

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF BUSINESS**

**ASSESSING CREDIT RISK CONTROL SYSTEMS IN FINANCIAL  
INSTITUTIONS IN GHANA: A CASE STUDY OF SOME SELECTED  
FINANCIAL INSTITUTIONS IN GHANA**

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## DECLARATION

I hereby declare that this submission is my own work towards the Master of Business Administration (Finance Option) Degree and to the best of my knowledge it contains no material previously published by another person nor material which has been accepted for the award for any other degree of the university.

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## **ACKNOWLEDGEMENT**

This thesis could not be effectively accomplished without diverse support from my supervisor (Dr.K.O Appiah), my mother, Miss Gladys Ivy Solomon, family members and friends.

## **DEDICATION**

This thesis is dedicated to my lovely mother Miss Gladys Ivy Solomon

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## **ABSTRACT**

Credit risk appraisal in the financial industry is very important since it would help reduce risk in the financial service delivery. The study seeks to identify the risk associated with providing financial services, explore the soundness of financial institution's credit risk control system, assess if credit risk control system conforms to the Basel II accord.

The data was collected from both primary and secondary data and included interviews and discussions with senior credit officers.

The study resulted in a number of significant observations. The results of the study implies that environmental risk, market risk, liquidity risk, reputational risk, legal risk and credit risk are of importance to the operations of financial institution in the Obuasi municipality. The study also revealed that financial institutions have exposure concentrations on the individual or industry, it was further observed that the mean rating of the respondents on borrower selection, size and terms are higher than the cut-off point of 3.5, implying relevance to the financial institution.

This has led to a couple of recommendations which comprise that the risk management policies of financial institutions should be updated regularly to avoid getting outdated and irrelevant with time, that the financial institution consciously resource all department of the institution for them to carry out their work, that codes of conduct for employees and members of staff are subject to regular review and also the performance accounting, information and communication systems must be evaluated.

In conclusion, financial institution should identify and manage risk inherent in all products and services and ensure that they are subjected to adequate risk management procedures

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Risk management is essential for any business that desires to make significant stride into the unforeseeable future. This is because the future, in as much as research can give an idea over what it would look like, it is still unknown. Anything unknown comes with several uncertainties as well, and uncertainties what make risk management a complex challenge. Every human enterprise is connected with risk .After rising up from bed, join a public transport or through a private means to work until we get back into our homes, we are wide-open to risks of diverse forms. For many years, risk and survival have gone side by side. Pre-historic individuals endured short and cruel lives, as the quest for food and somewhere to live exposed them to bodily threat from aggressive creatures and bad climate. As many well-known groups developed in Babylon, Greece and Sumeria, further risks (such as conflict and sickness) continued to destroy human race. From early history, though, material reward and physical risk went side by side. The courageous cave dweller ended up with foodstuff and the risk-averse one starving to passing away. The introduction of shipment generated a different setting for risk bearing adventure. The Vikings boarded built ships from Scandinavia to Britain, Ireland and even through the Atlantic to the Americas in pursuit of new plots of land to exploit – the risk-return trade off of their age. The growth of the shipment occupations brought about renewed comparisons for return and risk with the danger of ships falling and being approached by pirates offset by the rewards from ships that made it back with cargo. It also permitted for the separation of physical from economic risk as affluent merchants gambled their currency while the poor exposed their lives on the vessels. The spice vocation that succeeded as early as 350 BC, but prolonged and became the foundation for empires in

the middle of the last millennium offers a good example. Suppliers in India would load vessels with cinnamon and pepper and drive them to Arabia, Persia and East Africa. The shipment was further conveyed to camels and taken across the continent to Venice and Genoa, and then on to the other European countries. The, Spanish, Dutch and the English, extended the trade to the East Indies with an exclusively naval course. Merchants in Lisbon, Amsterdam, London with the support of the queen, would capitalise in ships and goods that would go on board on a very time-consuming trip. The threats on the way were many and it was not unusual to miss half or additional of the shipment (and persons bearing the load) beside the way, but the significant amounts that the spices claimed in their last journey's end still made this a profitable opportunity for both the holders of the vessels and the seamen who endured. Given this background, risk is as old as human generation and pervades through every craft or trade we engage in.

In the opinion of the State B of Pakistan, risks are typically defined by the adverse impact on the profitability of several distinct sources of uncertainty. The sources of uncertainty can either come from the client, tasks or marketplace and the unsuccessful organization of these sources can tip to the creation in fall of the organisation's (Pyle, 1997).

In Ghana, financial institutions are competing with each other as they endeavour to create products and services to win more customers and move to attract even the unbanked population to their folds. Again, typical with any growing economy, vibrant financial institutions are required to play a pivotal role in in harnessing the needed capital to support the infant but fast growing industries such as oil, information and communication technology etc. to drive the economy to middle income status in the

medium term. The above present a potential risk issues to the players in the financial sector of the economy.

According to Eccles, et al (2001), financial institutions have different types of risk exposure including market risk, credit risk and operational risk. The report suggests that, engagement in risk management practices in the financial institution is inevitable. In Ghana, financial institutions compete with each other as they strive to create products and services to win more customers and make moves to attract the ‘unbanked’ population. Also, as a growing economy, strong financial institutions are required to play major role in harnessing the needed capital to support the infant but fast growing oil industry and propel the country further forward into upper middle income economy. The above, present financial institutions in Ghana with potential risk issues.

According to Carey (2001), risk control is very vital in the financial sector than in any other parts of the economy since it thrives on the confidence of the individuals. Although financial institutions play financial intermediary role, they further formation of capital and encourage economic growth. However, the capacity of financial institutions to fuel economic growth and development primarily depends on the health, reliability and the stability of the credit risk management system. This puts financial business as a purely risky venture. The Deutsche Bank Research (2008) explains that banking problems as a result of poor risk credit assessment span the existence of banks. And the problems seen in the last three decades in the industry are not rare especially when placed in a broader context, a discovery made by Reinhart and Rogoff (2008a), during the exploration of financial history of the last eight centuries. This is a resilient indication that the concept of risk and its management in the financial sector is not new. Generally, many literatures have been published on risk management (Al-Tamimi and AlMazrooei, 2007).

At the launch of the PricewaterhouseCoopers Ghana Banking Study, the Governor of the Central Bank repeated the call for Board of Directors of financial institutions to put in place good credit risk appraisal practices at management levels with direct reporting to a committee of the Board to ensure effective monitoring and control of risk in their operations (Amissah-Arthur, 2010).

Ghana's Central has announced its framework for Risk-Based Regulation to meet the new challenges in the financial industry with respect to new technologies, branch expansion, product innovation, size and speed of financial transactions, and as a precursor to the full application of the Basel II accord. This framework includes the critical identification of risks related with the operations of financial institutions, and the measurement of management oversight functions of risks, in order to determine the effectiveness of these oversight functions to mitigate the effect of risks. In the process, financial institutions would be required to focus more on their risk assessment systems to further their improvement and thereby improve the overall risk assessment functions within their organisations (Amissah-Arthur, 2010).

## **1.2 Problem Statement**

The growing complexity of the financial intermediation environment has placed more responsibilities on leaders of financial institutions to be more prudent and cautious in their management of risk issues that confront the financial institutions. It is essential to understand that monetary risk is inherent to business of offering transactions and financial institution's roles as offering financial services (Thirlwell, 2002). Authority's inability to pay proper attention to risk matters could either bring about a direct loss of incomes / capital or might end in imposition of controls on a financial institution's capability to meet its corporate objects. Such restraints pose a risk as these could hamper

a financial institution's capacity to conduct its core business activity to take advantage of prospects to improve their activities. Apart from the external risk issues such as changes in the market and consumer dynamics that affect financial institutions, there are a myriad of internal risk challenges that do have great impact on financial institution's success as well. These challenges have become enormous because of the prevalence of economic, technological, social and legal interdependence. Every organisation need to put in place credit risk management and internal control systems in order to achieve the ultimate objectives of the organisation even though these (credit risk management and internal control) would vary for different organisations. Risk management and internal control systems are critical and fundamental to the successful operation and day-to-day running of a business.

Risk impacts numerous areas of finance operations, such as strategy, operation, finance, technology and environment. Precisely, internal risks may comprise the death of an important staff, significant declines in monetary and added resources, severe interruption to the flow of information and communication, fires or other human calamities, leading to disruptions of commerce and/or loss of data, Sani and Chaharmahalie (2010). More generally, risk also encompasses matters like fraud, waste, misuse and mishandling which have probable implications on corporate performance. Amissah-Arthur (2010) believes that the culture of risk management is not well rooted in Ghanaian banking system. This can be attributed to the fact that Ghanaian financial industry has not seen much financial turbulence that will cause them to put their house in order. Until the industry experiences dangers, an assessment of the credit risk management systems put in place by the various financial institutions can be done through researches like this to expose threats and possible threats and zoom in on the need to establish credit risk

management functions to serve their rightful purposes. Furthermore, financial institutions in their bid to go international because of adequate capital injections, they might probably take on numerous risks that they have hitherto been unaware with. Financial institution's capacity to do well in relation to regulatory risks, currency risks, and other market risks will become critical going forward. The foregoing emphasizes the need for risk management. However in the literature various studies tend to specifically examine the implications of credit risk management, particularly the effectiveness of internal controls as a risk management tool in improving bank performance. In light of the research problem identified in the above section, the following objectives are the focus of this study.

### **1.3 Research Objectives**

This study aims to achieve the following objective:

1. To identify the risk associated with providing financial services
2. To explore the soundness of financial institution's credit risk control mechanism
3. To assess if financial institution's credit risk control mechanisms conforms to 1999 Basel II accord.

### **1.4 Research Questions**

1. What particular risk do you organisation face in providing financial services?
2. What risk management regime does your organisation subscribe to?
3. Does your risk control regime conform to the 1999 Basel II accord?

### **1.5 Justification of the Study**

The findings of the study will provide insight for the credit risk management professionals in the financial institutions and the regulatory body of the industry. The findings would also provide a snapshot of the needs of the student body as a source of reference. Again, it will also serve as a guide in fostering a closer collaboration between all stakeholders and also elicit further research in the areas of private risk management.

### **1.6 Research Scope**

The scope of a research refers to the parameters under which the project will be operating. It reveals the period within which the study seeks to assess. Again it also reveals the materials that the project finds relevant to its course and the population size. The study would seek to explore data relating to three indigenous financial institutions on their credit risk management practices.

### **1.7 Research Methodology**

The section provides a snapshot of various procedures, processes and tools use to data acquisition and analysis through the administration of questionnaire and interviews. It is instructive to note that, the study accessed both primary and secondary data to enhance the credibility and the reliability of the study.

### **1.8 Organization of the Study**

The study consist five chapters. Chapter one introduces the reader to the overview and the background of the research work, and further important data such as research questions, the scope, the methodology, objectives and the justification of the study. Chapter two of the study in turn concentrate on the literature review to review the work

of other authors who have conducted studies in this area of interest to identify their conclusions and also identified gap in literatures of private equity financing mode. The third chapter also outlines the design of the study, the strategy, research purpose, data collection and analysis and the tools, sampling population, size and method.

The fourth chapter would provide the outcome of the data obtained and its relationship to chapter one. The outcome would be presented in graphs, tables and charts. The fifth chapter presents a snapshot of discussion on the records and findings. And it is also providing recommendations and perceived solutions to the problems identified in the course of the research.

### **1.9 Limitations**

Certain limitations are expected to be encountered in the course of this research. Key among the expected challenges is data collection from the respondents. In Ghana in particular, most people are troubled when you are trying to stimulate a relationship that binds them to release corporate information for research purposes.

