Banks are most likely to face difficulties when there is a slight deterioration in the quality of loan portfolios. In view of the volatility, bank managers require reliable risk measures so as to direct capital to business activities with an acceptable risk/reward ratio. In response to this, banks across the globe are embarking upon an upgrading of their risk management and control systems. Efficient risk management is therefore absolutely required in other to maximise profits and offer the best value to shareholders.

1.3 Problem Statement

Since 1976 RCBs in Ghana despite their success story has continue to face a number of challenges such as competition from the Commercial and foreign banks, changing regulatory environment, ineffective risk management practices amongst others. This has resulted in the folding up of 23 RCBs, Jha et al (2003) since inception.

Among the challenges facing RCBs in Ghana, risk management has consistently emerged as one of the major challenge of these banks. These banks continue to face daunting difficulties in evaluating the various kinds of risk such as Credit, Operational, Liquidity, Market or Systemic risk etc. The RCBs have over the years failed to institute pragmatic risk management frameworks to minimise these inherent risk factors. Carey (2001) reiterated the importance of risk management in financial institutions in order to maintain financial soundness.

The purpose of the research therefore is to examine the extent to which RCBs in Ghana have employ risk management practices in managing their different types of risks affecting their operations. The research will also determine the extent to which risk management practices of RCBs in Ghana are effective.

1.4 Research Objectives

The main objectives of this research are:

- To find out the understanding of risk and risk management practices among Rural and Community banks staffs,
- To examine how Rural and Community banks in Ghana clearly identify the potential risks that affects their aims and objectives,

1.5 Research Questions

This research piece will therefore attempt to answer the following questions:

- Do the staffs of Ghanaian Rural and Community banks understand risk and managing the types of risk affecting their operations?
- Do the Rural and Community banks in Ghana clearly identify the potential risks affecting their aims and objectives using appropriate methods of analysing, monitoring and reviewing, and identifying risk?

Hypothesis to be tested

The research study will also attempt to test the hypothesis;

H₀: Risk management practices are effective in Ghanaian RCBs.

H₁: Risk management practices are ineffective in Ghanaian RCBs.

1.6 Justification of the study

The research focuses on Ghanaian RCBs because there appear to be very limited literature in this area. It is therefore the intention of the researcher to bridge the research gap. It is also the researcher's intention to provide an empirical study that will form the bases for Ghanaian RCBs to evaluate their risk management systems which will eventually lead to the implementation of sound and effective risk management systems by these banks.

1.7 Limitations of the Research

The research focused on Rural and Community banks in Ghana and as such the results may not necessarily represent what pertains in other countries.

The research did not perform an independent evaluation of risk management practices of the sampled Rural and Community banks. However, in order to validate the findings of the research, five RCBs examinations reports periodically released by the Bank of Ghana were examined, in addition to analysing some published financial statements of the RCBs. The research was generally based on survey response from selected employees of the sampled banks.

The research also did not address in detail credit and liquidity risk. The study could not also address how the Basel accord impacted on risk management practices in the Rural and Community banks in Ghana.

1.8 Organisation of the study

The research is outlined as follows; Chapter 1 provides a brief overview of the research topic and a discussion on the relevance of the research.

Chapter 2 provides a critical review of the relevant literature on risk management.

Chapter 3 discusses the research methods adopted with reference to prior studies within the survey study scope.

Chapter 4 contains a detailed analysis of the survey results.

The conclusions and recommendations drawn from the research are provided in Chapter 5. The chapter further provides some recommendations for further research work.



Chapter 2

2.0 Literature Review

2.1 Introduction

This chapter aims at reviewing the background literature on Risk Management. The review process commence with an insight into Risk Management practices highlighting the relevance of understanding risk, risk assessment, monitoring and control. The chapter further elaborates on the various types of risks that affect banks and the approaches adopted in managing the different types of risk. The chapter then concludes with a brief review of the recent credit crises so as to provide some insight into the strategies being suggested to prevent its reoccurrences.

2.2 Risk Management

Pyle (1997) in his paper delivered at the risk management and regulation in banking conference in Jerusalem defined risk management as “the process by which managers satisfy their needs by identifying key risks, obtaining consistent, understandable, operational risk measures, choosing which risk to reduce and which to increase and by what means, and establishing procedures to monitor the resulting risk position”.

Al-Tammie et al (2007) examined risk management between United Arab Emirate (UAE) banks and foreign banks. The results revealed the following:

- The three most important types of risk facing the UAE Commercial banks are foreign exchange risk, Credit risk and operating risk.

- The four most important risk identification methods by UAE banks were; inspection by the bank risk managers, audit or physical inspection, financial statement analysis and risk survey, and
- UAE banks were somewhat efficient in assessing and analysing risk, risk management practices, risk monitoring and risk identification.

He further argued that the effectiveness of risk management is dependent on factors such as the economic conditions, the competition and the regulatory environment.

The literature also suggests a number of techniques mostly used in managing risks in banks.

2.2.1 Risk Management techniques

Oldfield and Santomero (1997) examined risk management in financial institutions.

Their findings suggested the following four techniques of risk management:

- Establishment of standards and reports
- The institution of position limits and rules such as counterparty exposures, credit limits and position concentration
- The establishment of investment guidelines and strategies, and
- The creation of performance-base compensation contracts.

Dedman and Robert-Tissot (2001) also enumerated the following seven systemic approaches to risk management:

- Reviewing losses and claims experience both within the bank and within other banks conducting similar business,
- Reviewing the manner in which instruction are handled,
- Consider how procedures may be improve in order to reduce risk,
- Operate, where possible, a system of dual control,

- Consider which staff should bear responsibility and for what, and how that responsibility will be managed,
- Consider the adoption of standard letters to client covering important areas, and
- When drafting letters of engagement consider specifying the purpose of the advice so that liability for losses falling outside the parties purpose can effectively be excluded.

2.2.2 Risk Management benefits

The most important benefit of managing financial risk according to Michael (2008) is that, it safeguards the organisation's ability to run its own business and enhances its objectives. Effective risk policy encourages loyalty from equity investors, creditors, managers, works, suppliers and customers that can generate many other benefits, including;

The enhancement of the organisation's reputation or brand

A reduction in earnings volatility

A reduction in average tax liabilities from greater earnings stability

The protection of cash flow

A possible reduction in capital cost

An improvement in supply chain management and a more stable customer base, and

A stronger position from which to deal with mergers and acquisitions

2.2.3 Risk Management and the Basel Capital Accord

According to Zaher (2006), the general purpose of the 1988 Basel I Capital Accord was to:

- Strengthen the stability of international banking system, and
- Set up a fair and a consistent international banking system in order to decrease competitive inequality among international banks.

Despite its success in defining banks' capital and the banks' capital ratio, Zaher (2006) appropriately listed the following criticisms levelled against the Basel I Capital Accord:

- Limited differentiation of credit risk,
- Static measure of default risk,
- No recognition of term structure of credit risk,
- Simplified calculation of potential future counterparty risk, and
- Lack of recognition of portfolio diversification effects.

Koszner (2008) argued in a speech he delivered at the Federal Reserve Bank of Boston AMA conference that, Basel I have become outdated for large international banks, hence the introduction of Basel II to bridge the gap. He emphasised that not only did Basel II established more risk sensitive and meaningful regulatory capital requirements, but also encourages ongoing improvements in banks risk management practices.

2.2.4 Risk Identification

Risk identification as Tchankova (2002) rightly stated is the first stage of risk management which eventually develops the next steps (i.e. analysis and control of risk management). Accurate and appropriate risk identification will usually lead to effective risk management. Greene and Trieschmann (1984) pointed out that risk managers should adequately identify all possible losses or gains that challenge their institutions in order for risk to become manageable. By engaging in risk identification the institution will be able to study business activities and places to determine where the institutions resources are expose to risks Williams et al (1998). The four basic elements of risk identification, according to Tchankova (2002) are:

- Sources of risk;
- Hazards factors;
- Perils; and
- Exposure to risk.

2.2.5 Risk Assessment

Risk assessment identifies and considers internal factors such as the nature of the bank's business activities the quality of personnel, organisational changes and employee turnover, as well as external factors such as fluctuating economic conditions, changes in industry and technological advances that adversely affect the achievement of banks objectives (<http://www.riskinstitute.ch/143330.htm>)

Morgan (1992) recommended the following approaches to risk analysis;

Appreciate that there can be no return without risk,

Understand and be transparent about risk, avoid risks that you cannot or do not understand,

Gain experience; new model will never substitute for an experienced risk manager,

Always know what the assumptions are and continuously question them,
Encourage a culture where risks are aired openly; communication is vital
Diversify risks, avoid concentration,
Be consistent and rigorous, showing discipline in your risk methodology,
Use common sense; do not spend infinite time striving for perfection, and
Get a “Risk Grade” assess the true returns of your business by accurately increasing
all the risks associated with them.

2.2.6 Risk Monitoring and Control

Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place. Regular audits of policy and standards compliance should be carried out and standards performance reviewed to identify opportunities for improvement, Association of Insurance and Risk Managers (AIRMIC), The National Forum for Risk Management in the Public sector (ALARM), Institute of Risk Management (IRM), (2002). The standards further stressed that the monitoring and control process should provide assurance that there existed appropriate controls in the organisation’s Business activities and should determine whether:

- The measures adopted resulted in what was intended,
- The procedures adopted and information gathered for undertaking the assessment was appropriate.
- Improve knowledge would have helped to reach better decisions and identify what lessons could be learned from future assessments and management of risks.

Krishnan et al (2005) arguably said the benefits of risk monitoring are realised if investors accurately understand changes in an institutions risk condition and incorporate their assessment into the prices of risky debts.

2.3 Types of Risk

Michael (2008) categorised the different types of risk into market, credit and financial or liquidity risk. Gai et al (2007) defined market risk as the risk over and above those natural priced and managed by financial intermediaries themselves. Santomero (1997) mentioned two forms of market risk which may affect banks as; Variation in the general level of interest rates, and

The relative value of currencies

The literature has dealt extensively with the different types of risk banks may face in the process of providing financial services. The following are a brief overview of some of the types of risk that affect financial institutions; Credit risk, Market risk, Liquidity or Financial risk, Operational risk, and Legal risk.

2.3.1 Credit Risk

Most banking institutions around the world have assumed the burden of credit risk. Eccles et al (2001) argued that current lending practices in credit risk management have made considerable progress. They stressed that measures of credit risk now take account of the riskiness rather than just the size of the asset. In recent times, the proliferation of financial contracts that entail counter-party default risk such as swaps, back – to – back loans, and derivatives have shifted the attention on ways to deal with credit risk in marketplaces Louberge` and Schlesinger (2005). As DeBandt and Hartmann (2000) rightly stated, credit risk entails an important systematic components and it has conceptually much in common with other types of risk where

an accumulation of losses may also arise as a consequence of market-wide phenomena.

A study by AL-Tamimi (2002) revealed that UAE Commercial banks were mainly facing credit risk. The results also showed that inspection by branch managers and financial analysis were the main methods used in risk identification by UAE banks. Khambata and Bagdi (2003) revealed that financial derivatives were heavily used by the top four Japanese banks and that loan commitments were the largest sources of credit risk.

A review of Basel II by Leeladhar (2007) indicated that even though Basel II had a wider scope, it still underscored the significance of credit risk in banks operations. He emphasised in his review that several banking crises in many countries had their roots in lax credit standards, poor portfolio risk management, and the inability or failure to evaluate the impact of changing economic environment on credit worthiness of banks borrowers.

2.3.2 Market Risk

Financial institutions may face market risk due to unexpected movement in interest which arises mainly as a result of positions in fixed income securities taken by traders, Fooladi et al (2000). This was further supported by Pyle (1997), who described market risk as the change in net asset due to changes in underlying economic factors such as interest rates, exchange rates, and equity and commodity prices. According to Abor (2005) “foreign exchange risk is the risk that an entity will be required to pay more or less than expected as a result of fluctuations in the exchange rate between its currency and the foreign currency in which payment must

be made". Some of the tools banks deploy to determine the level of acceptable risk as rightly enumerated by Michael (2008) include;

- Natural hedging where different risk exposures may offset each other,
- Forwards – contracts made today for the delivery of an asset at a specified date at an agreed price,
- Securitisation – the conversion of financial or physical assets into tradable financial institution,
- Options – contracts giving the holder the right, but not the obligation, to buy or sell an underlying asset at an agreed price in the future, and
- Traditional insurance cover.

