

**THE RELATIONSHIP BETWEEN CREDIT RISK MANAGEMENT
PRACTICES AND FINANCIAL PERFORMANCE OF COMMERCIAL
BANKS IN LIBERIA**

BY

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**A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERSITY OF
NAIROBI**

NOVEMBER 2012

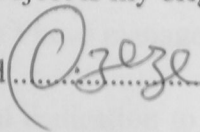
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DECLARATION

This project is my original work and has not been submitted for a degree in any other university.

Signed .....

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ACKNOWLEDGEMENTS

This project is dedicated firstly to the Almighty God for giving me good health without which I couldn't have managed to come this far in my academic life.

Special dedication to my dear parents specifically my lovely Grad Mother Mama Youngor, my mother, Weedor Gono Blama, and my father, Stephen Zeze.

Special acknowledgement goes to the Government of the Republic of Liberia through the Council of Higher Education of Liberia but most especially to Mr. John Seintz Moru, II, former Minister of Education of the Republic of Liberia whose tireless efforts made my scholarship program at the University of Nairobi, a resounding success.

There are several individuals who aided by study at the University of Nairobi including my colleagues Lamin K. Gould, Samwar S. Fallah, Jarwo W. Cooper, Albert B. Gibson and Emmanuel Harrison. I want to appreciate Dr. J. Fallah Moses who contributed immensely to my educational and other needs. I am also very grateful to my son, Thomas M. Sarko who also was deprived of many necessities all in the pursuit of my education.

Special thanks to Rev. G. Harris and his wife, Rev. Mother Musa M. Harris whose spiritual guidance led me to success. Mr. and Mrs. Rance Clarke also for their spiritual support.

I am grateful to Mr. and Mrs. Chrispin Tolay for their numerous supports during my stay at the University of Nairobi. My gratitude to Mr. Lawson Bah of the Ministry of Finance for his generous contributions. I also applaud the supports of Mr. Francis M. Lieghe and Chinkany.

ACKNOWLEDGEMENT

I express my sincere gratitude and appreciation to my Supervisor, Mr. Henrick Ondigo of the Department of Finance and Accounting at the University of Nairobi for his support and guidance throughout this study.

I also acknowledge the support of Bledée Kanneh and M. Suzie Kamara who assisted in gathering the data for the study from Liberia.

Special acknowledgement goes to the Government of the Republic of Liberia through the General Auditing Commission of Liberia but most especially to Mr. John Sembe Morlu, II, former Auditor General of the Republic of Liberia whose tireless efforts made my scholarship program at the University of Nairobi, a resounding success.

There are several individuals who aided by study at the University of Nairobi including my colleagues Lavina K. Gould, Samwar S. Fallah, Jarwo N. Cooper, Albert B. Gibson and Emmanuel Harmon, I want to appreciate Dr. J. Fallah Moses who contributed immensely to my educational and other needs. I am also very grateful to my son, Thomas M. Sarko who also was deprived of many necessities all in the pursuit of my education.

Bishop George G. Harris and his wife, Rev. Mother Musu M. Harris whose spiritual guidance directed my path to success. Mr. and Mrs. Romeo Clarke also for their spiritual support.

I am grateful to Mr. and Mrs. Chirspin Tulay for their numerous supports during my stay at the University of Nairobi. My gratitude to Mr. Lawson Bah of the Ministry of Finance for his meaningful contributions. I also applaud the supports of Mr. Prince M. Lieghe and Chitakunye Musiyiwa.

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LIST OF ABBREVIATION

BCBS	Basel Committee on Bank Supervision
BIS	Bank of International Settlements
BAI	Banking Administration Institute
BCG	Boston Consulting Group
CBL	Central Bank of Liberia
CEO	Chief Executive Officer
ELL	Eco Bank Liberia Limited
ERM	Enterprise Risk Management
FASB	Financial Accounting Standards Board
FIB	First International Bank
GAAP	Generally Accepted Accounting Procedures
GBL	Global Bank Liberia
IBLL	International Bank Liberia Limited
IFSB	International Financial Standard Board
KPMG	Klynveld Kraayenhof & Co
LBDI	Liberia Bank for Development and Investment
NIM	Net Interest Margin
ROA	Return on Investment
SIC	Simple Industry Index
SPSS	Statistical Package for the Social Sciences
UAE	United Arab Emirates

ABSTRACT

Credit risk management has become an important topic for financial institutes, especially since the business sector of financial services is related to conditions of uncertainty. The turmoil of the financial industry emphasizes the importance of effective risk management procedures. Consequently, this research looks at "the relationship between Credit Risk management practice and the financial performance of Commercial banks in Liberia." This research objective was formulated in order to gain a better understanding of credit risk management practices and its relationship with financial performance (return on asset).