Another limitation that the researcher is expecting to encounter is that, some respondents sometimes fail to fill their questionnaire giving out to them within the mutually agreed time frame despite the extensive prior discussions held with the respondents before the questions were giving. Nonetheless, the researcher would be able to make adjustment and readjustment that, he is able to limit any negative impact for project integrity and reliability.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This section analyses research works on credit risk assessment framework in the financial sector. It argues on matters of credit risk assessment background in the financial sector from diverse viewpoints in addition to providing a theoretic underpinning to the research work. It starts with an explanation on credit risk assessment, it further looks at the appraisals of research works on the grounds and types of credit risk appraisal procedures and the types of credit risk confronted by financial institutions, VaR as a credit risk appraisal tool, Integrated Risk Assessment as the ultimate aim for credit risk assessment framework, Enterprise Risk Management and the place of Corporate Governance in a financial institution's credit risk assessment are also reflected in this section.

#### **2.1.0 What is Credit Risk Control Mechanisms?**

For the purposes of this thesis, credit risk control is the total process of systems and policies that a financial institution needs to manage cautiously all the risks resultant from its financial intermediation, and to safeguard that they are within the institution's risk appetite, (Risk mitigation 2000). It also incorporates risk management, internal audit, internal control, corporate governance and information communication among other areas. This thesis discussion will concentrate on Credit Risk Management systems in some financial institutions in Ghana.

#### **2.1.1 What are the Key Finance Risks?**

The foremost finance risks as identified by Pyle (1997) are as follows:

- Market risk is the possibility of change in the net asset value due to the changes in the underlying economic factors such as interest rate, exchange rate, commodity prices etc.
- Credit risk is the possibility of change in the net asset value due to change in the perceived ability of the clients to meet their contractual obligations.
- Operational risk results from the costs incurred through errors made in carrying out transactions such as settlement failures, untimely collections and statutory requirements.
- Performance risk involves losses resulting from our inability to properly monitor personnel to use suitable methods.

### **2.1.3 Theoretical Background**

Several reports have been published in the last four years with endorsements on finest practices in credit risk control systems. Two stand head and shoulders above the others. They include the G-30 report published in 1993, titled "Derivatives: Practices and Principles" (a private sector initiative) and "Risk Management Guidelines for Derivatives", written together by the Basel Committee on Banking Supervision and the International Organisation of Securities Commissions (IOSCO) which was published a year later. These two journals have shaped today's finest practices in risk control (Risk mitigation 20000).

These reports underscore the significance of shaping at the top level the policy and scope of an organisation's association in and the use of financial instruments; oversight by senior managers and board of directors; credit risk assessment practise that comprises continuous assessing, observing and controlling of all risks (especially market and credit) correct and consistent management information with widespread limits; regular management reportage; comprehensive control and operational systems; and detailed

appraisal and control measures. They also emphasize the significance of the human factor in credit management practice - specialists involved must have the essential skills and knowledge, and the institution should not deal in any instrument until senior managers are fully pleased that all employees that matter understand and can accomplish the risks involved.

Furthermore, the G-20 emphasized on stronger procedures and oversight of systematically important financial institutions. These financial intermediaries must develop contingency plans that will make it easier to dismantle them at the time of crisis. Major global firms will have to establish crisis-management groups to strengthen International Corporation.

## **2.1 Credit Risk Assessment**

Credit Risk management is defined as the management of events intended to reduce the adverse effect of unlikelihood (risk) about probable losses (Schmidt and Roth, 1990). Redja (1998) also describes credit risk assessment as an efficient process aimed at classifying as well as appraising total loss susceptibility confronted by an establishment as well as for the collection in addition carrying out of the best appropriate methods meant for handling such disclosure. The practice comprises categorising, assessing, and handling of credit threat. Bessis (2010) too supports that in furtherance to this one being a method, credit risk assessment furthermore includes a set of tools and models for assessing and monitoring credit risk. The objects of credit risk appraisal comprise reduce foreign exchange losses, ease the unpredictability of cash flows, safeguard profits variations, growth in earnings, and safeguard existence of the organisation (Fatemi and Glaum, 2000). To safeguard that financial institutions work in a rigorous credit risk assessment situation, anywhere present is reduced effect on unlikelihood as well as

possible deficiencies, superiors want consistent credit risk procedures toward through capital to events by way of the ideal risk or reward ratios. They want estimations of the size of probable deficits to stay inside borders fixed through cautious internal considerations by supervisors. They further require tools to track state of affairs as well as give incentives for judicious risk taking by sections as well as persons.

Pyle (1997) suggests that credit risk assessment is the practise whereby leaders fulfil these requirements by finding important risks, getting reliable, reasonable, functioning risk procedures, selecting which risks to lessen, which to rise as well as through what procedures, and instituting processes to observe resultant risk situations. Bessis (2010) states that the objective of credit risk assessment is to review risks so as to track as well as regulate them, as well as aid further essential roles in a financial institution and also toward its frank monetary responsibility. They comprise supporting in carrying out the financial institution's eventual plan by means of supporting this one with a superior opinion the in the near future and consequently outlining suitable corporate procedure as well as supporting in the development of competitive advantages through the estimation of suitable assessment and the devising of added differentiation tactics founded on clientele's credit history.

Santomero (1995) suggests that the administration of the financial institutions depends on a series of stages to execute a credit risk appraisal scheme. They usually comprise four portions which are principles and reporting, locus restrictions or instructions, capital outlay procedures or tactics, inducement agreements and compensation. The techniques are typically built to review exposure, describe processes to bring about these exposures, Restrict distinct situations to reasonable level and boost managers to handle threat in a way that is stable by way of an institution's aims and objects.

## **2.2 The Purpose of Credit Risk Appraisal in the Financial Sector**

The central aim of running a financial institution is to get the most out of anticipated earnings taking cognisance of its unpredictability (risk). This demands for a dynamic administration of the unpredictability (risk) so as to get the expected outcomes. Credit Risk appraisal is thus an effort to lessen the unpredictability of earnings which takes the probable effect of reducing the price of stockholders' wealth. Many writers including Stulz (1984), Smith et al (1990) and Froot et al (1993) have given explanations why leaders ought to be so much concerned by way of the dynamic administration of default threat in their businesses. According to Oldfield and Santomero (1995), current analysis of the research works offers four main bases for credit risk assessment. These comprise manager's selfishness of guarding their position and wealth in the organisation. It is disputed that due to their restricted capacity to spread their funds in their own organisation, they are risk opposed as well as have a preference steadiness of the organisation's incomes to unpredictability for the reason that, all things being equal, such firmness expands their personal usefulness. Outside management reasons, the need to safeguard the bearing of lesser tax liability is one more basis for directors to pursue declined volatility of profits by means of credit risk appraisal.

Through liberal tax programmes, the projected tax liability are declined once earnings improves thus actions which lessen the unpredictability of stated assessable earnings remain followed by way augmenting investors' wealth. The utmost persuasive basis for leaders to get involved credit risk administration with the purpose of decreasing the volatility of earnings is the cause of probable monetary challenges. Substantial loss of profits could result in investors not having self-assurance in the institution's activities, loss of tactical position in the sector, removal of certificate or license as well as insolvency. The expenditures related with these will move leaders to circumvent them by

disembarking on issues that will help prevent slight realisations. Lastly, Credit risk assessment is followed for the reason that organizations want to prevent little earnings which compel them to pursue visible wealth prospects. When this occurs, it ends up in suboptimal treasuries as well as lesser projected investors' price as the interest cost of such external investment is greater than the resources sought within the firm due to long term market inadequacies. This unwanted result inspires leaders to vigorously undertake unpredictability lessening line of attack, which have the result of lessening the volatility of profits. It is hoped that any of the above stated grounds is adequate to inspire leadership to focus on credit risk as well as take a cautious review of risk at both level in respect of the level of risk related to financial service and possible risk alleviation procedures.

### **2.3 Types of Credit Risk Assessment**

Merton (1989) observed, a major characteristic of the license of financial institution is the propelling as well as not aggressive on risks. Though, not every risks in-built in their trade must be accepted openly by them; quite a few can be bought and sold or shifted whereas others can be eliminated completely. It is thus suitable not to divide risks in-built in their operations as well as resources into three different sections in relation to their nature so that the right techniques can remain adjusted to reduce them. Oldfield and Santomero (1995) contend that risk confronting financial institutions can be divided into three divisible groups from organisation's outlook.

There are risks that can be prevented through normal corporate checks and balances, risks that can be reassigned to other contributors as well as threats that should be handled vigorously at the organisation level. Preventing risk in total by corporate checks and balances has the objective of freeing the financial institution of risks that are not relevant

to the services offered on the best measure of a precise type of risk. This is completed by involving in activities such hedging, underwriting standards, diversification, reinsurance, and due diligence scrutiny to lessen the likelihoods of distinctive deficits by way of removing risks that are redundant to the financial institution's corporate objects. Afterwards, what will be left is some share of operational and systematic risk which must be reduced to the utmost extent possible and their level and costs reported to shareholders. It is for this reason that an effort toward violently avoiding these risks will limit risks, nevertheless will further lessen the earnings of the corporate operations.

Certain risks can also be reassigned by the financial institution, once there is no value-added or competitive advantage related with handling them, to other different persons who are in a superior situations to handle and benefit from them as well. Another category of risks which must be adsorbed and rigorously handled at the beginning of the financial institution level for the reason that good explanations exist for using additional resources to deal with them. Certain events whose in-built risks have to be handled by the financial institution comprise persons whose kind of the entrenched risk might be difficult and challenging to disclose to non-firm interests. For example, financial institutions having multifaceted illiquid as well as registered resources might find interactive the nature of such resources more challenging than hedging the causal risks. Furthermore, disclosing data about clients could provide rivals an unnecessary benefit. Dealing with such risk internally may also be essential for the reason that it is crucial to the financial institution's corporate object .This comprises propriety positions that are taken because of their risks and anticipated return. In summary, once risk is engrossed, credit risk appraisal activity entails the observing of corporate operations returns and risk and it is noted as part of undertaking a commercial activity. In conclusion, financial institution must take only those risks that are exclusively a part of the financial

institution's array of distinctive value-added services (Allen & Santomero, 1996, Oldfield & Santomero, 1995).

## **2.4 Important Finance Risks**

Various writers have classified these risks in a number of ways to build the structures for their scrutiny, nevertheless the identified ones which are noted in this research work are market risk, credit risk (which include foreign exchange risk, liquidity risk, interest rate risk) operational risks which sometimes include strategic risk and legal risk.

### **2.4.1 Credit Risk**

Greuning and Bratanovic (2009) describe credit risk as the likelihood that that a defaulter or borrower of a commercial security fails to repay the initial amount and other investment-associated cash flows in relation to the positions specified in a funding procedure. Typical of investment, credit risk implies disbursements may be deferred or not be paid at all, which can affect the liquidity position of a financial institution. The goal of credit risk assessment is to take advantage of a financial institution's risk-adjusted rate of yield by keeping credit risk vulnerability within tolerable limit. About 70 out of a hundred or more of a financial institution's statement of financial position is largely linked to credit risk and therefore well-thought-out as the major source of probable debts as well as financial failures. Absence of diversification of credit risk has led to the collapse of many financial institution. The challenge is that financial institutions have a comparative advantage in advancing loans to persons with whom they have related with, thus making too much focuses in geographical and industrialised areas. Credit risk comprises both the risk that a recipient of a loan amount fails to conform to the commitment to pay the liability and the risk of a decline in the credit

worth of a debtor. While non-payment generates a complete or incomplete loss of any sum borrowed to the debtor, a decline of the credit worthiness results in the upsurge of the likelihood of default. Usually, a decline in the credit worth of a debtor turn up into a loss for the reason that it elicits an increasing transfer of the expected market yield to recompense the sophisticated risk also activates a price deterioration (Bessis, 2010). Generally the monetary situation of the debtor as well as the present value of any basic security are of significant concern to financial institutions when assessing the credit risks of debtors (Santomero, 1997).