2.3.3 Finance/Liquidity Risk

Liquidity risk is the current and prospective risk to earnings or capital arising from bank's inability to meet its obligations when they come due without incurring unacceptable losses. This may include the inability to manage unplanned decreases or changes in funding sources or failure to recognise or address changes in market conditions that affect the ability to liquidate assets quickly and with minimal loss in value. Liquidity management derives its rationale from the institutions concern for refinancing, a position stated in various contexts Thakor et al (1981), Scharfstein and Stein (1993).

Managing liquidity risk which was not high on the regulatory or banking agenda before the crisis may well become the fore in the wake of the global credit crunch McDowall (2008).

2.3.4 Operational Risk

Operational risk is defined by the Revised Framework of the International Convergence of Capital Measurement and Capital Standards as the “risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.”

Thirwell (2002) argued that banks do not understand operational risk and that regulators should reframe from trying to change the management practices of banks and instead encourage them to understand risk management. The British Bankers Association (BBA) said the lack of a standard definition for operational risk is the most obvious example of the lack of standardisation between banks. According to Mainelli (2002) Basel II has not been specific about how operational risk will be calculated. He stated that the Accord only indicates that operational risk will on average, come to about 20 percent of the overall capital charge and consequently suggested the following three methods for calculating operational risk; Basic Indicator approach, Standardised approach, and Internal Measurement approach.

2.3.5 Legal Risk

Legal Risk is the risk in which an institution is exposed to legal actions Padmanabhan (2007). New Status, tax legislation, court opinions and regulations can put formerly well – established transactions into contention even when all parties have performed exposed to a number of legal risks such as; Product liability risk, Employee liability risk, Tax liability risk, and Environmental risk.

Thompson (1998) stated that banks are placing considerable emphasis on environmental risk management in their corporate lending operations. Violations of regulations or laws can lead to significant losses to banks.

2.4 Emerging Issues in Risk Management

Financial turbulence experienced by banks in recent times has revealed some weaknesses in existing risk management techniques. A research conducted by Ross (2000) mentioned how banks have begun implementing additional risk management techniques due to failures of the existing models to prevent certain financial risk losses. The conclusion of this survey indicated that even though the awareness level by banks of the key elements of strong financial risk management was acceptable, there were still fairly wide discrepancies in the level of implementation.

Honohan (2008) concluded in a study of risk management and the costs of the banking crisis that the structured financial crisis that has hit banking institutions in recent times is working itself out against a background of macroeconomic imbalances and the reversal of overly – optimistic risk pricing. Haag (2009) argued that the short and medium term impact of the financial crisis on developing countries will be a slowdown of growth. He further stated that the extent of the slowdown will depend on how deep the recession in the rich countries will be and how quick financial markets can return to normal operation. Tlelima (2009) categorically mentioned the following sectors of Africa's economies that may be affected by the credit crunch as: the financial sector, the Export and Import industry, the Tourism industry, and Workers' Remittances.

2.5 Conclusion

The following conclusions can be drawn from the literature above:

- Sound risk management practices will ensure financial soundness and reduce the volatility.
- Commercial banks uses four main techniques in risk management namely;
 - ❖ Standards and reports,
 - ❖ Position limits or rules,
 - ❖ Investment guidelines or strategies, and
 - ❖ Incentive contracts and compensation
- Credit risk is the major type of risk face by Commercial banks.
- Loan Portfolios emerges as the major source of credit risk in commercial banks.
- Banks needs to consider additional measures of addressing risk owing to failures observed within the existing risk management practices.
- Risk management effectiveness is dependent on factors such as the economic conditions, the competition and the regulatory environment.
- There is very little literature on banks risk management practices in Africa and specifically rural and community banks in Ghana.

Chapter 3

3.0 Research Methodology

3.1 Introduction

This chapter describes the research design process of the research that will lead to the gathering of the quantitative information to be summarized using statistical analysis. The chapter will among others discuss the population and sample size, the data collection, the access and credibility of the findings.

3.2 Research Philosophy

This research adopts the positivist philosophy. The principle of positivism according to Saunders et al (2003) adopts the philosophical stance of the natural scientist where the research assumes the role of an objective analyst making detached interpretations about the data collected. The positivist and research philosophy emphasis on highly structured methodology to facilitate replication Gill and Johnson (1997) and on quantifiable observations that lends itself to statistical analysis.

Collis and Hussey (2003) criticized the positivist approach that it is possible to separate people from the social contexts and that they cannot be understood without examining the perception they have of their own activities.

However, the philosophy seeks the facts or causes of social phenomena with very little regard to the subjective state of the researcher. Also, the approach was considered more appropriate for this research due to its relatively large sample size and precise objective data.

3.3 Research Design

The deductive research approach was employed for this research work. This approach is preferred to the inductive because it afforded the researcher the opportunity to develop the objectives and hypothesis of the research and then designed a research strategy to test the hypothesis.

The deductive approach was therefore chosen due to the following reasons:

- The necessity to select sample of sufficient size in order to generalize conclusion – for the purpose of this research a stratified random sampling approach was adopted in selecting the sample size of the Rural and Community Banks.
- Secondly, the rural and community banks in Ghana have similar characteristic and organizational structures. This therefore enables the researcher to draw relevant conclusions about the population of rural and community banks in Ghana based on the selected sample size.

For the purpose of this research, a descriptive survey research technique was employed. This research technique generally enables information to be gathered from a sample of people about their characteristics, opinions, attitudes, or previous experiences using questionnaires.

The ultimate aim of employing the descriptive survey technique is to learn about Risk Management practices existing in Ghanaian rural and community banks by surveying a sample of the population of rural and community banks in Ghana. This research technique has been widely criticized to be time consuming in the designing and piloting of questionnaires and analyzing the result.

However, the researchers' preference of this technique was due mainly to the following reasons:

- It enables the collection of large amount of data from a population in an economical way, and
- Data obtained through questionnaire are usually standardized allowing for easy comparison.

3.4 Population and Sample

The research focus was based on samples drawn from the population of 126 rural and community banks across the country and 22 out of 55 Inspectors from BOG and ARB/Apex banks in order to derive an informed and objective opinion about risk management practices in Ghanaian rural and Community banks. The ARB/APEX bank first quarter (2008) report on the performance of Rural and Community Banks (RCBs) rated 4 RCBs as strong, 83 as satisfactory and 38 as fair and marginal. The researcher employed the use of two sample strategy;

First a stratified sampling technique was employed in selecting 47 out of the 126 rural and community banks base on the performance ratings by the ARB/ Apex bank.

The selection criteria included:

- The four strong rural and community banks to ensure the inclusion of the highly performed rural banks. These banks by their ratings are assumed to have well structured risk management practices in places.
- Simple random sampling technique was deployed in selecting
 - i. 32 out of the 83 satisfactory rated Rural and Community banks, and
 - ii. 11 out of the 38 fair and marginal rated Rural and Community banks.

The sampling strategy adopted enabled the inclusion of all categories of rural banks namely strong, satisfactory and fair and marginal in the analysis of risk management practices existing in these banks.

The second sampling strategy involves the use of simple random sample in selecting 22 out of the 55 examiners of the inspectorate division directly involve in the examinations of RCBs. The three monitoring officers of the monitoring and evaluation unit of the ARB/APEX bank were all included in the survey. The central bank of Ghana's inspectorates division performs regular risk evaluation of rural and community banks to ascertain the level of effectiveness of risk management practices. The ARB/APEX bank which is a mini central bank with oversight responsibilities of the rural and community banks in the country also monitors and evaluate the monthly financial returns of these banks in order to monitor and control risk exposure levels.

The second strategy also afforded the researcher the opportunity to evaluate the opinions of the regulatory bodies on risk management practices in the rural and community banks in the country.

3.5 Data Collection

3.5.1 Primary Data Collection

For the purpose of this research two questionnaires were administered to the respondents.

The first questionnaire consisted of 35 questions based on a 5 point likert scale. 141 of the first questionnaire was individually administered to the selected respondents. The questionnaire centred on risk management practices in the 47 selected rural and community banks. This approach enabled the researcher to list carefully structured questions chosen after considerably testing, with a view to eliciting reliable responses from the chosen sample Collis and Hussey (2003). The researcher also adopted the questionnaire approach because it is cheaper, less time consuming, and

relatively suitable for the sample size of this research work. The primary data collection centred on the following areas of risk management:

Understanding risk and risk management,

Risk identification,

Risk Assessment and analysis,

Risk monitoring and control,

Risk management practices,

Types of risk, and

Methods of risk identification.

The respondents of the first questionnaires consisted of:

- i. The managers who are largely responsible for initiating and exercising risk management practice in their rural banks
- ii. The credit or project officers who are basically in charge of the credit management functions in their banks and
- iii. The internal auditors responsible for risk monitoring and control

The second questionnaire consisted of the following respondents:

- i. 22 inspectors or examiners randomly selected from the bank of Ghana's examination division and
- ii. 3 monitoring officers of the ARB/APEX bank's monitoring unit.

3.5.2 Secondary Data Collection

The secondary data source included an examination of the ARB/APEX banks quarterly performance reports for the past one year on the rural and community banks in Ghana, the financial statements of some of the rural and community banks, and the Bank of Ghana's periodic examinations report on the rural and community

banks. These data were readily available at the rural and community banks and access was not a hindrance.

3.6 Administration of Questionnaire

The research adopted the cognitive access strategy to access the appropriate data. Informal access to the sample rural and community banks was first negotiated by the researcher. This was later followed up with a formal introductory letter outlining the purpose of the research and the possible benefits to the rural banks in granting the access.

The respondents were then contacted by telephone for an agreed date of administering and collection of the questionnaires.

The Access strategy considered and addressed the following ethical issues during the negotiation process;

The privacy of the respondents and rural banks,

The informal consent of the respondents, and

Maintaining the confidentiality of the data provided by the respondents or the rural banks and assuring them of complete anonymity.

3.7 Data Analysis

To be able to answer the research questions and achieve the research objectives a descriptive statistics (i.e. graphs, tables, piecharts, frequencies etc) was employed to examine the results. This enabled the research to describe;

- The extent to which the responses differ from the mean, and
- The extent to which the central tendency represented the value of the research responses that occurred frequently Saunders et al (2003).

To examine the relationship of the mean values of the survey results of the two groups of respondents (i.e. RCBs and BOG and ARP/Apex banks) a one way NOVA (see appendix 5 for ANOVA formulae) was computed. The outcome of the ANOVA analysis enabled the research study to determine and conclude on the research hypothesis (H_1).

3.8 Summary

The positivist research philosophy was essentially adopted for this research. The research philosophy was considered suitable due mainly to its philosophical stance of natural science laying emphasis on highly structured methodology that facilitate quantifiable and statistical analysis utilizing relatively large sample in relation to the sample population.

The deductive research approach was considered more appropriate for the research objectives since it afforded the researcher the opportunity to develop the theory and hypothesis of the research and then design a research strategy to test the theory.

A survey research technique was also employed in gathering the data through questionnaires for this research purpose.

Stratified and simple random sampling techniques was developed in the selection of the participating rural and community banks. Additionally, the respondents were mainly staff involve in the risk management practices in the selected rural and community banks and the regulatory banks (i.e. Bank of Ghana and ARB/APEX bank). The research method also considered and evaluated the credibility of the research findings.

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Chapter 4

4.0 Research Analysis

4.1 Introduction

This chapter contains an elaborate analysis of the survey responses. For each questionnaire, the analysis detailed the results of each question and comments on the research outcome. The analysis included a summary of the descriptive results on each of the Risk Management variables used in the questionnaire. Finally, the chapter will present the results on the research hypothesis.

4.2 Analysis of RCBs Respondents

102 questionnaires were received from the 47 sampled RCBs out of a total of 137 ($n=137$) resulting in a response rate of 74.45%. The high response rate achieved was due to the research strategy adopted in chapter three. The highest responses came from Credit/Project officers directly responsible for the Risk Management function in their RCBs constituting 33.33% of total respondents. The low response rate of 5.88% came from Accountants whose functions in the RCBs does not involve a high level of the Risk Management function, and as such is not expected to affect the outcome of the research. Table 4.2 provides the detail results below.

4.2.1 Job Position and Qualification of Respondents

The levels of qualifications of respondents are highly relevant due to the skill level required in managing Bank risk. 58.82% (60) of the respondents had graduate and Professional level qualifications, while close to 26% (n=26) had both graduate and Professional level qualifications signifying a high level of theoretical understanding of Risk Management. Only a little under 15% of respondents had undergraduate level qualifications. Thus the overall skills levels of respondents adequately demonstrate a good grasp of risk management theory as depicted in table 4.1 below.

Table 4.1 Position and Qualifications of RCBs Respondents

CURRENT JOB POSITION	QUALIFICATION					TOTAL
	UNDERGRADUATE	GRADUATE	POSTGRADUATE	PROFESSIONAL QUALIFICATION (S)	GRADUATE & PROFESSIONAL QUALIFICATIONS	
SNR MANAGER/MANAGER	1	7	0	9	16	33
INTERNAL AUDITOR	1	3	0	19	6	29
CREDIT/PROJECT OFFICER	11	14	1	6	2	34
ACCOUNTANT	2	1	0	1	2	6
Total	15	25	1	35	26	102

Source: Authors field data

4.2.2 Job Position and Experience of Respondents

58 (56.86%) Respondents have less than five years experience on their respective job position while 40.20% (41 respondents) had between 5 and 20 years relevant experience. 3 respondents (2.94%) have over 20 years of relevant experience. The experience level demonstrates an in depth practical knowledge of Risk Management and is expected to reflect positively in the research outcome. This is clearly indicated in table 4.2 below.

Table 4.2 Qualifications and Experience

Job Position	Working Experience				Total
	LESS THAN 5 YEARS	5 - 10 YEARS	11 - 20 YEARS	OVER 20 YEARS	
SNR MANAGER/MANAGER	6	7	18	2	33
INTERNAL AUDITOR	29	0	0	0	29
CREDIT/PROJECT OFFICER	19	14	1	0	34
ACCOUNTANT	4	0	1	1	6
Total	58	21	20	3	102

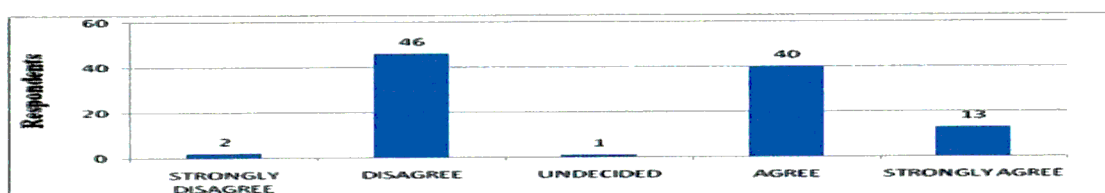
Source: Authors field data

4.3 Understanding Risk and Risk Management

This Risk variable determines the extent to which staff of RCBs in Ghana understands risk and risk management practices. The results of the questions posed in this section provide respondents opinions.

4.3.1 Understanding of risk management

45.1% RCBs respondents disagreed that there was a common understanding of Risk Management across the RCBs while 39.2 agreed. Whereas 2.0% of the respondents strongly disagreed, 12.7% were very sure that there was a common understanding of risk management by RCBs staff. This may probably be as a result of insufficient training for staff of RCBs on risk management practices. The results indicate a fair understanding of Risk Management across the RCBs figure 4.3.1 below provides the detail outcome.

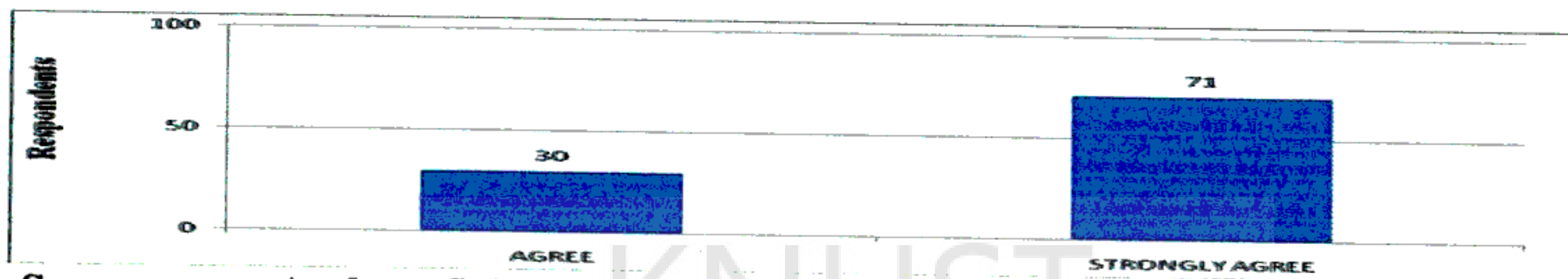
Figure 4.3.1 RCBs Understanding of Risk

Source: Authors field data

4.3.2 Managing Risk

69.6% of respondents indicated that managing risk is highly important for the overall success of the RCBs. 29.7% agreed that it was an important function. The results of responses clearly signifies the importance of the risk management function in influencing performance of RCBs. Figure 4.3.2 gives a pictorial representation below.

Figure 4.3.2 Managing Risk and the performance of RCBs

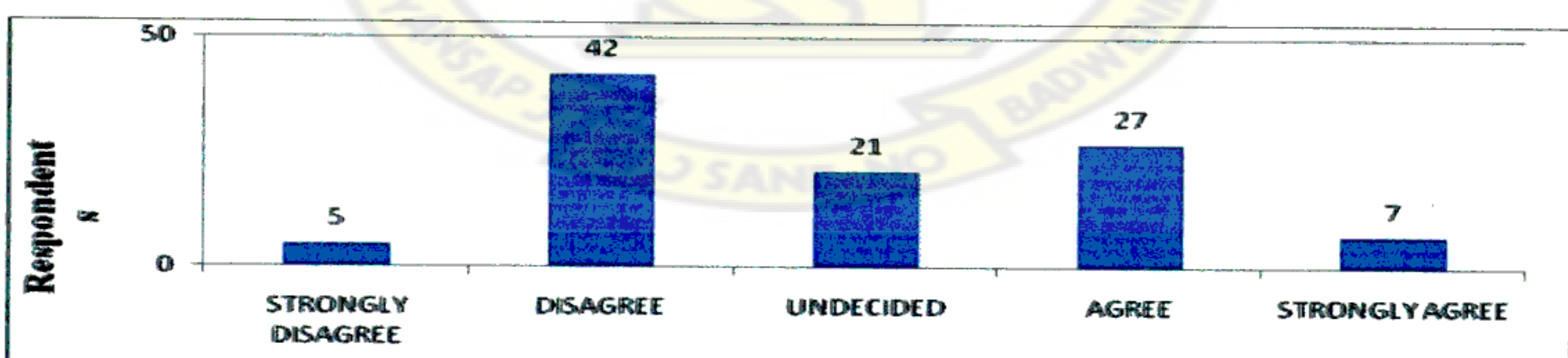


Source: Authors field data

4.3.3 Responsibility and accountability for risk management

The responses clearly reveal that risk management is not clearly set out and understood throughout the RCBs, an indication of inadequate techniques for ensuring the understanding of risk affecting the RCBs. 41.2 % of respondents disagreed that risk management was clearly set out, while 20.6% were undecided. 34 respondents (33.4%) said the function was clearly set out. Figure 4.3.3 below provides the detail.

Figure 4.3.3 RCBs Risk Management set out



Source: Authors field data

4.3.4 Techniques in risk management.

4.19 Summary

The responses from the respondents of the RCBs showed some level of risk management activities. The RCBs also indicated their commitment in integrating risk management into their core business functions. Most of the respondents in these categories gave a positive indication that risk management existing in their banks is efficient and effective in achieving their set objectives.

Respondents of RCB were generally of the opinion that their banks are fairly identifying risk, analyzing and monitoring risk. They believe staffs of RCBs understand risk and risk management practices.

Respondents of the regulatory institutions (i.e. Bank of Ghana and ARB Apex banks) viewed the risk management function in the rural and community banks as highly insufficient and ineffective.

The two groups of respondents clearly identified four key types of risks facing RCBs in Ghana as credit risk, operating risk, liquidity risk and legal/regulatory risk.

Responses of the two groups of respondents also pointed out main risk identification methods used by RCBs as Audit and physical inspection and inspection by Bank of Ghana and others.

The computed one-way ANOVA showed that there is significant difference between the mean values of the two groups of respondents.

Chapter 5

5.0 Summary of Findings, Conclusions and Recommendations

5.1 Introduction

As discussed in chapter two, Bank risk management is well documented. Africa has witnessed a consistent improvement in policies aimed at ensuring sound Bank risk management practices. This chapter will highlight the key findings from the research questions and hypothesis; provide some recommendations aimed at improving risk management practices in Ghanaian RCBS and make suggestions for future research work.

5.2 Summary of findings

The main focus of this research piece was whether RCBs in Ghana employ risk management practices in managing the different types of risks affecting their set objectives. The alternative hypothesis (H_1): Risk management practices are ineffective in Ghanaian RCBs, and a number of research questions were examined. Several analyses were conducted on both groups of respondents (RCBs and BOG/ARB Apex bank) to address the research hypothesis and questions.

5.2.1 Understanding Risk and Risk Management

An analysis of the responses of the RCBs indicated that staff of RCBs understands risk and risk management. However, responses from the regulatory institutions (i.e. Bank of Ghana and ARB Apex Bank) revealed that staff of RCBs understanding of risk and risk management was inadequate. Both however held a strong view that managing risk was important to the performance and the overall success of RCBs in Ghana.

5.2.2 Risk Identification and Risk Identification methods

The analysis indicated that there were significant difference in opinions of respondents of both groups (i.e. RCBs and BOG/Apex bank) whiles RCBs said they effectively identified risk affecting their operations using appropriate methods, the regulators said RCBs faces substantive difficulties in identifying risk affecting their operations.

Both groups of respondents identified two main risk identification method mostly used by RCBs in risk identification to be Audit and physical Inspection and Inspection by Bank of Ghana and others. The results therefore represent a negative response to the second research questions relating to risk identification and control.

5.2.3 Risk Analysis, Monitoring and Control

The third research questions centred on RCBs risk analysis, monitoring and control systems. The two groups of respondents' views were inconsistent when the analyses were conducted. The responses of the RCBs indicated a certain level of risk analysis, monitoring and control effectiveness within the RCBs. The Bank of Ghana and ARB Apex banks respondents' opinions showed a clear absent of effective risk

analysis, monitoring and Control mechanism in the RCBs. Such disparities in the responses from the two groups of respondents clearly showed that RCBs do not have in place an efficient risk analysis, monitoring and Control systems.

5.2.4 The Research Hypothesis

To determine whether risk management practices of RCBs were effective or otherwise, a one-way ANOVA was conducted to compare the mean values of the two groups of respondents (i.e. RCBs and BOG/ARB Apex Bank). The results were that there were significant differences between the mean values of respondents of RCBs and Bank of Ghana/ARB Apex Bank. Thus the hypothesis H_1 is accepted implying that Ghanaian RCBs risk management practices are ineffective.

5.3 Conclusion

The following conclusions can be drawn based on the findings of the study:

Ghanaian RCBs do not have sufficient understanding of risk and risk management,
The RCBs faces some difficulties in identifying the potential risk affecting operations using appropriate risk identification methods,
The Rural and Community banks do not have in place effective and efficient risk analysis, monitoring and control mechanism,
The general conclusion is that risk management practices existing in Ghanaian RCBs are ineffective.

5.4 Recommendations

Based on the findings from this research, some recommendations can be suggested. Clearly, the analysis revealed a considerable level of weaknesses in risk management in the RCBs of Ghana. This should certainly be a cause for concern to the regulators (i.e. Bank of Ghana and ARB Apex bank), the Government of Ghana and the District/Municipal Assemblies, the shareholders and stakeholders of these RCBs.

5.4.1 Regulatory Institutions

First, the Bank of Ghana may want to enforce its regulatory function by ensuring that findings and recommendations related to risk management in their periodic RCBs examination reports are adhered to and implemented on time. The ARB/Apex bank monitoring and evaluation unit should be strengthened to enable them compliment the efforts of the inspectorate division of the Bank of Ghana.

Another recommendation would be for the regulatory bodies to ensure that all RCBs develop and implement pragmatic risk management policy guidelines that can be understood and used by RCBs staff. Clearly most RCBs do not have these policy documents to guide them in their risk management roles.

5.4.2 The RCBs

Most of the RCBs in Ghana do not have risk departments/units, hence the ineffectiveness of risk management. It is important that the function should be decoupled from the Micro Finance units of the RCBs in order to effectively evaluate, analyse and control the potential risk affecting RCBs.

Finally, intensive staff training and computerizing the operations of RCBs would enhance risk management. The study showed that staff of RCBs lacks the requisite knowledge and skill in bank risk management. Accordingly, regular training in risk

will management would assist in upgrading the skills level of RCB staff. The Bank of Ghana and ARB Apex bank have recently initiated the process of computerizing all RCBs in the country. Computerizing the RCBs will lead to greater efficiency and better risk management.

5.4.3 Shareholders and Stakeholders

The Government of Ghana and the District/Municipal Assemblies may also want to incorporate into its guidelines for releasing funds to RCBs for on lending, a system of verifying and satisfying itself that the RCBs risk management function are effective.