Greuning and Bratanovic (2009), prescribed guidelines lay down by the board of a financial institution and executed by managers play an important role in credit risk assessment. In reality, a financial institution uses a credit procedure to shape the range as well as distribution of an institution's credit facilities and the way in which a credit portfolio is managed. There are also minimum principles set by authorities for handling credit risk. These entails the uniqueness of current and possible risks, the clarification of processes that indicate the firm's risk evaluation principles, also the setting of limits within which credit risk will be measured. There are usually three types of procedures connected to credit risk assessment. The main set targets to reduce or limit credit risk, which include guidelines on concentration and large exposures, diversification, loaning to related persons, as well as overexposure. The next set targets at categorising assets by requiring periodic assessment of the recovery of the portfolio of credit instruments. The last set of procedures targets to make allowances at a level sufficient to absorb expected loss.

#### **2.4.2 Market Risk**

Market risk is usually reflected as the threat that the price of a portfolio, either security portfolio or an exchange portfolio, will decline due to the variation in price of the market

risk dynamics. Pyle (1997) expresses market risk as the in net asset value due to variations in fundamental economic factors such as equity, exchange rate, interest rates, and commodity prices. There are three common market risk dynamics to financial institutions and these are foreign exchange rates, liquidity, and interest rates.

#### **2.4.2.1 Liquidity Risk**

Greuning and Bratanovic (2009), show that a financial institution is confronted with liquidity risk when it does not have the capacity to competently meet the withdrawal of funds and other deposits as well as meet finance surges risky assets as well as other risk free security portfolio. These authors go extra to suggest that a financial institution has sufficient liquidity capability when it can acquire required moneys (by cumulative deposits, advancing assets or securitising) quickly and at a realistic cost. The Basel Group on Bank Regulation, in its June 2008 review paper, explained liquidity as the capability of a financial institution to support growths in assets as well as pay commitments as their maturity fall due, devoid of expending improper deficits. Bessis (2010) nevertheless contemplates liquidity risk from three different positions. The notable perspective is where the financial institution has challenges in providing resources at a realistic charge due to circumstances connecting to operation volumes, level of interest rates and their variations and the complications in getting a counter party.

The next position looks at liquidity as a security support which helps to increase time under challenging circumstances. Liquidity risk is defined as a condition where immediate asset amounts are not adequate to meet short term obligations or unanticipated payments. The last position from where liquidity risk is measured as the risky condition. Those situations can originate from occurrences of huge losses which

generates liquidity concerns as well as uncertainties on the future of the financial institution. Such uncertainties can end in huge drawing of cash.

Liquidity is essential for financial institution to reimburse for anticipated and unanticipated fluctuations in the statement of financial position as well as to offer financial resources for expansion (Greuning and Bratanovic, 2009). Santomero (1995) nevertheless, suggests that whereas some would comprise the essence to strategize for expansion as well as unanticipated increase in advance, the risk now must be understood further acceptably as the possible for financial crisis. Such a condition would unavoidably be connected with an unforeseen event, such as a huge write offs, loss of assurance, or a ruin of nationwide division such as exchange emergency. In effect, liquidity risk assessment thus helps safeguard a financial institution's capacity to address cash payment commitments, which are unclear as they are affected by outside happenings as well as further agents' conduct.

The Basel Group on Bank Regulation review article (June 2008) stresses that the essential duty of financial institution in the maturity transformation of volatile funds into long-term advances makes financial institution fundamentally susceptible to liquidity risk, both of an institution-specific nature as well as that which distresses markets as a whole. A liquidity deficit at a single financial institution can have system-wide effects as well as liquidity risk assessment is of supreme prominence to both the supervisory body as well as the financial institutions. The value of liquidity is nevertheless a job of market circumstances as well as the market's insight of the in-built riskiness of the advancing institution (greuning and bratanovic, 2009) so if there is a nationwide disaster such as severe scarcity or insight of the financial institution's credit positions worsens, or raising funds using the institution becomes unexpectedly essential as well as persistent or else

has unanticipated variation, finance turn out to be more expensive. Financial market growths in the preceding years have augmented the complication of liquidity risk and its appraisal.

#### **2.4.2.2 Interest Rate Risk**

Interest rate risk is the probability that instabilities in interest rates to decline a financial institution's earnings. Greater chunk of the advances and loan assets of the statement of financial position as well as period or funds deposits, profit incomes as well as expenses that are stimulated by means of interest rates and as interest rates remain not stable, so remain such earnings. However, interest rate risk remains comprehensible for mortgagors and financiers by way of changeable rates, persons involved in fixed rate transactions are not discharged from interest rate risks since the opportunity cost that increases from market place (Bessis, 2010) Greuning and Bratanovic (2009), postulates that the mixture of an unstable interest rate environs, deregulation, in addition to an increasing selection of on and off-statement of financial position products have made the management of interest rate risk a mounting task. In the meantime, knowledgeable usage of interest rate derivatives— like financial futures and interest rate swaps— might assist financial institutions assess as well as lessen the interest rate exposure that is in-built in their entity. Finance supervisory body as well as overseers therefore put more prominence on the assessment of interest rate risk evaluation, for the most part since the Basel Committee endorses the enactment of market risk– built wealth charges. Greuning and Bratanovic (2009) suggests that financial institution encounter interest rate risk starting from four key sources namely re-pricing risk, yield curve risk, basis risk, and optionality. The primary and most often deliberated source of interest rate risk stems from timing differences in the maturity of fixed rates and the re-pricing of the floating rates of financial institution's assets, liabilities, and off-statement of financial positions.

The simple technique used for calculating re-pricing risk is duration, which undertakes a comparable move in the yield curve. Furthermore, re-pricing mismatches reveals a financial institution to risk stemming from fluctuations in the slope and shape of the yield curve (nonparallel shifts). Yield curve risk occurs once yield curve moves unfavourably distress a financial institution's earnings. One more significant effect of interest rate risk is basis risk, which originates from flawed connection in the modification of the rates received as well as funded on diverse tools with otherwise comparable re-pricing features. Once interest rates vary, these differences can cause unexpected modifications in the cash movements as well as earnings spread amongst obligations and resources, and off-balance-sheet tools of associated maturity or re-pricing occurrences (Wright and Houpt, 1996). An increasingly vital basis of interest rate risk stems from the selections imbedded in several financial asset, obligation, and off-statement of financial position portfolios. If not efficiently handled, selections can present key risk to a financial institution for the reason that the choices held by clients, mutually obvious as well as entrenched, remain generally employed by the benefit of the holder as well as to the disadvantage of the financial institution. Also, an aggregate series of selections can consist of essential clout, which can increase the effects (both negative and positive) of superior conditions on the financial institution. In general, interest rate risk appraisal comprises numerous procedures, schedules as well as repetitions that a financial institution uses to decline the risk of deteriorating of its equity for the reason that of contrary variations in interest rates from some of the reasons cited earlier. Risk factors linked to interest rate risk are measured in every single exchange in which a financial institution has interest-rate-sensitive on and off-statement of financial positions. As interest rate risk can have negative effects on both a financial institution's profits as well as its economic value, technique which focusses on the effect of interest rate

instabilities on a financial institution's net interest income is merged with a new one which takes a further whole opinion of the possible long-standing impact of such interest rates variations on its economic worth is used to assess the interest risk exposure.

### **2.4.2.3 Foreign Exchange Risk**

Bessis (2010) describes foreign exchange risk by way of spending as a result of fluctuations in exchange rates. Such cost against profits might happen owing to a disparity concerning the price of resources as well as that of investment and obligations denominated in foreign exchanges or a misalliance concerning remote defaulters as well as foreign short term liabilities that are stated in home money. Greuning and Bratanovic (2009), explains foreign exchange risk is anticipated and can thus end in a loss or a profit, reliant on the path of exchange rate moves as well as whether a financial institution is reporting surplus or deficits in the foreign currency.

By and large, the variations in the price of home currency that generate currency risk end from longstanding macroeconomic issues like fluctuations in distant as well as home interest rates as well as the capacity and course of a nation's skill and investment movements. Temporary issues, such as anticipated or unanticipated partisan procedures, altered prospects on the part of marketplace players, or conjecture grounded money exchange might as well account for foreign exchange fluctuations. Completely, these issues can disturb the demand as well as supply meant for an exchange and thus the daily engagements of the exchange rate in exchange marketplaces.

Foreign exchange risk is usually measured to include operation risk, financial risk and reassessment risk. Operation risk is the price-based effect of exchange rate fluctuations on foreign defaulters and foreign short term liabilities, which is, the variance in value at which they are funded as well as the value at which they are accepted in indigenous currency in the financial reports of a financial institution or business organisation. Also

known as corporate risk, financial risk recounts to the effect of exchange rate fluctuations on a nation's longstanding or a corporation's modest situation. With upsurge in internationalisation, wealth transfers speedily to benefit from the fluctuations in exchange rates and consequently depreciations of foreign currencies can result in bigger rivalry in both abroad and home marketplaces. This occurrence makes this constituent of foreign exchange risk very serious for its organisation. The third factor, revaluation risk occurs once a financial institution's foreign currency situations are enhanced in domestic denominations, as well as when a majority shareholder reviews annual amalgamation of financial reports. Financial institution involved in foreign exchange activities are similarly vulnerable to foreign exchange risk in kinds of default risks such as the credit of the secured person to a foreign exchange agreement as well as time-zone-related payment risk.

### **2.4.3 Operational Risk**

The Basel Accord (2007) explains operational risk as the risk of intended or unintended loss resulting from insufficient or unsuccessful processes within, persons as well as structures or from outward events. Collapses of the information systems, reportage structures, internal checks and balance as well as regulations intended to take well-timed remedial measures, or in agreement with the in-house risk procedures end in operational risks (Bessis, 2010). Operational risks, thus, perform at various stages, such as man-made mistakes, procedures, as well as technical as well as information technology. As operational risk is an "event risk" in the non-appearance of an effective tracing as well as risk reportage, certain essential risks will be overlooked, there will be no cause for remedial measures as well as this can result in overwhelming results. Improvements in latest finance environs, for example superior reliance on high-class know-how, rising marketing techniques, swelling electronic commerce, subcontracting of tasks as well as

happenings, as well as healthier usage of structured finance undertakings that claims to ease market and credit risk have led to larger stages of operational risk in financial institution (Greuning and Bratanovic, 2009).

The acceptance of the aforementioned influential motive in functioning risk has contributed to a bigger attention on the growth of reliable operational risk appraisal techniques by financial institution with the ingenuity being engaged by the Basel Team on Finance Regulation. The Group dealt with operational risk in its Essential Ethics for Effective Finance Regulation (1997) by anxious overseers to ensure that financial institutions have risk assessment processes as well as measures to recognise, measure, realise, and normalise operational risk. The Comprehensive Practices for the Administration of Operational Risk in its 2003 research work, the Working Group also made available the policy guide to financial institution meant to guiding operational risk, in expectation of the executing the Basel II Accord, which stresses investment allocation dedicated to operational risks. However, all these struggles using the supervisory group at tackling operational risk, actual difficulties happen when it comes to its controlling. It is thought-provoking to bring together generally appropriate explanations. Also, the degree of probable losses arising from particular risk roots remains typically not easy to plan. Lastly, it is interesting planning an operative technique intended for systematic reporting of trends in a financial institution's operational risks as very massive operational losses are rare. Because of the truths and bureaucratic bottlenecks caused by operational risk, the major section of mounting an operational framework is to create a corporate grouping of loss procedures that must assist as a vessel meant for information collection procedure on event occurrence as well as expenditures. The facts collected is at that moment examined with numerous arithmetic techniques such as graphical demonstration of the likelihood as well as severity of risks. This supports to find the

relations between a number of operational risks. The procedure then finishes with some estimations of worst-case losses owing to procedures risks. Demonstrating of loss provisions owing to operational risks will permit the exact cash allocation to be made for operational risk as vital by current guidelines (Bessis, 2010). For purposes of achieving objectives of setting up an operational risk appraisal arrangement to be fulfilled, it might require or need a change in the manner and beliefs of the organisation. Leadership should also not only safeguard compliance with the operational risk procedures recognised by the board, but also report regularly to senior executives. A definite level of self-appraisal of the checks and balances in place to control and ease operational risk will be supportive.

#### **2.4.4 Strategic Risk**

Though Credit risk and financial risk in finance have been thoroughly explored, the risk assessments effects of several company tactics and the outward market and industry doubts have received practically minute consideration (Miller, 1992). Slywotzky and Drzik (2005), define strategic risk as the collection of outward proceedings and preferences that can distress a firm's growing course as well as investor price. Whereas these two writers reflect strategic risk as only concern of external events, some writers see strategic risk as the contemporary and possible effect on profits or wealth arising from inner corporate undertakings such as opposing corporate selections, inappropriate execution of results, or absence of sensitivity toward industry fluctuations. They thus examine strategic risk as a task of the compatibility of an organisation's strategic objects, the corporate tactics crafted to realise those objectives, the funds deployed toward these objectives, and the superiority of execution, Emblemson and Kjolstad (2002), similarly describe strategic risk as risk which arises as an institution follows its

corporate objects either by taking advantage of prospects and or minimising threats, either way this is reflected, strategic risk covers a diversity of doubts which are not in monetary terms, but somewhat operational or credit related triggered by macro-economic dynamics, industry gaps or trends in organisation's strategic choices which distresses the organisation's profits and stockholders' value unfavourably, strategic risks often constitute some of a firm's largest vulnerabilities and thus can be a further serious cause of price deterioration. Regrettably, as strategic risks are generally very volatile and of diverse kinds, leaders have also not yet been able to thoroughly advance techniques and tools to deal with them (Slywotzky and Drzik, 2005). This is because the more prescribed risk appraisal methods frequently remain focused on recognizable exposures and therefore less appropriate to deal with several of the unanticipated economic and strategic issues` that describe present business situation in which strategic risks are entrenched. Slywotzky and Drzik (2005) tried to ascertain important events which add to strategic risk and classified them into seven main types. These comprise sector margin squeeze, risk of know-how shift which has the possibility of moving some goods and services out of the marketplace, brand erosion, incidence of one-of-a-kind player to grab the highest part of the price in the marketplace, client precedence move, original assignment disappointment as well as marketplace inactivity. The recommendation was to make accessible the basis for assessing an entity strategic risks and advance counter activities to address them. The writers observe that the key to sustaining strategic risks is trying to identify how to measure as well as react to them. They equally support services to authorities to amend their funds provision allocation by linking to a greater borrowing cost to risky investments in addition to build improved elasticity into their investment set up once confronted with risk economic situations. The way and manner these risk are dealt with can be determined by the features in the organisation – the swot analyses.

They comprise capabilities, managerial capacities, delivery networks, communication channels, operating systems. The corporate's inner features should be measured together with the outcome of supervisory, competitive, technological, environmental changes, and economy. An efficient strategic risk appraisal structure should hold both the downside risk and upside risk. It ought to track to counteract all obligations, together from hard luck and from devastating business decisions, also snatch opportunities for gains through managerial growth and innovation. Taking hold of upside risk comprises looking for prospects and crafting ideas to act on these opportunities when the future presents them. Offsetting downside risk on the other hand is established by reducing the possibility of occurring; and supporting retrieval after these losses (Herman and Head, 2002). Beasley and Frigo (2007) recommend that the foremost stage in strategic risk organisation is finding a system to meticulously measure a corporate's strategic corporate risk. Therefore, strategic risk organization starts by way of recognizing in addition to measuring exactly how a comprehensive series of probable proceedings and conditions will influence a company's strategy execution, including the ultimate impression on the assessment of the establishment.

Before organisation can positively control risks that may be recognised by numerous situation scrutinises, they must describe superseding risk assessment objective. Gates (2006) contends that because of the struggle of the philosophy of tactical risk, no specific arithmetic amount will prove acceptable in all premeditated situations. Due to of the uniqueness of the set of tactical risk opposed by every financial institution, regulatory institutions have not developed common techniques for all the groups for dealing with strategic risk. Certain authorities as well as academics have developed various commendations and measures for dealing with strategic risk. One such guide is by Slywotzky and Drzik (2005). Developing a strong strategic risk appraisal structure

comprises an organisation to reassess both its practices within as well as its outside environs, and to realise how judiciously the twofold remain associated. In other words, outward issues have impact on practices within, but those inner practices, because of interconnectivity of monetary markets can also have an effect on how the organisation is watched externally--and even have an impact on the marketplace generally (Kroszner, 2008).

## **2.5 Assessing Market Risk through Var Technique**

Jorion (2007) describes VaR intrinsically as a brief of the most awful loss over an objective prospect that would be exceeded by way of a certain level of assurance. It estimates the limited possible loss that may be expended on a location at a given limit and level of assurance. Greuning and Bratanovic (2009) discuss to it as a demonstrating technique that characteristically reviews a commercial organization's collective market risk exposure as well as, assumed a likelihood level, evaluates the total amount a commercial organization would miss if it were to hold certain assets for a certain time period. It is a progressive method that articulates commercial market risk in a practice that anybody can understand, precisely money. It considers the anticipated worst miss, over a goal limit, within a specified assurance level (99 percentage is the level nominated by the Basel Committee). VaR-based simulations comprise a number of market risks, the commercial organization is skilled to adjust its portfolio set up, drawing on a variety of choice for diversification to reduce the threat to which it is exposed and the connected investment requisite.

The standard exclusive representations that practice VaR methods are Banker's trust Risk Adjusted Return on Capital, JP Morgan's Risk metrics and Chase's Value at risk. Inputs to a VaR-based standards involve information on the financial institution's stance

as well as scheduled values, unpredictability, and risk elements. VaR-based simulations pool the probable variance in the price of every point that would result from exact activities in fundamental risk dynamics through the likelihood of such activities happening. The variations in price remain totaled at the level of trading book subdivisions as well as through entirely exchange procedures as well as marketplaces. The VaR aggregate might be totaled through any of a several of processes which are the historical simulation approach, the Monte Carlo Simulation method as well as the delta-normal or variance/covariance technique. In relation to the Basel Group on Banking Regulation, the regulatory requirement for every portfolio must comprise VaR amounts, reduced to the kind of risk or asset class in addition to the total, estimated for between a day as well as a two-week holding periods, in addition to recounted in relation to high, moderate, and low prices over the reporting time frame as well as at the end of the period. Additionally, there must be data in respect of return and risk total, including a relation concerning risk estimations compared with real results. Also, there must be qualitative interactions with assessment of the income statement to VaR, including a narrative of variances concerning the center of the income statement and the basis of the VaR estimations, as well as numerical assessment of company-wide exposure to marketplace risk, reduced to this kind of risk, that in the financial institution's decision best articulates vulnerability to risk, narrated in terms of high, average, and low prices over the period end.

VaR amounts must be totaled on a simple-addition base through risk issue types, taking cognizance of relationships in every type. The Basel Group market risk capital average furthermore necessitates that the VaR be calculated everyday as well as the market risk-associated investment needs encountered on a day-to-day basis. The investment

prerequisite is articulated by way of the advanced of the preceding day's VaR as well as the average of the everyday VaR assessments for each one of the past sixty commercial days. This is then multiplied by an additional cause nominated by nationwide regulatory experts as well as associated to the superiority of a financial institution's credit risk management system. VaR faces some limitations grounded on the reason that it accepts that past familiarities might be continual in future. It must thus be used as one device in a joint set of tools— as well as not as the only review of a portfolio's exposure.

## **2.6 Integrated Risk Assessment: An important Objective of a Forward -Looking Risk Assessment Plan**

DeLoach (2000) discusses that risk assessment must be combined with corporate forecasting and strategic management. In 2003, the Joint Forum's Working Group of the Basel Team on Finance Regulation's report, discloses that there is more stress on the assessment of risk in a coordinated manner as well as associated effort to shared risks confronted by organisations in the monetary industry.

The Working Group trusts that these developments emanate from the curiosity of businesses in comprehending well the diversity of risks that confronts them; therefore letting them to conclude further exactly the total investment required to run their companies. It is as well believed that the promulgation of Sarbanes-Oxley in 2002 as well as the surge of humiliations that encouraged it, have intensified the necessity for a shared technique to assessing risk in establishments to live in the present-day unpredictable corporate environment fast changing. Andersen (2009) furthermore maintains that present corporate finance appraisal techniques, where total market exposures of diverse physically isolated resources are normally articulated in a particular value-at-risk metric derived after evaluation of co-variation in asset returns, influences

for a supplementary shared opinion to risk appraisal. It is also well-known that environmental risks, market-related exposure as well as operational disturbances can cooperate although these risks are managed through devoted efficient sections (Andersen and Terp, 2006). Research demonstrates that closely eighty percent of the companies with huge deficits in present periods had been hit by diverse risk were linked, thus revealing the necessity for a credit risk appraisal task that exceeds business storage tower as well as the ensuing compartmentalization of risks (Funston, 2004).

Meulbroek (2002) contends that integrated risk appraisal has in present days has rotated out to be a hands-on likelihood, because of the enormous developments in information technology, as well as sophisticated globally-tested legal and accounting setup to backing the use of contractual agreements on big scale and at little charge. Meulbroek (2002) summaries integrated risk management as the documentation as well as evaluation of the total risks that disturbs an organization's value, as well as the crafting a plan to managing the risks. The Joint Forum's Working Group<sup>11</sup> continues that an integrated risk appraisal arrangement monitors to have in place organization guiding principle and processes that are anticipated to support consciousness of, also accountability for the risks in place over the commercial organization, also improve upon the techniques needed to manage those risks. A major aim is to ensure that an organization does not neglect every significant cause of risk. It is considered strategic instead of calculated by noting at how risks affects the worth of the firm. What integrated risk management brings is a systematic method of assessing risk as well as identifying its diverse impact on the business. It helps leaders with the probability of profiting from renewed perceptions into the interaction amongst different categories of risk and archaic business choice zones, dealings simply lost bereft of a comprehensive structure (Meulbroek, 2002). From management viewpoint, integrated risk appraisal typically

involves the establishment of categorized limited arrangements as well as risk management working group to help outline by what method to fix and assign such limitations.

According to Rosenberg and Schuermann (2005), the motive of integrated risk management in a bank is to evaluate and manage risk and capital through a diverse range of events in the bank which comprises methods for classifying different risk forms in the bank. To help support this, numerous banks have increased the share of their investments committed to risk appraisal activities to back its dedicated risk appraisal task. Many banks have invested significantly in central communication and information structures to track risks within the bank.