Shareholders and stakeholders at large must ensure that RCBs recruits staff with the requisite expertise of managing bank risk. It is important that Board of Directors poses the competence and skills levels needed to develop the right policies needed to improve on the risk management function. Most Board of Directors of RCBs often falls short of the competence level expected from them as the apex decision makers.

A policy direction that incorporates the recommendations above will certainly lead to a significant improvement of the risk management function of RCBs in Ghana. This will enable Ghanaian RCBs compete to favourably with the commercial banks in the country.

5.5 Recommendations for future Research

The research study could not address in detail RCBs credit risk management. Future research studies may examine credit risk as it is one of the most important types of risk affecting Ghanaian RCBs.

A second area for future study would be to analyze liquidity risk management in the RCBs. Liquidity risk affect most banks including Ghanaian RCBs. A weak liquidity position can lead to the liquidation of a Rural or community bank.

Another area that may be considered for future research may be a comparative analysis of risk management between Ghanaian commercial Banks and the foreign Banks in Ghana. This could be useful in determining the level of risk management effectiveness of these banks in Ghana.

A future study to determine the extent to which the Basel Accord impact on risk management of Ghanaian RCBs could reveal some relevant findings that will be useful for policy formulation.

Finally, further research could be to perform an independent examination of the risk management function of RCBs in Ghana to substantiate most of the findings of the Bank of Ghana periodic examination reports.

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Appendix 1 Mapping of the research questionnaire

Questionnaire Category	Research Questions	Source
Understanding Risk and Risk Management	6-11	Replicated from, www.audit.nsw.gov.au/publications/questionnaires/RiskSurveyInstrument.pdf
Risk Identification	12-14	Replicated from, www.audit.nsw.gov.au/publications/questionnaires/RiskSurveyInstrument.pdf
Risk Analysis and Assessment	15-18	Replicated from, www.audit.nsw.gov.au/publications/questionnaires/RiskSurveyInstrument.pdf
Risk Monitoring and Review	19-23	Replicated from, www.audit.nsw.gov.au/publications/questionnaires/RiskSurveyInstrument.pdf
Risk Management Practices	24-30	Replicated from, www.audit.nsw.gov.au/publications/questionnaires/RiskSurveyInstrument.pdf
Risk Identification techniques and Types of Risk	31, 32	Replicated from, www.audit.nsw.gov.au/publications/questionnaires/RiskSurveyInstrument.pdf

Appendix 2 Questionnaires - RCBs

RISK MANAGEMENT: AN ANALYSIS OF GHANAIAN RURAL AND COMMUNITY BANKS (RCB'S)

QUESTIONNAIRE FOR RCB'S

A. BIODATA

1. Name of RCB:
2. Current Job Position:
3. Gender (Please Tick (√)) Male ☐ ₁ Female ☐ ₂
4. What qualification(s) do you have? (Please Tick (√))
Undergraduate ☐ ₁ Graduate ☐ ₂ Postgraduate ☐ ₃
Professional qualification(s) ☐ ₄ Other (Please specify)
5. For how long have you been working on your present job? (Please Tick (√) one below)
Less than 5 years ☐ ₁ 5-10 years ☐ ₂ 11-20 years ☐ ₃ Over 20 years ☐ ₄

B. UNDERSTANDING RISK AND RISK MANAGEMENT (PLEASE TICK (√) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 6. There is a common understanding of risk management across the bank. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 7. Responsibility and accountability for risk management is clearly set out and understood throughout the bank. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 8. Managing risk is important to the performance and the overall success of the bank. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 9. It is crucial to apply the most sophisticated techniques in risk management. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 10. Your bank's objective is to expand the applications of advanced risk management techniques. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 11. Application of risk management techniques reduce cost or expected losses. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

C. RISK IDENTIFICATION (PLEASE TICK (√) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 12. The bank carries out a comprehensive and systematic identification of its risks relating to each of its declared aims and objectives. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 13. The bank finds it difficult to priorities its main risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 14. Changes in risk are recognized and identified with the bank's roles and responsibilities. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

D. RISK ANALYSIS AND ASSESSMENT (PLEASE TICK (✓) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 15. Your bank assesses the likelihood of occurring risk. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 16. Your bank's risks are assessed by using quantitative and qualitative analysis methods of risk management. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 17. Your bank's response to analysed risks includes prioritizing of risks benefits of addressing risks, and selecting those that need active management attention. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 18. Your bank's response to analysed risks includes prioritizing risk treatments where there are resource constraints on risk treatment implementation. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

E. RISK MONITORING AND REVIEW (PLEASE TICK (✓) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 19. Monitoring the effectiveness of risk management is an integral part of routine management reporting. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 20. The level of control by the bank is appropriate for the risks that it faces. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 21. Reporting and communication processes within your bank support the effective management of risk. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 22. Your bank's response to risk includes an evaluation of the effectiveness of the existing controls and risk management practices. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 23. Your bank's response to risk includes action plans for implementing decisions about identified risks assessment of the costs and benefits of addressing risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

F. RISK MANAGEMENT PRACTICES (PLEASE TICK (✓) ONLY ONE BOX)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 24. Your bank's executive management regularly reviews the bank's performance in managing its business risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 25. Your bank's risk management procedures and processes are documented and provide guidance to staff about managing risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 26. Your bank's risk policy ensures the recruitment of highly qualified people in risk management and encourages training programs in the area of risk management. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

27. The application of Basel Capital accord by your bank would improve the efficiency of risk management. ☐₁ ☐₂ ☐₃ ☐₄ ☐₅
28. Your Bank's Capital is adequate if the ratio of capital to total risk-weighted assets is equal to 10%. ☐₁ ☐₂ ☐₃ ☐₄ ☐₅
29. Overall, the level of risk management practices in my bank is efficient and effective in achieving our objectives. ☐₁ ☐₂ ☐₃ ☐₄ ☐₅
30. Risk management is integrated into the following processes in your bank, planning, Budgeting and the Reporting System. ☐₁ ☐₂ ☐₃ ☐₄ ☐₅

G. RISK IDENTIFICATION METHODS (PLEASE TICK (✓) ALL THAT APPLY)

31. What tools and techniques are used by your bank for identifying risk?

Inspection by the bank risk manager

☐₁

Inspection by the bank of Ghana & others

☐₂

Audits or physical inspection

☐₃

Financial statement analysis

☐₄

Risk surveys

☐₅

Process analysis

☐₆

SWOT (Strengths, Weaknesses, Opportunities, threats) analysis

☐₇

Benchmarking

☐₈

Others (Please specify)

H. TYPES OF RISK

32. Please indicate in order of importance the different types of risk that your bank faces.

Foreign exchange risk

☐

Interest rate risk

☐

Credit risk

☐

Counterparty risk

☐

Operating risk

☐

Price risk

☐

Liquidity risk

☐

Reputation risk

☐

Legal risk

☐

Strategic risk

☐

Solvency risk

☐

Others (please specify)

33. Are there any other comments you may wish to make? (please write in the space below)

34. Are you happy to be contacted to clarify any queries I may have after receiving your responses to the above questions? ☐ Yes ☐₁ No ☐₂

35. Would you like to receive a summary of the findings of the survey? Yes ☐₁ No ☐₂

Thank you for completing this questionnaire survey. If you have any queries regarding this survey, please contact me.

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Appendix 3 Questionnaires – BOG and ARB/Apex Banks

RISK MANAGEMENT: AN ANALYSIS OF GHANAIA RURAL AND COMMUNITY BANKS (RCB'S)

QUESTIONNAIRE FOR BOG AND ARB APEX BANK LTD

I. BIODATA

36. Name of Institution:

37. Current Job Position:

38. Gender (Please Tick (√)) Male ☐ ₁ Female ☐ ₂

39. What qualification(s) do you have? (Please Tick (√))
Undergraduate ☐ ₁ Graduate ☐ ₂ Postgraduate ☐ ₃
Professional qualification(s) ☐ ₄ Other (Please specify)

40. For how long have you been working on your present job? (Please Tick (√) one below)
Less than 5 years ☐ ₁ 5-10 years ☐ ₂ 11-20 years ☐ ₃ Over 20 years ☐ ₄

J. UNDERSTANDING RISK AND RISK MANAGEMENT (PLEASE TICK (√) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 41. There is a common understanding of risk management across the RCBs. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 42. Responsibility and accountability for risk management is clearly set out and understood throughout the RCBs. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 43. Managing risk is important to the performance and the overall success of the RCBs. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 44. One objective of the RCBs is to expand the applications of advanced risk management techniques. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

K. RISK IDENTIFICATION (PLEASE TICK (√) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 45. The RCBs carries out a comprehensive and systematic identification of its risks relating to each of its declared aims and objectives. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 46. The RCBs finds it difficult to priorities its main risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 47. Changes in risk are recognized and identified with the RCBs's roles and responsibilities. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

L. RISK ANALYSIS AND ASSESSMENT (PLEASE TICK (√) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 48. RCBs assess the likelihood of occurring risk. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 49. RCB assesses risks using quantitative and qualitative analysis methods of risk | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

management.

50. RCBs response to analyzed risks includes prioritizing of risks, benefits of addressing risks, and selecting those that need active management attention. ☐₁ ☐₂ ☐₃ ☐₄ ☐₅
51. RCBs response to analyzed risks includes prioritizing risk treatments where there are resource constraints on risk treatment implementation. ☐₁ ☐₂ ☐₃ ☐₄ ☐₅

M. RISK MONITORING AND REVIEW (PLEASE TICK (✓) ONLY ONE)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 52. Monitoring the effectiveness of risk management is an integral part of routine management reporting in the RCBs. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 53. The level of control exercised by the RCBs is appropriate for the risks that RCBs faces or are likely to face. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 54. Reporting and communication processes existing in the RCBs support the effective management of risk. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 55. RCBs response to risk includes an evaluation of the effectiveness of the existing controls and risk management practices. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 56. RCBs response to risk includes action plans for implementing decisions about indentified risks, assessment of the costs and benefits of addressing risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

N. RISK MANAGEMENT PRACTICES(PLEASE TICK (✓) ONLY ONE BOX)

- | | Strongly
Disagree | Disagree | Undecided | Agree | Strongly
Agree |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 57. RCBs executive management regularly reviews the bank's performance in managing its business risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 58. RCBs risk management procedures and processes are documented and provide guidance to staff about managing risks. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 59. RCBs risk policy ensures the recruitment of highly qualified people in risk management and encourages training programs in the area of risk management. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 60. The application of Basel Capital accord by the RCBs bank would improve the efficiency of risk management. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 61. RCBs Capital is adequate if the ratio of capital to total risk-weighted assets is equal to10%. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 62. Overall, the level of risk management practices in RCBs is efficient and effective in achieving their objectives. | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |
| 63. Risk management is integrated into the following processes in the RCBs, planning, Budgeting and the Reporting System | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ | <input type="checkbox"/> ₃ | <input type="checkbox"/> ₄ | <input type="checkbox"/> ₅ |

O. RISK IDENTIFICATION METHODS (PLEASE TICK (✓) ALL THAT APPLY)

64. What tools and techniques are used by RCBs for identifying risk?

Inspection by the bank risk manager

☐ 1

Inspection by the bank of Ghana & others

☐ 2

Audits or physical inspection

☐ 3

Financial statement analysis

☐ 4

Risk surveys

☐ 5

Process analysis

☐ 6

SWOT (Strengths, Weaknesses, Opportunities, threats) analysis

☐ 7

Benchmarking

☐ 8

Others (Please specify)

☐**P. TYPES OF RISK**

65. Please indicate in order of importance the different types of risk that affect RCBs.

Foreign exchange risk

☐

Interest rate risk

☐

Credit risk

☐

Counterparty risk

☐

Operating risk

☐

Price risk

☐

Liquidity risk

☐

Reputation risk

☐

Legal risk

☐

Strategic risk

Solvency risk

☐

Others (please specify)

66. Are there any other comments you may wish to make? (please write in the space below)

67. Are you happy to be contacted to clarify any queries I may have after receiving your responses to the above questions? Yes ☐ 1 No ☐ 268. Would you like to receive a summary of the findings of the survey? Yes ☐ 1 No ☐ 2

Thank you for completing this questionnaire survey. If you have any queries regarding this survey, please contact me.