It is significant stating that an integrated risk appraisal practise does not definitely show a central risk assessment arrangement. Reasonably, a significant characteristics of integrated risk assessment process is simply that it accounts for and pursues an institution's material risk. It assesses the organisation's entire risk exposure, as opposed to partial appraisal of each risk in exclusion, as it is the whole risk of the business which certainly matters to the appraisal of the organisation's price as well as its ability to achieve its contractual obligations in the future. Additionally, by grouping risks, certain different risks within the organisation will partially or entirely compensate every one therefore reducing the overall expenditure of dealing with those risks. The Joint Forum's Working Group of the Basel Committee on Banking Supervision largely describes risk in its totality as determinations by businesses to develop numerical risk procedures that incorporate various kinds of risk. The greatest known technique is to evaluate the extent of financial resources that an organisation believes is vital to engross probable deficits linked through each of the stated risks. This is normally achieved through statistical or

mathematical techniques intended to measure the probability of likely adversarial conclusions, however the use of certain strain circumstances is as well reasonably common. Combination of risks end up in diversification returns to the organisation for the reason that deficient relationships in the risks confronted by the organisation. Aggregate risk turn into minor and the investment required to carefully function is furthermore less significant than would then be the situation if risks were not grouped. The advancement in procedures to risk amalgamation and risk grouping by organisations discloses regulatory and supervisory innovations as well as additional proposals an incentive to sustained improvements in regulatory and supervisory procedures.

### **2.6.1 Enterprise Risk Appraisal: A suitable technique for incorporating risks**

At the moment, there has been greater consideration to risk assessment at the corporate level, this can be connected to several strategic choices (Beasley et al, 2005). As stated previously, supervisors, shareholders, rating agencies, audit committees, and boards are all concerned in taking a collective commercial risk assessment scheme to dealing with risk so as to take account of every risk in the firm, their interconnection with each other as well as their collective impact on organizations.

ERM uses the company's risk enthusiasm to decide which risks must be recognised as well as which ought to be moderated. DeLoach (2000) defines Enterprise Risk Management as an intended and well-organized method: it supports people, strategy, process, knowledge and technology with the aim of evaluating as well as dealing with the difficulties the business go through as it generates worth. It simply means that: elimination of departmental, functional, or traditional obstacles. It is actually all-inclusive, integrated, forward-thinking as well as procedure oriented technique to dealing with all types of business opportunities and risk – with the objective of getting the most out of stockholder worth for the business.

The Group of Funding Institutes of the Tread way Commission (COSO) information on business risk assessment (ERM) in 2004 defines it as a procedure, caused by a corporate's management, board of directors, administration as well as other employees, applied in policy targeting through the business, planned to be acquainted with likely measures that might disturb the institution, as well as dealing with risk within its risk desire, to deliver realistic assertion concerning the achievement of the business goals. The report suggests that the fundamental principle of Enterprise Risk Management is that each institution endures to deliver returns for its investors.

Enterprise Risk Management allows organisation to efficiently manage doubt as well as related opportunity and risk, improving the capability to increasing its price. Enterprise Risk Appraisal is capable to undertake this since it supports bringing together strategy and risk appetite, enhancing risk response choices, lessening operative astonishments as well as deficits, recognising and dealing with several and across business risks, grabbing opportunities as well as enhancing deployment of resources. These expertise in-built in Enterprise Risk Management aid top executives accomplish the organisation's profitability and performance set goals and avoid loss of funds. Enterprise risk assessment aids efficient reportage and agreement with regulations and laws helps prevent disgrace to the institution's standing as well as related concerns. In total, enterprise risk assessment aids an institution realise its aims as well as evade drawbacks and shocks along the route.

## **2.7 The Position of Corporate Governance in the Assessment of Financial Risks**

The significance of corporate governance has caught the responsiveness of local experts and organizations involved in global trade, as well as financial flows. Corporate governance is as well vital to shielding the determination of global marketplaces such as

the International Monetary (IMF), the World Bank, the Bank for International Settlement (BIS), Organization for Economic Co-operation and Development (OECD). Numerous issues can be credited to this greater consideration. These comprise the evolution of established financiers for example mutual funds, insurance companies, pension funds, as well as very leveraged organizations and their function in the monetary industry. Also, the extensively expressed distresses and attack that the modern checking and assessment of publicly traded companies are extremely flawed, leading to suboptimal monetary and societal progress, is as well a factor to take note of. Furthermore, the move from an outdated opinion of corporate governance as positioned on stockholder price in support of a corporate governance structure prolonged to an extensive round of shareholders as well as the effect of augmented internationalization of commercial marketplaces, an international drift toward deregulation of commercial segments, as well as liberalization of established stakeholders' operations, all explain the rising prominence of corporate governance (Greuning and Bratanovic, 2009). Greuning and Bratanovic (2009), advances that corporate governance is concerned with the way in which the occupation of the financial institution is controlled. It is explained as established relations among the financial institution's board, management, investors, as well as other interested parties. This involves developing company objectives as well as a financial institution's risk history, bring into line business activities as well as conducts with the enthusiasm that authorities will manage the financial institution in a secured as well as controlled way, managing every day's activities within a standard risk background as well as in agreement with suitable regulations and laws, while protecting the wellbeing of accountholders as well as other investors.

An efficient control measure in the financial organisation helps retain trust from general public and self-assurance in the financial transactions system. Moreover, it is believed to

create a conducive atmosphere that favours financial effectiveness, reduces monetary risks, as well as improvements in systemic stability. Borrowing cost inclines to be less significant when corporate governance is observed to be acceptable as it expresses an indication of reduced risk that transforms into investors eagerness to receive insignificant earnings. Respectable corporate governance has been established to upturn working activity and lessening the risks of contamination from monetary challenges. Apart from, lessening the in-house risk of challenge by confidently impacting stakeholders' understanding of risk and their preparedness to provide finance, better governance enhances the organisations' toughness as well as rigidity to outside vulnerability. Greuning and Bratanovic (2009) further suggest that the key fundamentals of a rigorous corporate governance structure in a financial institution include a well-articulated business plan based on which the entire achievement as well as the involvement of personalities could be assessed. It further comprises enforcing and setting, decision making authority, and responsibilities fit for the financial institution's carefully chosen risk history as well as a robust financial risk assessment function, adequate checks and balances, and purposeful procedure plan with the requisite control mechanism. It further involves adequate business ethics, standards of appropriate behavior and efficient structures used to guarantee compliance.

This comprises particular tracking of the financial institution's risk disclosures where related parties are expected to show up. Monetary and executive inducements to behave in an appropriate way presented to the management, employees and board with benefit, elevation, and punishments are as well critical essentials to a good corporate governance as well as accountability and suitable flow of information within and outside. Due to the significance of corporate governance in the financial sector, the Basel Group on Finance Regulation has instituted a set of control ethics for financial establishments. These

procedures cover four essential measures of control that would be integrated in the organizational hierarchy of any financial institution to safeguard suitable control mechanism. These are oversight by the supervisory directors, board of directors or checks by persons not involved in the daily appraisal of the several corporate sections, horizontal administration of diverse corporate parts and autonomous risk appraisal, audit compliance roles. It is also significant that vital employees are appropriate and suitable for their careers.

In the research work by Greuning and Bratanovic (2009), the key stakeholders connected in financial institution's corporate governance and risk appraisal are the supervisory and regulatory specialists who make legal and regulatory environment in which the value as well as usefulness of financial institution's risk assessment can be enhanced and further support to a reliable and sound financial sector. The rest are the investors who define the course of a financial institution by selecting the regulatory board as well as approval of the audit committees, board of directors, and independent advisors.

The board assigns management, sets tactical course, establishes functioning procedures, and more significantly, takes control of confirming the dependability of a financial institution. Furthermore, significant stakeholder in the corporate governance arrangement of a financial institution is assessment of those accountable for the financial institution's activities as well as for executing risk appraisal procedures. An audit committee which can be noted as an addition of the board's risk assessment task supports managers with the management and identification of risk. A significant outside stakeholder in the institution's control is the independent examiners. They offer the market, stakeholders, shareholders with facts and capability to hold management and directors answerable for the complete set-up of a financial institution.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

This section examines the approach for the study. It offers a comprehensive and methodical procedure of how the important risks managed by Utrack Savings and Loans, IGS Financial Services and Mcotley Capital are recognized, assessed and managed. The key considerations of this section comprises industry standards, logical techniques to be used, critical tools used for deducing the facts as well as the framework of the critical constituents of the risks the financial institution is exposed to.

#### **3.1 Source of Data**

The research work depended mostly on both secondary and primary data. This will be gathered from the responses after the survey administered and the periodic publications and other information issued by these commercial organizations as well as other establishments. A number of these noticeable secondary facts originates from financial analyst, industry watchers and regulators. These organization's plan papers as well as procedures about the assessment of the different risks are as well a key reference of data for defining whether the organization's control procedures as well as finance risk assessment techniques are sufficient in managing intrinsic risk in their corporate operations.

The key standards for this appraisals will be the numerous papers issued by the Finance Risk Assessment Group of the Basel Committee on Finance Regulation about values which safeguard complete assessment of risks in commercial organisation. This will support in assessing the capability of Utrack Savings and Loans, IGS Financial Services and Mcotley Capital finance risk assessment structure as the vital constituents of the

suggested procedures will be reflected to those in the organisations procedures in respect of its structures, procedures, processes as well as measures instituted in place to assess risks. According to the key supervisory body of Ghana's the financial institutions (Bank of Ghana), the Basel beliefs for safeguarding complete assessment of risks have been integrated in the nation's Banking Act, Act 673 and must thus be followed to by the country's financial institutions operating. To support in appraising the performance of Utrack Savings and Loans, IGS Financial Services and Mcotley Capital with reference to that of the Ghanaian financial industry, the financial stability reports issued by the Bank of Ghana on periodic bases were relied upon for industry data.

### **3.2 Primary Data**

Primary data are freshly collected data otherwise known as raw data that are either used to test the working hypothesis or as evidence to support your claim or for both. In the collection of primary data, a structured questionnaire was used to collect information from the respondents. The questionnaires will be administered to elicit relevant information from the management and other employees.

Interviews comprise the most important research input, for two reasons. First, because there is a little existing literature on credit risk management framework in the Ghanaian financial industry, it is significant that interviews are the most viable method to capture the historical evolution of the credit risk management practices in the Ghanaian financial Industry. Moreover, interviews ensure that the study reflects an assessment of what changes appeared most important to the administration of the concept.

### **3.3 Secondary Information**

These are information which have already been collected by some other individual, organization or agency and which have already been processed and used to satisfy its own need but it is being used by another under reference for an entirely different reason.

Brochures, business magazine, journals, internet, newspapers, relevant articles and other long essays, which cover the area of study, will be used. This can also be said to be information gathered for the purposes other than the completion of a research project and also used to gain mutual insight into the research problem.

Secondary data source is a term used in a number of disciplines to describe sources of materials that is close to the person, information, period or idea being studied. These will also give specific responses to the research questions through interview schedules with selected respondents well learned and at least familiar to the practical aspects of credit risk appraisal in the financial industry.

### **3.4 Sample Size and Sampling Techniques**

Since it is impossible for the researchers to study the hundreds of employees and clients of the institutions, a sample of 40 people will be chosen from whom information will be elicited on the variables been studied. The sample will have the following allocation; 10 management officials, 20 operational officers and 10 clients. In order to examine the contribution of the people involve, questionnaire will be submitted to a convenient sample of people, and will be interviewed by researcher.

The data will be collected in three weeks during the working hours of each day. The choice of Utrack Savings and Loan, IGS Financial Services and Mcotley Capital was based on convenience. In terms of proximity and resources, it was deemed appropriate and convenient to study these companies. These institutions are among those that Bank

of Ghana has given license to operate. In view of the specialized nature of the study, purposive sampling and convenient sampling were employed in the selection of individual respondents for the study.

Purposive sampling type has a reasonable cost and reasonable control over sample content. It works with small sample size and representation is by choice. The researcher considered giving equal right to select males and females in the strata. Thus the employee accounts officers, cashiers, and loans officers of these institutions. The respondents could be divided into three categories.

### **3.5 Research Design**

Research design is the framework or blueprint for conducting a meaningful research. It sets the framework for collection, measurement and analysis of data. Research design provides the adhesive that holds the research mission together. A design is used to structure the research, to show how all of the major parts of the research project - the samples or groups, measures, treatments or programs, and methods of assignment work together to try to address the central research questions.

The research is intended to successfully elicit facts on how effectively the Utrack Savings and Loans, IGS Financial Services and Mcotley Capital management have conducted their operations relative to the Bank of Ghana and Basel II requirement and how it has contributed for the smooth operations and the sustainability of the institution. A case study will be used and as such the survey method of data collection would be employed to collect data of qualitative nature. A structured questionnaire would be prepared for respondents to give appropriate answers. The researcher in this study adopts causal/exploratory research design since the study is a case study.

### 3.6 Analytical Tools

The analysis in this report relies heavily on excel models. These consisted of a series of spreadsheet-based data input tables that allow data to be collected and manipulated in a systematic manner. The spreadsheet allows for the generation of relevant tables, ratios and graphs which will assist in the interpretation and analysis of the data to be collected to help measure these institution's performances as well as judge the effectiveness of its credit risk management process.

### 3.7 Analytical Components

The analysis of the Utrack Savings and Loans, IGS Financial Services and Mcotley's risk profile would be based on the six main types of financial risks it is exposed to, which are: Operational risk, Credit, Liquidity, Interest rate and Currency risks. These risks are inter related as one can give rise to another or a transaction aimed at reducing one of the risks can end up shifting the risk to another area. In this regard, the analysis take cognizance of this interrelationship and adopt a holistic approach.

#### Risk Categories

Risk	Mode of Assessment
<b>Operational Risk</b>	How reliable is the information systems, how employees conform to the operational rules and regulation, monitoring the internal control systems
<b>Credit Risk</b>	Customer Loans / Gross Loans and Advances Total Loans / Gross Loans and Advances
<b>Liquidity Risk</b>	Customer Loans / Customer Deposits Readily Marketable Assets / Total Assets Liquid Assets / Volatile Liabilities (Volatility Coverage) Volatile Liabilities / Total liabilities Liquid Assets / Total deposits (Bank Run)
<b>Interest rate Risk</b>	Interest Rate Sensitive Assets / Interest Rate Sensitive Liabilities Interest Rate Sensitive Assets / Total Assets Interest Rate Sensitive Liabilities / Total Liabilities
<b>Currency Risk</b>	Net Open Currency Position / Qualifying Capital

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Source: Own construction

### **3.8 Profile of the study area**

The research would be conducted in the Obuasi Municipality. Incidentally, Utrack and Savings Loans, IGS Financial Services and Mcotley Capital have their branches in Obuasi with their head offices in Tema, Kumasi and Accra respectfully. The Obuasi Municipality covers area of about 254 square kilometres and has businesses scattered all over the municipality. These institutions are incorporated under the Companies Codes 1963 (Act179) and issued with certificates to commence business by their regulatory bodies. Through good customer relations and the provision of quality product and service, Utrack Savings and Loans has and a number of branches scattered across the country, IGS Financial Services has four branches across the country and MCotley Capital currently can boast of 4 active branches, these institutions with the initial focus on the formal and the informal sector, over the past years have extended their operations to cover the formal and the informal sector providing credit support and also financing SMES. The customers who are under consideration for these credit support mostly lack the required security to back the loans they contract.

These financial institution's objective is to engage in the ordinary business of offering financial service through effective and efficient mobilization of savings and deposits. This is to make funds available to support viable economic ventures as a way of promoting economic growth and improving the living standard of its clients. The services of these institution include business loans, current account with very low charges for all businesses, high interest earning financial product. Utrack Savings and loans offer savings and loans product with 3% Interest, the monthly interest on principal can be withdrawn by the client. There is also the private wealth investment product by IGS Financial Service by which customers can deposit any amount for an attractive

return, MCotley also operate Income Investment Portfolio products, which is a medium to long term instruments with an attractive 15% compound rate of return for 365 days.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

#### 4.1 Introduction

This section includes the demonstration, examination and the discussion of results of the research work. They are presented based on the research questions forwarded to lead the research work.

#### 4.2 Particulars of Respondents

The background information of the certain financial institutions in Ghana focuses on their age group, respondents' wealth of experience as well as their grades of the. Comprehending the behavioral attitudes of the respondents is essential when assessing credit risk control systems in commercial institutions in the country.

**Table 4.1: Age category of Respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
20-30years	8	20.0	20.0	20.0
31-40years	27	67.5	67.5	87.5
Valid 41-50years	3	7.5	7.5	95.0
51-60years	2	5.0	5.0	100.0
Total	40	100.0	100.0	

*Source: Field data.*

In this study, the survey was conducted from a population of sixty (60) workers in the selected financial institutions in Ghana. There were forty (40) usable responses to the survey. Among the respondents, the highest proportion (67.5%) came from the '31–40 years' age group; 7.5% and 5.0% responded '41-50years' and '51–60 years' age group respectively and one-quarter (20.0%) of the respondents were within the age group of 20-30years (Table 4.1). Age category of the respondents was captured in the study to help the researcher assess the different age categories that are seriously in the financial

institutions in Ghana. The results also suggests that majority of the respondents were matured and therefore could be captured in an academic study such as this.

**Table 4.2: Working experience of Respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
1-5years	11	27.5	27.5	27.5
6-10years	23	57.5	57.5	85.0
Valid 11-15years	4	10.0	10.0	95.0
16-20years	2	5.0	5.0	100.0
Total	40	100.0	100.0	

*Source: Field data.*

The study also investigates the respondents' work experience specifically in the financial institutions. Over half (57.5%) of the survey respondents have worked in the financial institutions for 6-10years (Table 4.2); the second largest proportion (27.5%) of respondents have worked in financial institutions for 1 – 5 years; some section (10.0%) of the respondents have worked in financial institutions for 11-15years and 5.0% of the respondents have worked for financial institutions for 16-20years. This implies that most of the workers in the selected financial institutions are experienced, proficient and capable of exercising good judgment and as such the responses provided by them could be relied upon.

**Table 4.3: Staff grade of the Respondents**

	Frequency	Percent	Valid Percent	Cumulative Percent
General manager	3	7.5	7.5	7.5
Manager	3	7.5	7.5	15.0
Senior Credit officer	9	22.5	22.5	37.5
Valid Credit officer	13	32.5	32.5	70.0
Junior officer	6	15.0	15.0	85.0
Other (Specify)	6	15.0	15.0	100.0
Total	40	100.0	100.0	

*Source: Field data.*

The findings on the grades of the respondents are in Table 4.3. The statistics indicate that the staff captured as respondents were in different grades such as General Manager, Managers, Senior Credit Officers, Credit Officers, Junior Officers and Credit Office. The highest grade was credit officer. This recorded 32.5% of those surveyed in the study. The Senior Credit Officers were next and theirs recorded 22.5%. Moreover, 7.5% of each respondent were General Managers and Managers of institutions selected. Again, 15.0% of the respondents responded each to Credit officer and others (specify). All the grades were captured in the survey in order to obtain their views, contributions and dedications with regards to having quality in every aspect of their operations.

### 4.3 Research Question 1

What particular risk does your organisation face in providing financial services?

**Table 4.4: The relevance of the types of risks to the Financial Institutions**

Types	N	Low importance		Moderate importance	High importance		Mean	Std. Deviation
		1	2	3	4	5		
Environmental Risk	40	----	7(17.5%)	8(20.0%)	18(45.0%)	7(17.5%)	3.63	.979
Operational risk	40	----	----	6(15.0%)	13(32.5%)	21(52.5%)	4.37	.740
Market risk	40	----	3(7.5%)	7(17.5%)	20(50.0%)	10(25.0%)	3.92	.859
Liquidity risk	40	----	3(7.5%)	10(25.0%)	20(50.0%)	7(17.5%)	3.78	.832
Reputational risk	40	----	----	6(15.0%)	13(32.5%)	21(52.5%)	4.37	.740
Legal risk	40	----	4(10.0%)	3(7.5%)	28(70.0%)	5(12.5%)	3.87	.723
Credit risk	40	----	1(2.5%)	2(5.0%)	12(30.0%)	25(62.5%)	4.50	.816
Valid N (listwise)								

Source: Field data.  $X \geq 3.50$  High importance

In Table 4.4, the respondents' decisions show the relevance of the types of risks to the financial institutions. Table 4.4 indicated that the mean rating of the respondents on the relevance of the types of risks to the Financial Institutions are higher than the cut-off point of 3.5 in all the types of risk listed. This implies that environmental risk,

operational risk, market risk, liquidity risk, reputational risk, legal risk and credit risk are of importance to their operations. The results confirm with Catherine (2009) that all financial systems in the world operate in a changing environment. These changes present threats or opportunities thus exposing financial sector to a high risk which needs to be managed efficiently and effectively.

A number of financial institutions in the world has collapsed or experienced financial problems due to inefficient of taking into consideration the importance of credit risk management systems, financial institutions are involved in the risky venture. In the process of providing financial services, they assume various kinds of risks such as operational Risk, counterparty Risk, liquidity Risk, legal Risk, and Credit Risk. This indicates that financial institutions in Ghana should identify and manage risk inherent in all products and activities and ensure that the risks of products and activities new to them are subject to adequate risk management procedures and controls before being introduced or undertaken, and approved in advance by the board of directors or its appropriate committee as all the type of risk depicted in Table 4.4 exceeds the cut-off point of 3.5 ( $x \geq 3.5$ ).

#### 4.4 Research Question 2

What risk management regime does your organisation subscribe to?

**Table 4.5: How customers are visited after loan advancement \* Staff grade of the Respondents Cross tabulation**

		Staff grade of the Respondents						Percent	Total
		Gm	M	Sco	O	Jo	Os		
How are customers visited after loan advancement	Weekly	0(0.0%)	0(0.0%)	3(7.5%)	5(12.5%)	0(0.0%)	2(5.0%)	25.0	10
	Monthly	3(7.5%)	3(7.5%)	6(15.0%)	8(20.0%)	6(15.0%)	4(10.0%)	75.0	30
Total		3(7.5%)	3(7.5%)	9(22.5%)	13(32.5%)	6(15.0%)	6(15.0%)	100.0	40

*Gm= General manager; M= manager, Sco= Senior Credit Officer, O=Officer, Jo=Junior Officer*

*Os=others*

*Source: Field data.*

Table 4.5 shows responses to the questionnaire instrument on how the customers are visited after loan advancement. From this study, responses from general manager, manager, Senior Credit Officer, Officer, junior officers and others were used. Table 4.5 shows responses to the questionnaire instrument presented in relation to the respondent's staff grades. As indicated in Table 4.5, the 25.0% ( $Sco=7.5\%$ ,  $O=12.5\%$ ,  $Os=5.0\%$ )\* of respondents opined that they weekly visits customers after loan advancement. Moreover, 75.0% ( $Gm=7.5\%$ ,  $M=7.5\%$ ,  $Sco=15.0\%$ ,  $O=20.0\%$   $Jo=15.0\%$ ,  $Os=10.0\%$ )\* of the respondents mentioned that they monthly visits customers after loan advancement. Judging from the percentage, the selected financial institutions in Ghana visits customers monthly after loan advancement. As confirmed by respondents of selected financial institutions (Utrack Savings and Loans, IGS Financial Services and Mcotley Capital) in Ghana that customers are visited monthly after loan advancement as a way of managing credit risks. A good example will be that of a study conducted by Felix, Jaya & Gaurav (2013) that the policy define the process of loan granting from loan application to its approval but it ignores the after the loan is disbursed client need a close supervision.