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Appendix 4 ANOVA Formulae

SUM OF SQUARES

$$SS_{\text{BETWEEN}} = \frac{(\sum X_1)^2}{n_1} + \frac{(\sum X_2)^2}{n_2} + \dots + \frac{(\sum X_k)^2}{n_k} - \frac{(\sum X_{\text{TOT}})^2}{N_{\text{TOT}}}$$

DEGREE OF FREEDOM

$$df_{\text{Between}} = K - 1$$

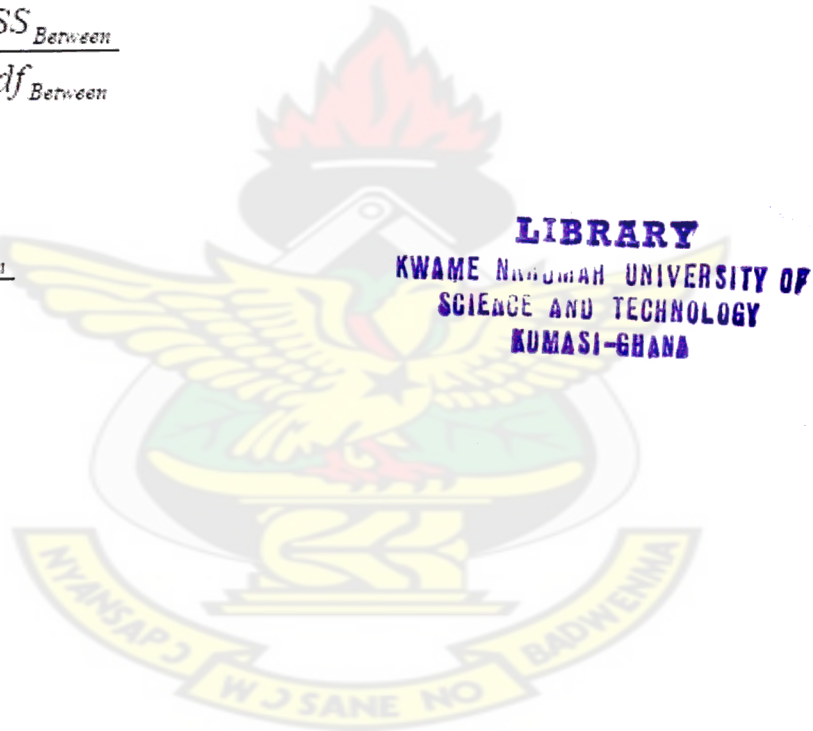
K= IS THE NUMBER OF CATEGORIES OR GROUPS

MEAN SQUARE

$$MS_{\text{Between}} = \frac{SS_{\text{Between}}}{df_{\text{Between}}}$$

F-RATIO

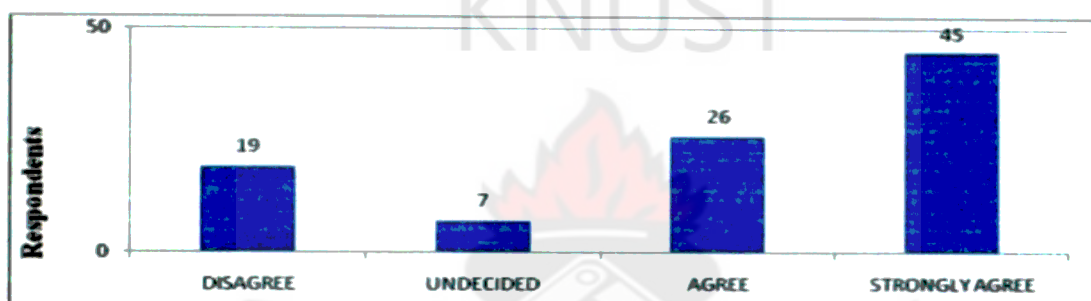
$$F = \frac{MS_{\text{Between}}}{MS_{\text{Within}}}$$



4.3.4 Techniques in risk management.

Close to 69.6% (n=71) of respondents said, it was critical or highly critical to apply the most sophisticated risk management techniques. While 7.2% were undecided, 19.6% said it was not critical at this moment to apply the most sophisticated risk management techniques in managing risk affecting RCBs. The respondents generally showed that it was critical at this moment to apply the most sophisticated Risk management in the RCBs especially owing to the criticisms levelled against Basel I accord. Figure 4.3.4 below shows the detail analysis.

Figure 4.3.4 Application of sophisticated Risk Management techniques

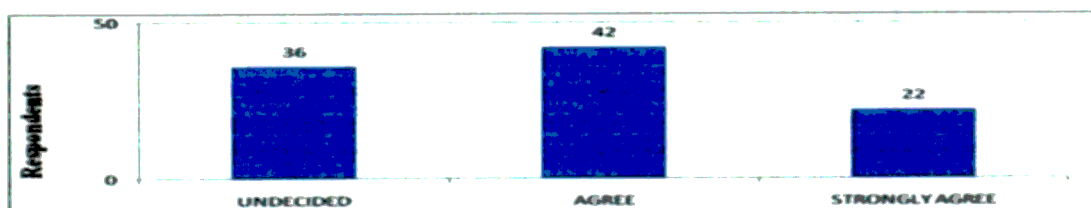


Source: Authors field data

4.3.5 Applications of advance risk management techniques.

Almost 62.8% (n=64) of respondents said their RCBs had an objective of expanding the application of advance risk management techniques. 36 respondents (35.3%) were however not sure. The results showed a clear intension to enhance risk management within the RCBs. The details have been presented in figure 4.3.5 below.

Figure 4.3.5 Application of advanced Risk Management techniques

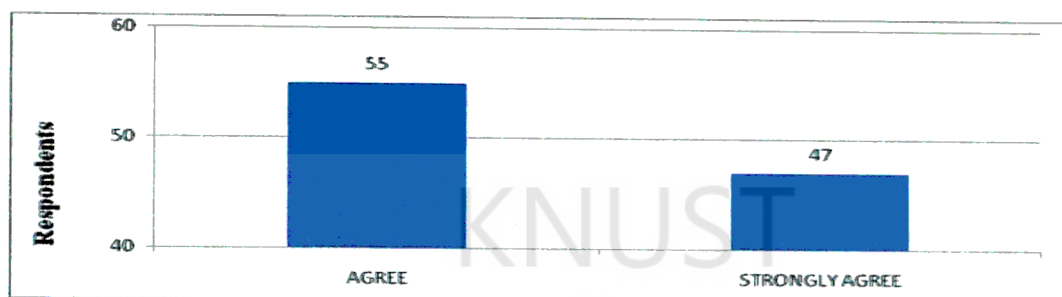


Source: Authors field data

4.3.6 Application of risk management techniques

55 respondents (53.9%) agreed that application of risk management will lead to a reduction in cost or expected losses, while 46.1% strongly agreed. The responses clearly emphasises the benefits to RCBs of adopting risk management techniques. A graphical representation is provided in figure 4.3.6.

Figure 4.3.6 Cost reduction and Risk Management techniques



Source: Authors field data

4.3.7 Summary of Understanding Risk and Risk Management

The average mean response about RCBs understanding of risk and risk management is 3.85. This indicates that RCBs staff fairly understands risk and risk management. The highest mean (4.70) responses occurred when respondents were asked about the importance of managing risk in relation to RCBs overall performance. The lowest mean (2.89) response rate was when respondents were asked whether risk management has been clearly set out and understood across the RCBs. There is however a significant difference between the highest and lowest mean response indicating some level of dispersion in the responses. The average standard deviation of 0.85 indicates a fairly moderate dispersion depicting the relative importance of the questions. Table 4.3 below show the details of summary of the analysis.

Table 4.3 Understanding Risk and Risk Management Summary

Question	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
A common understanding of Risk Management across the Bank	102	0	3.16	4.00	2.00	1.19
Risk Management is clearly set out and understood throughout the Bank	102	0	2.89	3.00	2.00	1.07
Managing Risk is important to the performance and the overall success of the Bank	101	1	4.70	5.00	5.00	0.46
It is crucial to apply the most sophisticated techniques in risk management	97	5	4.00	4.00	5.00	1.15
Your objective is to expand the applications of advanced risk management techniques	100	2	3.86	4.00	4.00	0.75
Application of risk management techniques reduce cost or expected losses	102	0	4.46	4.00	4.00	0.50
Average			3.85	4.00	3.67	0.85

Source: Authors field data

4.4 Risk Identification

The question under this section is to determine the extent to which RCBs are able to identify risk facing their operations. The analysis in the section shows respondents opinions.

4.4.1 Identification of risk

Almost 45.5% (n=46) of respondents either strongly agreed or agreed that RCBs carries out systematic and comprehensive risk identification probably due to their inability to appropriately identify the four basic elements of risk identification as pointed out by Tchankova (2002). 36 respondents (35.3) disagreed, whiles 18.6% were not sure. The responses show clearly the extent to which RCBs adequately identify the potential risk affecting their operations, considering the importance of this process in managing risk. Figure 4.4.1 provides a pictorial view.

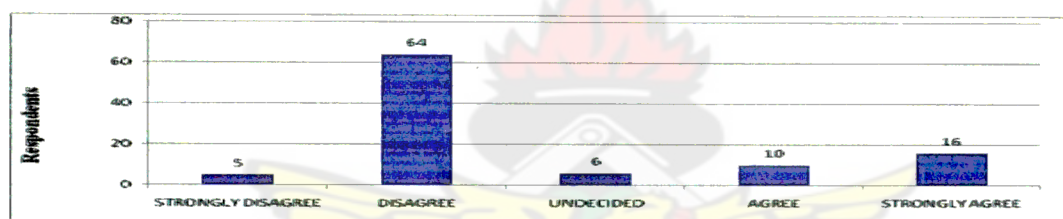
Figure 4.4.1 Systematic identification of Risk relating to objectives

Source: Authors field data

4.4.2 Main risks

The Respondents disagreed that RCBs finds it difficult to prioritize its main risk. Close to 68.9% (n=69) either strongly disagreed or disagreed with the perception. This position did not however synchronise with respondents opinions on figure 4.4.1. Clearly the RCBs ability to accurately identify risk affecting their operations will show the extent to which the RCBs are able to prioritise their main risk. 26 respondents were sure RCBs had difficulties in prioritising its main risk. Only 6 respondents were not sure of such a difficulty. It is important that RCBs are able to prioritize risk affecting their operations for the purpose of effective risk management. The detail analysis is as indicated in Figure 4.4.2 below.

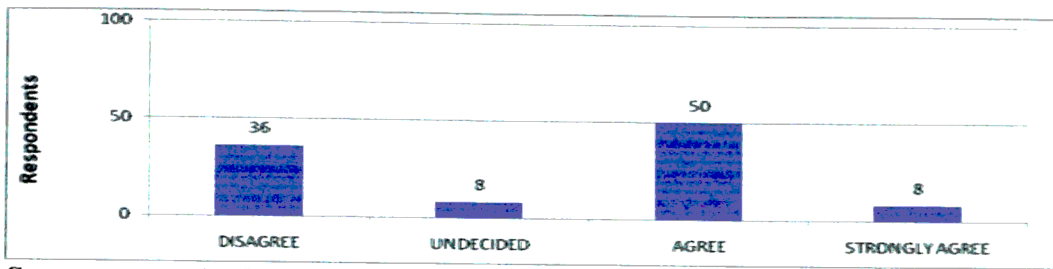
Figure 4.4.2 RCBs and prioritisation of key Risk



Source: Authors field data

4.4.3 Changes in risk

The purpose of the study was to determine the extent to which changes in risk affecting RCBs are regularly factored into its operations. Almost 56.8% (n=58) of respondents either agreed or strongly agreed that RCBs recognize changes in risk and factors it into its roles and responsibilities. 35.3% of respondents disagreed whiles 7.8% were not sure as indicated in the figure below.

Figure 4.4.3 Changes in Risk and RCBs roles and responsibilities

Source: Authors field data

4.4.4 Risk Identification Summary of Analysis

The responses showed a fairly even distribution of the mean responses on risk identification. The average mean response of 3.05 gives indication of fair level of risk identification by RCBs. The highest mean value of 3.29 was when respondents were asked whether RCBs recognize changes in risk in their operations. The average standard deviation of 1.09% indicates some level of variation of respondents' assessment of RCBs skill of identifying risk affecting their operation. The results did not demonstrate clearly whether RCBs adequately identify risk affecting their operations. Table 4.4 shows the detail summary results.