**Table 4.6: Exposure Concentration limit on the individual or industry \* Staff grade of the Respondents Cross tabulation**

		Staff grade of the Respondents						Percent	Total
		Gm	M	Sco	Co	O	Os		
Exposure Concentration limit on the individual or industry	Yes	1(2.4%)	3(9.7%)	8(20.0%)	12(30.0%)	5(12.4%)	6(15.0%)	87.5	35
	No	0(0.0%)	0(0.0%)	1(2.5%)	1(2.5%)	1(2.5%)	2(5.0%)	12.5	5
Total		3(7.5%)	3(7.5%)	9(22.5%)	13(32.5%)	6(15.0%)	6(15.0%)	100.0	40

*Gm= General manager; M= manager, Sco= Senior Credit officer, Credit Officer, O = Officer, Os=others*  
*Source: Field data.*

The responses on whether the financial institutions have exposure concentration limit on the individual or industry is depicted in Table 4.6. Inferring from the Table, 87.5% ( $Gm=2.5\%$ ,  $m=9.7\%$ ,  $Sco=20.0\%$ ,  $Co=30.0\%$ ,  $O=12.4\%$ ,  $Os=15.0\%$ )\* of the respondents gave a response of “Yes” thus; they have exposure concentration limit on

the individual or industry. Moreover, 12.5% ( $Sco=2.5\%$ ,  $O=2.5\%$ ,  $Co=2.5\%$ ,  $Os=5.0\%$ )\* of the respondents cited “No” thus they agreed otherwise. The responses have been presented in relation to the respondent’s staff grade in the financial institution. Analyses of the responses show that there were statistically significant associations between the variables. This is evident that most of the financial institutions have exposure concentration on the individual or industry. According the final version of the report by Basel Committee on Banking Supervision (2014), throughout history there have been instances of financial institutions failing due to concentrated exposures to individual counterparties (eg Johnson Matthey Bankers in the UK in 1984, the Korean banking crisis in the late 1990s). Large exposures regulation has arisen as a tool for containing the maximum loss a financial institution could face in the event of a sudden counterparty failure to a level that does not endanger the institution’s solvency. Therefore there is the need for financial institutions to measure and limit the size of large exposures in relation to their capital has long been recognized by the Basel Committee on Banking Supervision.

**Table 4.7: How often portfolio status assessment is conducted**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Monthly	33	82.5	82.5
	Semi annually	7	17.5	100.0
	Annually	0	0.0	0.0
	Total	40	100.0	100.0

*Source: Field data.*

Appropriate monitoring must be undertaken to ensure the financial institution is protected at all times and that portfolio status are identified and acted upon at the earliest opportunity. There should be clearly defined procedures to ensure that monitoring, reporting and controls are applied in line with the institutions’ policies, procedures and

terms of sanction. As evident in Table 4.7 of the responses obtained, more than half (82.5%) of the respondents agreed that portfolio status assessment is conducted monthly. The smaller section (17.5%) of the respondents opined that portfolio status assessment is conducted semi-annually. The views of the respondents aligns with Markowitz (1952) that monthly assessment of a portfolio should be enough. Markowitz (1952) emphasized that it is better to gaze at where the organisation presently is with resources and the total financial standing, and should do so each month. This does not mean that the institution should do a deep dive analysis on the performance of everything they are involved in. Rather, just look to see how the portfolio is doing, and if any changes or rebalancing need to happen. This is separate from budgeting-related exercises.

The results indicate that the selected financial institutions in Ghana conduct assessment on their portfolio status every month which aims at maximizing the expected return and minimizing the risk.

**Table 4.8: How often Are Analysis are performed**

Portfolios	N	Responses			Mean	Std. Deviation
		Daily	Weekly	Monthly		
At risk	40	---	23(57.6%)	17(42.5%)	2.43	.501
In arrears	40	10(25.0%)	27(67.5%)	3(7.5%)	1.82	.549
<b>Valid N (listwise)</b>	<b>40</b>					

*Source: Field data.*

From Table 4.8, participants' views were solicited on how often they perform portfolio at risk and portfolio in arrears analysis. Inferring from the Table, majority (57.6%) of the respondents mentioned that portfolio at risk is analysed weekly. Little below half (42.5%) of the respondents indicated that portfolio at risk is analysed monthly. Portfolio is the largest and most important asset of financial institutions, but it is held outside the institution, in the borrowers' hands. There is a certain level of risk inherent in any portfolio because repayment, which happens in the future, is uncertain. The level of risk

in the portfolio requires regular monitoring and analysis. Meaningful monitoring of risk requires producing and using a portfolio report that provides detailed information on the portfolio size, disbursements, repayments, arrears, aging, principal write-offs and other elements necessary to ascertain the level of risk and track portfolio quality. The view of the respondents aligns with McPherson (1991) that portfolio risk analyses gives proper relative weight to small and large loans, short-and long-term loans. Managers who receive a daily or weekly aged Portfolio at Risk (PAR) report can quickly pick out loans that need to be pursued aggressively, while keeping a finger on the pulse of overall portfolio quality.

Moreover, concerning how portfolio in arrears is analysed, more than half (67.5%) of the respondents indicated that portfolio in arrears is analysed weekly, while 25.0% and 7.5% of the total respondents revealed that portfolio analysis in arrears is analyse weekly and monthly respectively. MEDA (1997) mentioned that key to achieving scale and operational and financial self-sufficiency is to reduce the percentage of loans in arrears. To maintain good portfolio quality financial professionals must regularly monitor and understand (1) what causes of arrears and (2) how arrears can be reduced. MEDA (1997) further emphasized that to reduce arrears, an aging analysis should be done weekly/monthly, because it is the only way for management and the board of directors to know the portfolio's health. If done regularly, a problem's seriousness can be reinforced with each report and discussed by management and the board.

**Table 4.9: Considering periodic information back-up relevant to risk management \*****Working experience of Respondents Cross tabulation**

		Working experience of Respondents				Total
		1-5years	6-10years	11-15years	16-20years	
Considering periodic information back-up relevant to risk management	Yes	10(25.0%)	20(50.0%)	4(10.0%)	2(5.0%)	36(90.0%)
	No	1(2.5%)	3(7.5%)	0(0.0%)	0(0.0%)	4(10.0%)
Total		11(27.5%)	23(57.5%)	4(10.0%)	2(5.0%)	40(100.0%)

Source: Field data.

From Table 4.9, participants' views were solicited on whether they consider periodic information back-up relevant to risk management. The responses were presented in relation to the working experience of the respondents. An overwhelming percentage (90.0%) of the respondents gave a response to "Yes", meaning; the financial institutions consider periodic information back-up relevant to credit risk management. Smaller section (10.0%) of the respondents cited "No" to the statement of considering periodic information back-up relevant to risk management. Clearly, by ensuring reliable, accurate and timely data, relevant details for level of use, timely dissemination for corrective action, financial institutions can prevent delinquency rather than attempt to control it after it has occurred. The results indicate that there was a statistically significant association between the four variables (thus; working experience of the respondents).

**Table 4.10: Credit Methodology used by the Financial Institution**

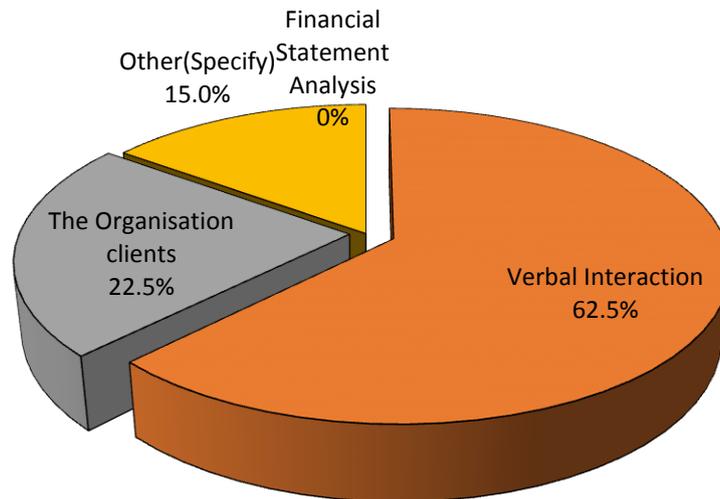
Methods	N	Low relevance		Moderate relevance	High relevance		Mean	Std. Deviation
		1	2	3	4	5		
Borrower selection	40	----	----	6(15.0%)	21(52.5%)	13(32.5%)	4.18	.675
Size and terms	40	----	4(10.0%)	4(10.0%)	26(65.0%)	6(15.0%)	3.85	.802
Incentives to pay	40	----	9(22.5%)	21(52.5%)	9(22.5%)	1(2.5%)	3.05	.749
<b>Valid N (listwise)</b>	<b>40</b>							

Source: Field data.

$X \geq 3.50$  high relevance

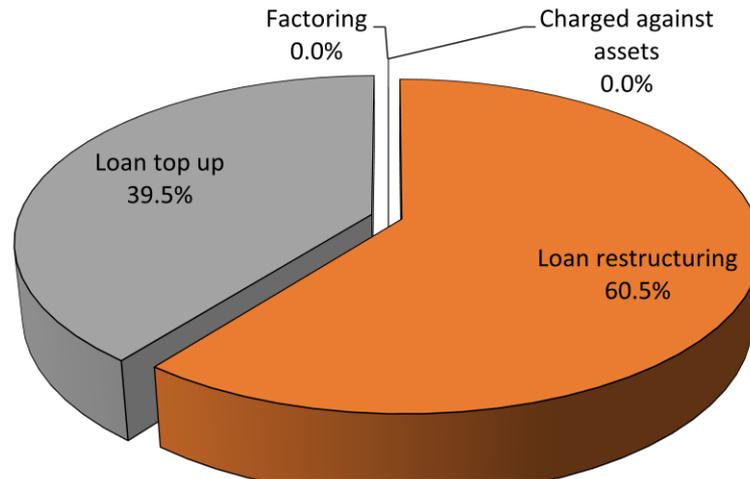
In Table 4.10, the respondents' decisions show the relevance of the credit methodology to the organisation. Table 4.10 indicated that the mean rating of the respondents on borrower selection, size and terms are higher than the cut-off point of 3.50 ( $X \geq 3.50$ ). This implies that borrower selection, size and terms are relevant to the financial institution. It must be noted that in most cases, delinquency is caused not by bad defaulters but by credit institutions that have not implemented an effective methodology.

It must further be noted that financial institution should create an image and philosophy that does not consider late payments acceptable. The benefit of creating discipline in borrowers is critical to the success of financial institution. The credit service must be valued by the clients. Loan products should suit clients' needs, the delivery process should be convenient, and clients should be made to feel that the organization respects and cares about them. Incentives won't work if the clients do not value the access to credit. Financial institution should make sure loan size and terms do not make repayment difficult and loans should not be based on projections, but rather base in on the capacity to repay. An institution should establish an incentive system that uses both financial and non-financial incentives to encourage on time repayments. For the borrower these can include larger loans, follow up loans, interest rebates, and access to training or disincentives such as penalty/fees on further access to loans, collection of collateral, legal action).



**Figure 4.1: Verifying the credibility of information provided by clients**  
*Source: Field data.*

Figure 4.1 displays responses on how the selected financial institutions in Obuasi municipality verify the credibility of information provided by clients. Majority (62.5%) of the respondents opined that the credibility of information provided by clients is verified by verbal interaction of the respondents. This means that financial institutions complete a credit application that includes basic information like address, contact information and tax ID number, as well as references from other businesses that have extended credit to the client in question. One – fourth (22.5%) of the respondents revealed that the organisation clients is used to verify the credibility of information provided by the clients. The smaller section (15.0%) of the respondents specify(others) as a way of verifying the credibility of information provided by the clients and none of them indicated that financial statement analysis is used to verify the credibility of information provided by the clients. The credibility of information provided by clients is necessary to ensure that loans are made on appropriate terms to clients who can and will pay them back. What analysis is needed and what is the most efficient approach to fulfill that need is primarily determined by the type and nature of the loan.