Table 4.4 Risk identification summary

No.	Questions	N		Mean	Median	Mode	Std. Deviation
		Valid	Missing				
1	The Bank carries out a comprehensive and systemic identification of its risks relating to each of its declared aims and objectives	101	1	3.19	3	4	1.027
2	The Banks finds it difficulties to priorities its main risk	101	1	2.68	2	2	1.216
3	Changes in the are recognised and identified with the bank's roles and responsibilities	102	0	3.29	4	4	1.04
	Average	101	1	3.05	3.00	3.33	1.09

Source: Authors field data

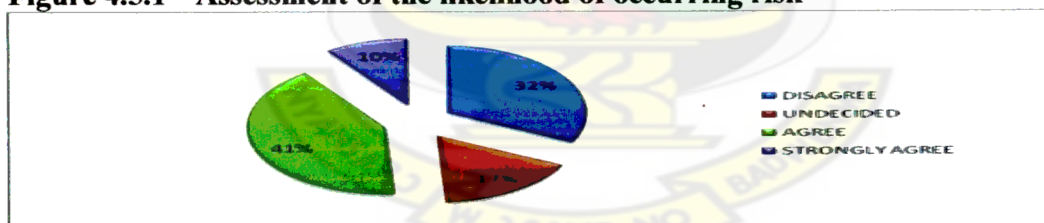
4.5 Risk Analysis and Assessment

This variable analyses respondents' assessment of how RCBs in Ghana assesses risk affecting their operations. The four questions answered by respondents provide a fair view.

4.5.1 Assessment of occurring risk

The survey results on the question showed that RCBs assesses the likelihood of occurring risk. Close to 51% (n=52) of respondents indicated that RCBs assesses the likelihood of occurring risk. 33 respondents (32.4%) objected to the accession, while 16.7% were not sure. Contrary to this accession, risk assessment is usually conducted by the regulatory bodies. Most RCBs do not perform effective risk assessment as some of the Bank of Ghana's examination reports revealed. A regular assessment of the likelihood of occurring risk will ensure timely risk mitigation measures by the RCBs. Figure 4.5.1 below provides a pictorial representation of the outcome.

Figure 4.5.1 Assessment of the likelihood of occurring risk



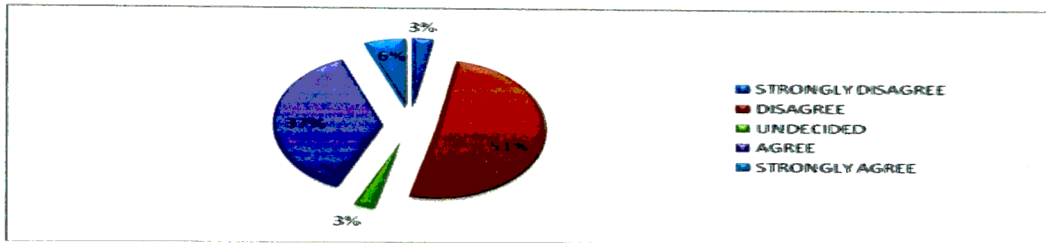
Source: Authors field data

4.5.2 Quantitative and Qualitative methods of risk management.

52.9% of respondents said their institutions do not use quantitative and qualitative methods in assessing risk affecting their operations. Close to 43% of respondents said RCBs deploy quantitative and qualitative methods in assessing risk. Only 3 respondents (3.0%) were not quite clear of the use of quantitative and qualitative

method of risk assessment by the RCBs. A good risk management technique will normally involve the use of quantitative and qualitative methods in assessing the likelihood of occurring risk. Figure 4.5.2 gives a detail representative below.

Figure 4.5.2 Quantitative and qualitative methods of Risk analysis

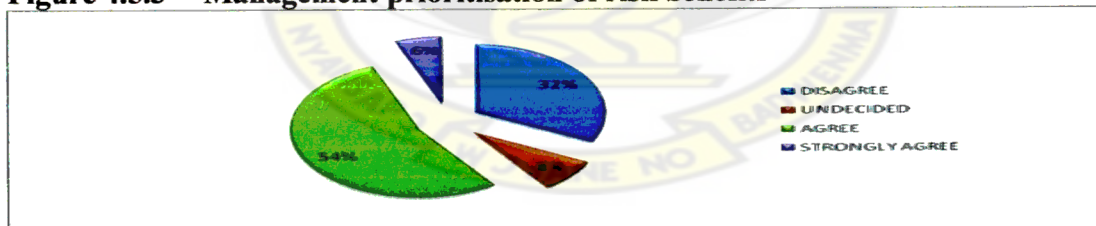


Source: Authors field data

4.5.3 Prioritizing of risk benefits

Prioritizing of risks benefits in addressing risk enables the RCBs to explore and take advantage of the full benefits in determining the immediate management action. A significant number of respondents (60%) said management of RCBs prioritizes its risk benefits whiles close to 32% did not agree. A Few respondents (8%) were rather not sure if the claim is true. The responses generally showed that management of RCBs prioritizes its risk benefits when addressing risk. Figure 4.5.3 gives a detail analysis of the results.

Figure 4.5.3 Management prioritisation of risk benefits



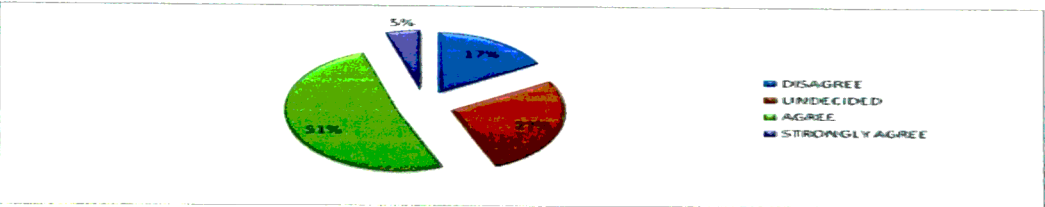
Source: Authors field data

4.5.4 Prioritizing risk treatments

The responses revealed that over 55.9% (n=57) of respondents said their RCBs respond to analyzed risk by prioritizing risk treatments in relation to resources

availability. Nearly 16.7% did not agree whiles 26.7% were not sure whether RCBs perform this action. Performing this effectively will ensure that risk treatments are prioritized in accordance with resources availability and the benefits to be derived in addressing the risk. The details are as indicated in figure 4.5.4.

Figure 4.5.4 Prioritisation of risk treatments and resource constraints.



Source: Authors field data

4.5.5 Summary of Risk analysis and assessment

The average mean of 2.60% of responses fairly indicate that the RCBs were effectively assessing and analyzing risk. The overall mean responses clearly indicate an even distribution, which means that respondents had an almost equal view of the risk analysis questions of this survey. The average standard deviation of 0.79 further showed that respondents had fairly close views. Table 4.5 below provides the details.

Table 4.5 Risk Analysis and Assessment Summary

No.	Questions	N		Mean	Median	Mode	Std. Deviation
		Valid	Missing				
1	Assessment of the likelihood of occurring risk	102	0	3.28	4	4	1.028
2	Bank risk are assessed using quantitative and qualitative analysis methods of risk management	100	2	2.92	2	2	1.116
3	Response to analysed risks includes prioritising of risk benefits of addressing risk, and selecting those that need active management attention	102	0	3.33	4	4	0.998
4	Response to analysed risks includes prioritising risk treatments where there are resource constraints on risk treatment implementation	101	1	3.45	4	4	0.83
	Average	81	0.60	3.25	2.80	2.80	0.79

Source: Authors field data

4.6 Risk Monitoring and Review

Risk monitoring ensures that risk management practices conform to best practices that assist in the early discovery of mistakes. The responses to the questions in this section addresses risk monitoring as practiced in the Ghanaian RCBs.

4.6.1 Monitoring the effectiveness of risk management

Regular monitoring of the effectiveness will ensure best practice. Essentially, close to 79.4% either agreed or strongly agreed that their RCBs risk management practices is an integral part of routine management reporting. Only 20.9% of respondents either disagreed or were undecided. Figure 4.6.1 gives a pictorial representation.

Figure 4.6.1 Monitoring the effectiveness of Risk Management

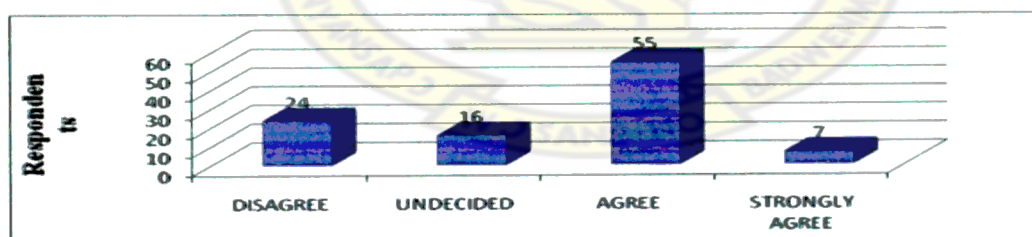


Source: Authors field data

4.6.2 Level of Risk control

A little over 60% (n=62) of respondents said the level of control by their RCBs was appropriate in addressing their potential risk. Close to 39% hold a contrary view as shown in the figure below.

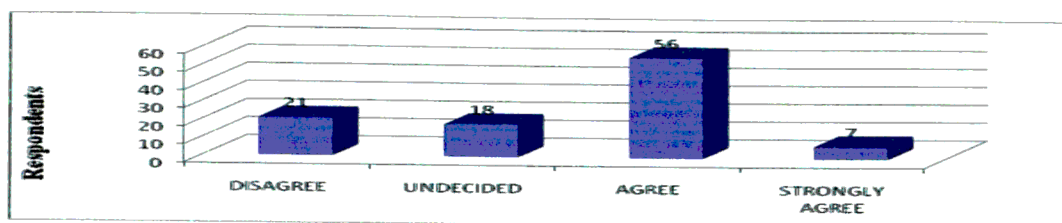
Figure 4.6.2 Level of Risk control by RCBs



Source: Authors field data

4.6.3 Reporting and Communication processes and risk management

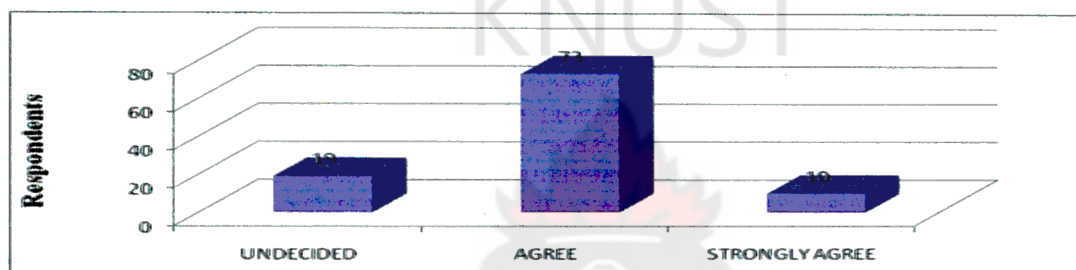
The survey results revealed that close to 62% of respondents agreed or strongly agreed that reporting and communication processes in the RCBs support effective risk management. Less than 39% were either undecided or disagreed. The details can be found in figure 4.6.3 below.

Figure 4.6.3 Risk Management reporting and communication processes

Source: Authors field data

4.6.4 Existing controls and risk management practices

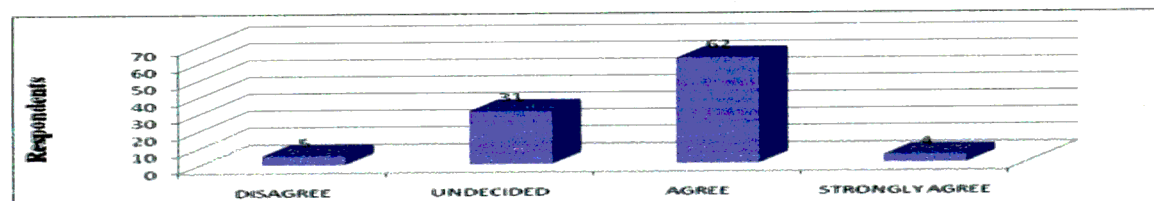
Regular evaluation of the RCBs control systems enhances risk management practices. Figure 4.6.4 below shows that almost 81.4% of respondents held the view that evaluation of internal controls is an integral part of risk management in RCBs.

Figure 4.6.4 Effectiveness of existing Controls and Risk Management

Source: Authors field data

4.6.5 Action plans and identified risks, costs and benefits of addressing risk.

The responses generally indicated that RCBs response includes action plans for implementing decisions relating to identified risk, assessment of the cost and the benefits of addressing risk. 64.9% (n=66) said response to risk includes actions plans while 35.3% were either not sure or disagreed. Figure 4.6.4 provides the details below.

Figure 4.6.5 Action plans and identified Risk implementation

Source: Authors field data

4.6.6 Risk Monitoring and Review Summary of Responses

The average mean of response of 3.66 gives an indication that the RCBs practice some level of effective risk monitoring and control system. The highest mean response of 3.91 occurred when almost 81.4% of respondents said internal controls evaluations were an integral part of the risk management. The lowest mean response was when respondents were asked whether the level of control by the RCBs were appropriate in managing its risk.

As indicated in Table 4.6 below there is no significant difference between the means indicating a close level of respondents' opinions of RCBs risk monitoring and control practices. The standard deviation of the distribution also revealed almost close views by respondents.

Table 4.6 Risk Monitoring and Review Summary

No.	Questions	N		Mean	Median	Mode	Std. Deviation
		Valid	Missing				
1	Monitoring the effectiveness of risk management is an integral part of routine management reporting	102	0	3.82	4	4	0.916
2	The level of control by the Bank is appropriate for the risks that it faces	102	0	3.44	4	4	0.929
3	Reporting and communication processes within your Bank support the effective management of risk	102	0	3.48	4	4	0.898
4	Response to risk includes an evaluation of the effectiveness of the existing controls and risk management practices	102	0	3.91	4	4	0.528
5	Response to risk includes action plans for implementing decisions about identified risks assessment of the costs and benefits of addressing risk	102	0	3.64	4	4	0.642
	Average	102	-	3.66	4.00	4.00	0.78

Source: Authors field data

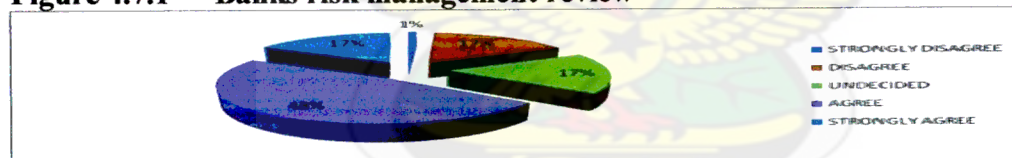
4.7 Risk Management Practices

Arguably, the most important function of risk management is the risk management practices existing in the RCBs. The fact that the other aspects of risk management discussed in this research are being performed effectively does not give an indication that there exists an effective and efficient risk management practices. Questions in this section provide the responses in this regard.

4.7.1 Management review of business risk

Respondents generally agreed that RCBs executive management regularly reviews its business risk management. Close to 65% of respondents agreed or strongly agreed with the existence of such a review process. About 35% either disagreed or were undecided. A regular review process to determine the level of effectiveness helps strengthen sound risk management policy. The details of the results are as indicated in figure 4.7.1 below.

Figure 4.7.1 Banks risk management review



Source: Authors field data

4.7.2 Bank's risk management procedures and processes

Almost 62% (n=63) of respondents objected or strongly objected to the availability of risk management policy guidelines in the RCBs. Nearly 37.3% said risk management policies and procedures are documented whiles 1% were not sure. Risk policy documents will essentially provide guidance in managing risk affecting RCBs. The figure below elaborates further

Figure 4.7.2 Banks risk management procedure and processes

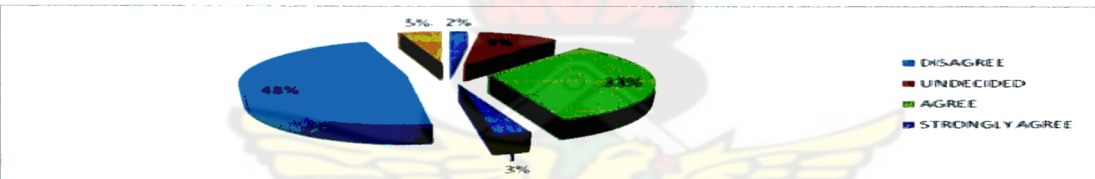


Source: Authors field data

4.7.3 Risk management policy and staff recruitment

55.9% of respondents disagreed or strongly disagreed that risk policies in RCBs ensures the recruitment of highly qualified staff to manage and ensure risk management programs. 39.2% either agreed or strongly agreed that RCBs risk policy documents ensures such a practice. Less than 5% of respondents were rather not certain as shown in figure 4.7.3.

Figure 4.7.3 RCBs Risk Policy and Staff Recruitment

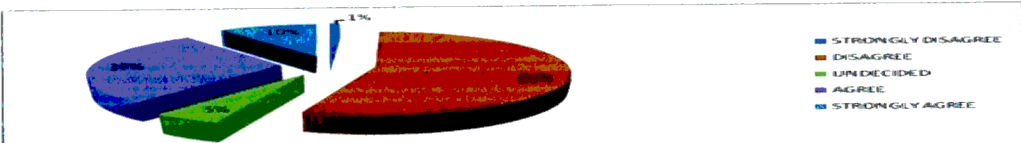


Source: Authors field data

4.7.4 Basel Capital Accord and Risk management

The Basel capital accord is a techniques adopted by the central Bank of Ghana as a means of improving the efficiency of banks risk management 68.6% (n=70) of respondents said the application of the Basel Capital accord by RCBs will result in improved efficiency in risk management, an indication that staffs of RCBs are aware of the benefits of ensuring the compliance of the accord. Less than 22% either were undecided or disagreed. Figure 4.7.4 indicates the detail results.

Figure 4.7.4 Application of Basel Capital Accord and Risk management

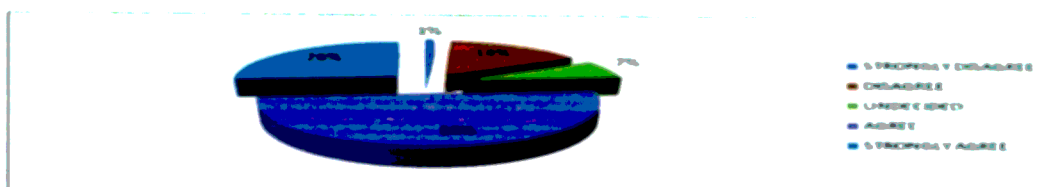


Source: Authors field data

4.7.5 10% Capital Adequacy Ratio and risk management

More than two thirds (76.5%) of respondents were certain that 10% capital adequacy ratio will be sufficient to maintain an adequate capital surplus for RCBs. 16.7% of respondents said the ratio of 10% is inadequate while 6.9% said they were not sure whether the rating is adequate. The detail is found in figure 4.7.5 below.

Figure 4.7.5 Capital Adequacy ratio and Risk Management

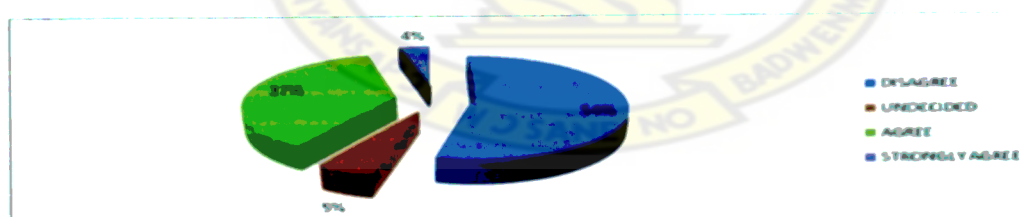


Source: Authors field data

4.7.6 Level of risk management

Close to 54% of respondents said they did not think that the overall level of risk management were efficient in achieving their objectives. About 41.2% of respondents said it was effective while close to 5% were not sure of the level of effectiveness. This clearly gives an indication that RCBs have somehow weak risk management practices in place which requires immediate attention by their executive management. The results are as shown in figure 4.7.6.

Figure 4.7.6 overall level of risk management effectiveness

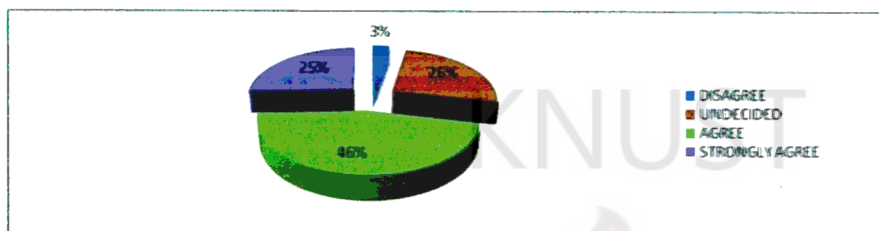


Source: Authors field data

4.7.7 Risk Management and Banks, planning, Budgeting and the Reporting systems.

The responses portrayed that risk management is an integral part of RCBs planning, budgeting and reporting system. 71.6% of respondents either agreed or strongly agreed while less than 3% disagreed. However, 25.2% were not sure whether the process has been integrated in the planning, budgeting and reporting system. Figure 4.7.7 below gives a pictorial representation of the results.

Figure 4.7.7 Risk Management and RCBs Planning, Budgeting and Reporting Systems



Source: Authors field data

4.7.8 Summary of Risk Management Practices

The mean responses clearly showed an even distribution indicating different shades of opinion on the effectiveness of risk management practices in RCBs. The average mean responses of 3.40 further attest to the differences in opinions. The highest mean value (3.93) was when respondents were asked to indicate whether risk management was an integral part RCBs planning, budgeting and reporting system. The lowest mean value of 2.78 occurred when respondents were asked to indicate whether there exist risk management policies and procedures. This clearly resulted in a significant difference in the mean values.

The responses also resulted in a high standard deviation with a lowest value of 0.794 and a high value of 1.132 indicating a significant variation of respondents' opinion about RCBs risk management practices. This result generally depicts an ineffective level of risk management practices, across the RCBs. Table 4.7 below gives the detail results.

Table 4.7 Risk Management Practices

No	Questions	N		Mean	Median	Mode	Std. Deviation
		Valid	Missing				
1	Banks executive management regularly reviews the bank's performance in managing its business risks	102	0	3.63	4	4	0.984
2	Banks risk management procedures and processes are documented and provide guidance to staff about managing risks.	102	0	2.78	2	2	1.077
3	Banks risk policy ensures the recruitment of highly qualified people in risk management and encourages training programs in the area of risk management	102	0	2.92	2	2	1.132
4	Application of Basel Capital accord by your Bank would improve the efficiency of risk management	92	10	3.78	4	4	0.626
5	Banks Capital is adequate if the ratio of capital to total risk-weighted assets is equal to 10%	102	0	3.85	4	4	1.019
6	The Overall level of risk management practices in my bank is efficient and effective in achieving our objective	102	0	2.91	2	2	1.035
7	Risk management is integrated into the bank's planning, Budgeting and reporting system	102	0	3.94	4	4	0.794
	Average	100.57	1.43	3.40	3.14	3.14	0.95

Source: Authors field data

4.8 Risk Identification Methods

The survey responses revealed that more than 55% of respondents said RCBs deploy four main techniques in risk identification, namely:

- i. Audit and Physical Inspection
- ii. Inspection by Bank of Ghana and others
- iii. Financial statement analysis
- iv. Inspection by Bank Risk Management
- v. SWOT

All respondents identified Audit and physical inspection as the prime technique used by RCBs in identifying risk affecting the business activities of Ghanaian RCBs. The table below shows the results.

Table 4.8 Risk Identification Tools and Techniques

Tools & Techniques	Responses		Percent of Cases
	N	Percent	
INSPECTION BY BANK RISK MANAGER	61	13.00%	59.80%
INSPECTION BY BANK OF GHANA & OTHERS	99	21.00%	97.10%
AUDIT & PHYSICAL INSPECTION	102	21.70%	100.00%
FINANCIAL STATEMENT ANALYSIS	99	21.00%	97.10%
RISK SURVEYS	14	3.00%	13.70%
PROCESS ANALYSIS	3	0.60%	2.90%
SWOT	57	12.10%	55.90%
BENCHMARKING	36	7.60%	35.30%
Total	471	100.00%	461.80%

Source: Authors field data

4.9 Types of Risk

The responses revealed that RCBs in Ghana faces different types of risks. 75% of respondents identified four main types of risk affecting RCBs. They included, credit Risk, Operating Risk, Liquidity risk, and Legal/Regulatory Risk. These responses were further confirmed by an inspection of some of the Bank of Ghana's periodic examination reports on Ghanaian RCBs. The inspection revealed the four risk identified by respondents as the main types of risk affecting RCBs operations. Table 4.9 gives a summary position of the results.

Table 4.9 Types of Risk

Types of Risk	Responses		Percent of Cases
	N	Percent	
FOREIGN EXCHANGE RISK	40	5.70%	39.20%
CREDIT RISK	102	14.50%	100.00%
OPERATING RISK	102	14.50%	100.00%
LIQUIDITY RISK	99	14.10%	97.10%
LEGAL RISK	77	10.90%	75.50%
SOLVENCY RISK	42	6.00%	41.20%
INTEREST RATE RISK	71	10.10%	69.60%
COUNTERPARTY RISK	39	5.50%	38.20%
PRICE RISK	39	5.50%	38.20%
REPUTATIONLA RISK	41	5.80%	40.20%
STRATEGIC RISK	50	7.10%	49.00%
OTHERS	2	0.30%	2.00%
Total	704	100.00%	690.20%

Source: Authors field data

4.10 Analysis of BOG/ARB Apex Bank survey respondents

4.10.1 Job Position and Gender

19 responses were received from the two institutions (Bank of Ghana and ARB Apex Bank Ltd) out of a total of 25 questionnaires administered resulting in a response rate of 76%. The highest responses were received from managers. A low response of 5.26% was obtained from Deputy Managers and Asst. Directors respectively. The distribution of the responses of the survey showed a fairly balance distribution among the respondents. This is expected to impact positively on the research outcome as represented in Table 4.10 below.