**Figure 4.2: How portfolio arrears is treated**

*Source: Field data.*

Figure 4.2 outlines how portfolio in arrears is treated by the financial institutions. A considerable proportion of the respondents indicated that loan restructuring is used to treat portfolio areas bringing the percentage to 60.5%. In addition, one-third (39.5%) of the respondents attested that loan top up is adopted when treating portfolio arrears. None of the respondents indicated that factoring and charged against assets is used by their institution when treating portfolio in arrears. The view of the respondents supports that loan restructuring is adopted when the client is willing but unable to repay. It must also be mentioned that loan restructuring should be considered for clients with a very good excuse. This means that the principal, interest due, and penalty due are added up as the starting balance on a new loan, for which the client signs a new loan contract. Rescheduling can, however, hide a problem that can resurface in a worse condition, even encouraging delinquency. The day of reckoning comes when repayments start again.

### **4.5 Research Question 3**

Does your risk control regime conform to the 1999 Basel II accord?

To assess if financial institution's credit risk control mechanisms conforms to 1999 Basel II. The Basel Core Principles for Effective Banking Supervision requires a financial

institution to have an effective systems in place to identify, measure, monitor and control credit risk as part of an overall approach to risk management. This includes best practice as dictated by international standards and the requirements of group regulators.

With regards to the 1999 Basel II principles, the selected financial institutions practices have credit risk management policies and procedure that outline the institutions willingness to grant credits based on the types of credits, economic sector, currency and maturity. The financial institutions manage credit concentrations and other portfolio issues. However, the institutions have policies and procedures, as well as adequate controls that deal with portfolio concentration issues.

The policies and procedure of the financial institutions also spell out guidelines for risk identification, reporting and risk control and mitigation techniques, documentation, legal issues and management of problem loans. The financial institutions, however, use more of subjective credit risk measurement techniques in the generation of their risk grading. Moreover, the financial institutions verify the credibility of information provided by clients in order to determine if the client will be able comply with the agreement. Senior management bear the ultimate responsibility for an effective system of credit risk management, supervisors is as part of their ongoing supervisory activities, assess the system in place at the institution, measure, monitor and control credit risk. In addition, the management monitors risk positions, and compliance with and appropriateness of policies.

The Financial Institutions also have credit risk measurement methodologies (thus; borrower selection, size and terms, and incentive to pay) that enable them to quantify the risks involved in exposures to individual borrowers or counterparties. The financial institutions understand to whom they are granting credit. Therefore, prior to entering into any new credit relationship, the institutions become familiar with the borrower or

counterparty and are confident that they are dealing with an individual or organization of sound repute and creditworthiness. Policies are put in place to avoid association with individuals involved in fraudulent activities and other crimes. This is done through a number of asking for references from known parties, accessing credit registries, and becoming familiar with individuals responsible for managing a company and checking their personal references and financial condition and also the organization clients.

The financial institutions have a comprehensive procedures and information systems that monitor the condition of individual credits and single obligors across the institutions various portfolios. These procedures defines criteria for identifying and reporting potential problem credits and other transactions to ensure that they are subject to more frequent monitoring as well as possible corrective action, classification and/or provision. In addition, the financial institutions have in place a system for monitoring the overall composition and quality of the various credit portfolios which is consistent with the nature, size and complexity of the various institutions portfolios.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents a summary of the study. It covers the major findings, conclusions arrived at and the recommendations made. The research was undertaken to assess credit risk control systems in financial institutions in Ghana.

#### **Summary of Findings**

As stated above, the study dealt with three specific objectives. The key findings of the study are:

The results of the study implies that environmental risk, operational risk, market risk, liquidity risk, reputational risk, legal risk and credit risk are of importance to the operations of the selected financial institutions in the Obuasi municipality.

It was observed that there were statistically significant associations between the variables. This is evident that most financial institutions have exposure concentration on the individual or industry.

The results indicated that the selected financial institutions in Ghana conduct assessment on their portfolio status every month which aims at maximizing the expected return and minimizing the risk.

It was noticed that the mean rating of the respondents on borrower selection, and size and terms are higher than the cut-off point of 3.50( $x \geq 3.50$ ) relevance to the financial institution.

The results revealed portfolio at risk and portfolio in arrears analysis are performed weekly as the level of risk in the portfolio requires regular monitoring and analysis. Meaningful monitoring of risk requires to producing and using a portfolio report that provides detailed information on the portfolio size, disbursements, repayments, arrears, aging, principal write-offs and other elements necessary to ascertain the level of risk and track portfolio quality.

Based on the research, the researcher noted that loan restructuring and loan top up are used to treat portfolio areas.

The results confirmed that financial institutions conforms to the 1999 Basel II accord as they have effective systems in place to identify, measure, monitor and control credit risk as part of an overall approach to credit risk management.

## **5.2 Conclusions**

Financial institutions have different types of risk exposures. Credit risk management plays a crucial role in the overall risk management activities carried out by firms in the financial services industry. It may also be concluded that financial institutions in Ghana identify and manage risk inherent in all products and activities and ensure that the risks of products and activities new to them are subject to adequate risk management procedures and controls before being introduced or undertaken.

It can be expediently concluded that by far, the level of risk in the portfolio requires regular monitoring and analysis. Meaningful monitoring of risk requires to producing and using a portfolio report that provides detailed information on the portfolio size,

disbursements, repayments, arrears, aging, principal write-offs and other elements necessary to ascertain the level of risk and track portfolio quality.

From all indications, the findings of the study show that financial institutions credit risk management practices are in line with sound practices. The financial institutions have a credit policy and procedure manual that guides their lending activities. They also have well-structured risk management departments with highly qualified personnel who develop and implement credit strategies and policies that have been approved and recommended by the boards of directors. They have systems in place to effectively monitor and maintain credit quality. The financial institutions also have loan recovery units responsible for managing problem loans and executing workout strategies to either ensure full loan recovery or minimize loan losses from problem loans. The credit risk management practices are in line with benchmarks such as Basel II.

### **5.3 Recommendations**

The findings of the study resulted in the following recommendations made by researcher: Risk management policies of the financial institutions must be updated regularly to avoid getting outdated and irrelevant with time.

The financial institutions must make the effort to resource all departments/units of the institution effectively for them to be able to carry out their task in a manner that avoids unnecessary risk

Financial institutions must come out with a clearly described code of conduct for employees and members of staff subject to regular review.

Financial institutions should have a clearly-established process in place for approving new credits as well as the amendment, renewal and re-financing of existing credits.

The performance of the accounting, information and communications systems must be evaluated.

Based on its performance, the institutions must ensure that it does its job of communicating information timely and promptly as required by all members of staff for any duty or task.

Also financial institutions should adapt the principles required by Basel II to suit the size, nature and complexity of their lending activities by operating within sound, well-defined credit-granting criteria.

Financial institutions should establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties that aggregate in a comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet.

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## APPENDIX

### KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

This is a research being conducted in partial fulfilment of the requirement for the award of Master of Business Administration (MBA) on “**Assessing Credit Risk Control Systems in Financial Institutions in Ghana- A Case Study of some Selected Financial Institutions in Ghana**” The purpose is to identify how relevant risk is to the financial service industry and whether their risk management framework conforms to the Basel II accord. The questionnaire is in 2 sections 1) Risk in financial service industry; and 2) The impact of credit risk on operational risk management in your bank. You are further assured that any information you provide is purely for academic purposes.

**Instruction:** Please tick where applicable and supply details where required.

**1.1** How relevant are the following types of risks to your operations? (Please tick only one option for each type). These risks are ranked from a lower importance 1 to a higher importance of 5.

Types of Risk	Low importance		Moderate importance	High importance	
	1	2	3	4	5
Environmental Risk	<input type="checkbox"/>				
Operational Risk	<input type="checkbox"/>				
Market Risk	<input type="checkbox"/>				
Liquidity Risk	<input type="checkbox"/>				
Reputational Risk	<input type="checkbox"/>				
Legal Risk	<input type="checkbox"/>				
Credit Risk	<input type="checkbox"/>				

**1.2** How regular do you assess these type of risk that are relevant to your operations? (Please tick only one option for each type)

Types of Risk	Annually	Semi-Annually	Quarterly	Monthly	Weekly
Environmental Risk	<input type="checkbox"/>				
Operational Risk	<input type="checkbox"/>				
Market Risk	<input type="checkbox"/>				
Liquidity Risk	<input type="checkbox"/>				
Reputational Risk	<input type="checkbox"/>				
Legal Risk	<input type="checkbox"/>				
Credit Risk	<input type="checkbox"/>				

**1.3** After loan advancement, how often do you visit a customer?

- (1) Weekly [ ] (2) Monthly [ ] (3) Semi-Annually [ ] (4) Annually [ ]  
 (5) Other (Specify).....

**1.4** Do you have an exposure concentration limit on individual or industry?

- (A) Yes [ ] (B) No [ ]

**1.5** Who does the final approval of a loan facility?

- (1) Credit Officer [ ] (2) Credit Committee [ ] (3) other (Specify)  
 .....

**1.6** How relevant is the contribution of the following groups in granting of loans? Tick appropriate box

<b>Groups</b>	<b>Not Relevant</b>	<b>Moderately Relevant</b>	<b>Highly Relevant</b>
Credit Officer	[ ]	[ ]	[ ]
Credit Committee	[ ]	[ ]	[ ]

**1.7** How often do you conduct portfolio status assessment? Tick the appropriate box

- Monthly [ ] Semi-Annually[ ] Annually[ ]

**1.8** How often do you perform the following analysis?

<b>Portfolios</b>	<b>Daily</b>	<b>Weekly</b>	<b>Monthly</b>	<b>Quarterly</b>
At Risk	[ ]	[ ]	[ ]	[ ]
In arrears	[ ]	[ ]	[ ]	[ ]

**1.9** How do you manage your Information Technology?

- Outsourced [ ] Internal Staff[ ] Other (Specify) [ ]

**2.0** Do you consider periodic information back-up relevant to risk management? Please tick appropriate box

- Yes [ ] No [ ]

**2.1** If you have answered yes to question 2.0, how often do you do a system back up?

- Daily [ ] Weekly [ ] Monthly[ ]

**2.2** These three credit methodology rate them according to their relevant to your organisation according to their relevance. From a lower relevance of **1** to a higher relevance of **5**

<b>Methods</b>	<b>Low relevance</b>	<b>Moderate</b>	<b>High relevance</b>
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	<b>relevance</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Borrower Selection	[ ]	[ ]	[ ]	[ ]	[ ]
Size and Terms	[ ]	[ ]	[ ]	[ ]	[ ]
Incentives to pay	[ ]	[ ]	[ ]	[ ]	[ ]

2.3 How do you verify the credibility of information provided by clients? You can choose as many as appropriate.

- (1) Financial Statement Analysis [ ]                      (2) Verbal Interaction [ ]  
 (3) The Organisation's clients [ ]                      (4) Others (Please specify).....

2.4 How do you treat portfolio in arrears?

- Charged against assets [ ]      Loan restructuring [ ]      Loan top up [ ]      Factoring [ ]

2.4 How often do you conduct training for credit officers?

- Weekly[ ]                      Monthly[ ]                      Quarterly[ ]                      Semi-Annually[ ]