Table 4.10 Job position and Gender

Current Job Position	Gender		Total
	Male	Female	
Officer II	2	1	3
Officer I	2	1	3
Asst Manager	1	1	2
Deputy Manager	1	0	1
Manager	2	3	5
Deputy Chief Manager	1	1	2
Chief Manager	2	0	2
Asst Director	1	0	1
Total	12	7	19

Source: Authors field data

4.10.2 Position and qualification – BOG/ARB Apex Bank

The analysis indicated that 8 respondents (42.10%) has graduate level training; 5 respondents (26.31%) possess postgraduate qualifications while the remaining 6 respondents have either professional qualifications or both graduate or postgraduate in addition to the professional qualifications. The level of skills of the respondents adequately represents a good understanding of the theory of risk management as indicated in the table.

Table 4.11 BOG/ARB APEX Bank Respondents' Qualifications and Job Positions

Current Job Position	Qualification				
	GRADUATE	POSTGRADUATE	PROFESSIONAL QUALIFICATION (S)	GRADUATE & PROFESSIONAL QUALIFICATIONS	POSTGRADUATE & PROFESSIONAL QUALIFICATIONS
Officer II	3	0	0	0	0
Officer I	3	0	0	0	0
Asst Manager	1	0	1	0	0
Deputy Manager	0	0	0	0	1
Manager	0	1	0	2	2
Deputy Chief Manager	0	2	0	0	0
Chief Manager	1	1	0	0	0
Asst Director	0	1	0	0	0
Total	8	5	1	2	3

Source: Authors field data

4.10.3 Qualification and experience of BOG/ARB Apex Bank

52.63% (n=10) of responses have less than five years experience on their respective job position while 36.84% (n=7) of respondents have between 5 and 10 years experience. The less than 5 years lengths of service though not quite encouraging is not expected to affect the research outcome owing to the level of educational background of the respondents. This is as indicated in Table 4.12 below.

Table 4.12 BOG/ARB APEX Bank Respondents' Qualifications and Experience

Current Job Position	Working Experience			Total
	LESS THAN 5 YEARS	5 -10 YEARS	11 - 20 YEARS	
Officer II	3	0	0	3
Officer I	3	0	0	3
Asst Manager	1	1	0	2
Deputy Manager	1	0	0	1
Manager	2	3	0	5
Deputy Chief Manager	0	2	0	2
Chief Manager	0	1	1	2
Asst Director	0	0	1	1
Total	10	7	2	19

Source: Authors field data

4.11 BOG/ARB Apex Bank Responses Understanding Risk and Risk Management.

The average mean response rate of BOG/ARB Apex bank respondents' opinion about RCBs understanding of risk and risk management is 2.59. The respondents' opinion clearly showed that the RCBs do not have a firm understanding of risk and risk management. The results also indicate the relative importance of managing risk in the RCBs. The highest mean of 4.84 was when BOG/ARB Apex bank respondents viewed managing risk as important to the performance and success of RCBs in Ghana. The lowest mean 1.53 was when respondents of the regulatory institutions were asked about RCBs common understanding of risk management and whether it has been clearly set out in their objectives. Table 4.13 below gives details survey results.

Table 4.13 BOG ARB APEX Bank Responses on Understanding Risk and Risk Management

Questions	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
A common understanding of Risk Management across the RCBs	19.00	-	1.53	2.00	2.00	0.51
Risk Management is clearly set out and understood throughout the RCBs	19.00	-	1.53	2.00	2.00	0.51
Managing Risk is important to the performance and the overall success of the RCBs	19.00	-	4.84	5.00	5.00	0.37
One objective of the RCBs is to expand the applications of advanced risk management techniques	19.00	-	2.47	3.00	3.00	0.90
Average	19.00	-	2.59	3.00	3.00	0.58

Source: Authors field data

4.12 Risk Identification – BOG/ARB Apex Bank Respondents

Opinions of respondents of BOG/ARB Apex bank give a strong indication that Ghanaian RCBs have difficulties in identifying risk affecting their business activities. The average mean (2.67) of the responses clearly showed that RCBs finds it difficult in identifying the potential risk. The results seem to be consistent with the difficulties staff face in understanding risk. The survey result also showed a reasonable low average standard deviation of 0.48 indicating the closeness of the responses shown in Table 4.14 below.

Table 4.14 BOG/ARB Apex bank Respondents Answers on RCBs Risk Identification

Questions	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
RCBs carries out a comprehensive and systemic identification of its risks relating to each of its declared aims and objectives	19.00	-	1.95	2.00	2.00	0.52
RCBs finds it difficult to priorities its main risk	19.00	-	4.21	4.00	4.00	0.42
Changes in the Risk are recognised and identified with the RCBs roles and responsibilities	19.00	-	1.84	2.00	2.00	0.50
Average	19.00	-	2.67	2.67	2.67	0.48

Source: Authors field data

4.13 Risk Analysis – BOG/ARB Apex Bank

The results of the responses as shown in the table below gives an average mean response rate of 2.16 indicating that RCBs in Ghana are not effectively assessing and analyzing risk. The responses also returned a closed mean values among the five questions indicating an almost equal view of respondents on risk assessment. The average standard deviation of 0.42 also signified close relationship of the opinions of respondents on RCBs risk assessment.

Table 4.15 Responses on RCBs Risk Analysis

Questions	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
RCBs assesses the likelihood of occurring risk	19.00	-	2.00	2.00	2.00	-
RCBs assesses risk using quantitative and qualitative analysis methods of risk management	19.00	-	2.47	2.00	2.00	0.70
RCBs Response to analysed risks includes prioritising of risk benefits of addressing risk, and selecting those that need active management attention	19.00	-	2.05	2.00	2.00	0.23
RCBs Response to analysed risks includes prioritising of risk treatments where there are resource constraints on risk treatment implementation	19.00	-	2.11	2.00	2.00	0.74
Average	19.00	-	2.16	2.00	2.00	0.42

Source: Authors field data

4.14 Risk Monitoring – BOG/ARC Apex Bank respondents

The average mean of the sample response of 2.13 indicated that Ghanaian RCBs do not operate on effective risk monitoring and control systems. Proper risk monitoring will ensure early detection of mistakes thus ensuring that RCBs risk management practices conforms to the desired industry practices. The responses of the distribution also revealed a close relationship of respondents' opinion about risk monitoring system of the RCBs in Ghana. The average standard deviation of 0.75 also demonstrates a fairly low dispersion from the average value which further

indicated the closeness of the relationship. Table 4.16 provides a summary representation.

Table 4.16 Respondents Answers on RCBs Risk Monitoring

Questions	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
Monitoring the effectiveness of risk management is an integral part of routine management reporting in the RCBs	19.00	-	2.16	2.00	2.00	0.76
The level of control exercised by the RCBs is appropriate for the risks that RCBs faces	19.00	-	2.11	2.00	2.00	0.74
Reporting and communication processes existing in the RCBs support the effective management of risk	19.00	-	2.05	2.00	2.00	0.78
RCBs Response to risk includes an evaluation of the effectiveness of the existing controls and risk management practices	19.00	-	2.21	2.00	2.00	0.71
RCBs Response to risk includes action plans for implementing decisions about identified risks assessment of the costs and benefits of addressing risk	19.00	-	2.11	2.00	2.00	0.74
Average	19.00	-	2.13	2.00	2.00	0.75

Source: Authors field data

4.15 Risk Management Practices

The responses on risk management practices by the regulators namely Bank of Ghana and ARB/Apex gave an indication of lack of an efficient and effective risk management practices in Ghanaian RCBs. The average mean of respondents' opinion is 2.68 signifying a fairly weak risk management practices. The highest mean value of 4.58 was when respondents agreed that 10% capital ratio was adequate for RCBs operations. While a low mean value of 1.53 concerns respondents' strong objection that RCBs risk policy ensures recruitment of high quality staff. The results clearly showed a significant variation in the highest and lowest mean values, indicating a significant difference in opinions. However, the average standard deviation of 0.78

showed that respondents had close relationship in their opinion. Table 4.17 provides the details below.

Table 4.17 Results of response on RCBs Risk Management practices

Questions	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
RCBs executive management regularly reviews the bank's performance in managing its business risks	19.00	-	2.00	2.00	2.00	0.33
RCBs risk management procedures and processes are documented and provide guidance to staff about managing risks.	19.00	-	1.68	2.00	1.00	0.95
RCBs risk policy ensures the recruitment of highly qualified people in risk management and encourages training programs in the area of risk management	19.00	-	1.53	1.00	1.00	0.96
Application of Basel Capital accord by the RCBs would improve the efficiency of risk management	19.00	-	4.26	5.00	5.00	1.10
RCBs Capital is adequate if the ratio of capital to total risk-weighted assets is equal to 10%	19.00	-	4.53	5.00	5.00	0.51
The Overall level of risk management practices in the RCBs is efficient and effective in achieving our objective	19.00	-	2.58	2.00	2.00	1.22
Risk management is integrated into the RCBs planning, Budgeting and reporting systems	19.00	-	2.21	2.00	2.00	0.42
Average	19.00	-	2.68	2.71	2.57	0.78

Source: Authors field data

4.16 Risk Identification Methods – BOG/ARB Apex Bank Survey

The results generally showed that the most important methods adopted by RCBs in identifying risk were; Audit and physical inspection and inspection by Bank of Ghana and other regulatory agencies. A little over 47% of respondents believe that RCBs risk managers' use financial statement analysis as a method of identifying risk while just about 5% said inspection by RCBs risk managers was another form of risk identification method as shown in Table 4.18.

Table 4.18 RCBs Risk identification techniques – BOG/ARB Apex bank respondents

RISK IDENTIFICATION METHODS	Responses		Percent of Cases
	N	Percent	
INSPECTION BY BANK RISK MANAGER	1.00	2.08	5.26
FINANCIAL STATEMENT ANALYSIS	9.00	18.75	47.37
AUDIT & PHYSICAL INSPECTION	19.00	39.58	100.00
INSPECTION BY BANK OF GHANA & OTHERS	19.00	39.58	100.00
TOTAL		100.00	252.63

Source: Authors field data

4.17 Types of Risk – BOG/ARB Apex Bank survey

Respondents were asked to indicate the different type of risk affecting RCBs operations in Ghana. The responses revealed that the most important type of risk faced by RCBs in Ghana were credit Risk, operating Risk, Liquidity Risk and Legal Risk. An evaluation of some of the periodic examination reports by the Bank of Ghana on some RCBs significantly supported respondents' opinions as mentioned earlier in this chapter. The Table below provides the details.

Table 4.19 Types of Risk – BOG/ARB Apex Bank Respondents

TYPES OF RISK	Responses		Percent of Cases
	N	Percent	
INTEREST RATE RISK	3.00	3.80	15.79
CREDIT RISK	19.00	24.05	100.00
OPERATING RISK	19.00	24.05	100.00
LIQUIDITY RISK	19.00	24.05	100.00
LEGAL RISK	19.00	24.05	100.00
TOTAL		100.00	415.79

Source: Authors field data

4.18 Testing the hypothesis

In order to test the hypothesis of the research, a one way ANOVA was computed to compare the mean values of the two groups of respondents (RCBs and BOG/ARB Apex banks). The analysis showed that the F value of 0.422852 with 4 and 5 degrees

of freedom (df) has a probability of occurrence by chance of 0.78765 shows that there is a significant difference between the means of the two groups. Therefore, there is a statistically significant difference in the means between respondents of RCBs and Bank of Ghana and Apex Banks as shown in Table 4.20. This signifies that risk management practices existing in the RCBs are ineffective; hence the hypothesis H_0 is rejected and H_1 is accepted.

Table 4.20 ANOVA Analyses

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Understanding Risk and Risk Management	2	6.44	3.22	0.7938
Risk Identification	2	5.72	2.86	0.0722
Risk Analysis & Review	2	4.73	2.365	0.11045
Risk Monitoring and Review	2	5.79	2.895	1.17045
Risk Management Practices	2	6.08	3.04	0.2592

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.81394	4	0.203485	0.422852	0.78765	5.192168
Within Groups	2.4061	5	0.48122			
Total	3.22004	9				

Source: Authors field data