Quantitative research design is employed under the quantitative research design survey method is used. The data were collected by cross sectional survey method.

The conclusion of this study shows a positive relationship between the credit risk management practices and financial performance. Commercial banks during the pre-liberalization period were not effective in managing their credit risk in contrast to the post-liberalization period. Variations in the credit policies by seven of the nine commercial banks reflect monetary and fiscal policy actions, where expansionary fiscal policy partly increased inflationary pressure and the monetary authority. During the post-liberalization period, most banks used the services of consultants to formulate their credit risk management policies which reduced the risk posed by defaulting on loans.

Commercial banks in Liberia should focus more attention on capacity building and special training of bank managers whose function relate to credit and loans to serve as a conduit of giving them sufficient knowledge on how to deal with credit issues and mitigate credit risk faced by these banks.

The legal system of Liberia should be reformed to enhance the enforcement of financial contracts. This would work as an incentive for banks to invest in information capital, thus reducing the information asymmetry problem. Consequently, the proportion of nonperforming loans will be reduced hence lower risk premium attributed to credit risk. In addition, efforts should be made to revitalize the growth of the economy and to attain macro stability in order to increase the return on investment and reduce uncertainty.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The Concept of risk management is a two-step process. The first is to identify the source of the risk, which is to identify the leading variables causing the risk. The second is to devise methods to quantify the risk using mathematical models, in order to understand the risk profile of the instrument. Once a general framework of risk identification and management is developed, the techniques can be applied to different situations, products, instruments and institutions. It is crucial for banks to have comprehensive risk management framework as there is growing realization among that sustainable growth critically depends on the development of a comprehensive risk management framework (Greuning and Iqbal, 2007).

A robust risk management framework can help banks to reduce their exposure to risks, and enhance their ability to compete in the market (Iqbal and Mirakhor, 2007). A reduction in each institution's exposure will reduce the systemic risk as well. Hence, it is necessary that Banks have in place a comprehensive risk management and reporting process to identify, measure, monitor, manage, report and control different categories of risks. In addition, this process should pay attention to compliance with Shariah rules and principles.

Commercial banks are in the risk business. In the process of providing financial services, they assume various kinds of financial risks. Over the last decade the understanding of the place of commercial banks within the financial sector has improved substantially. Over this time, much has been written on the role of commercial banks in the financial sector, both in the academic literature and in the financial press. Suffice it to say that market participants seek the services of these financial institutions because of their ability to provide market knowledge, transaction efficiency and funding capability. In performing these roles they generally act as a principal in the transaction. As such, they use their own balance sheet to facilitate the transaction and to absorb the risks associated with it. Santomero, (1997).

1.1.1 Credit Risk Management

Credit risk management is defined as identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments (Early, 1996; Coyle, 2000). Credit extended to borrowers may be at the risk of default such that whereas banks extend credit on the understanding that borrowers will repay their loans, some borrowers usually default and as a result, banks income decrease due to the need to provision for the loans. Where commercial banks do not have an indication of what proportion of their borrowers will default, earnings will vary thus exposing the banks to an additional risk of variability of their profits. Every financial institution bears a degree of risk when the institution lends to business and consumers and hence experiences some loan losses when certain borrowers fail to repay their loans as agreed.

Principally, the credit risk of a bank is the possibility of loss arising from non-repayment of interest and the principle, or both, or non-realization of securities on the loans.

Risks exposed to commercial banks threaten a crises not only in the banks but to the financial market as a whole and credit risk is one of the threats to soundness of commercial banks. To minimize credit risk, banks are encouraged to use the "know your customer" principle as expounded by the Basel Committee on Banking Supervision. ((Kunt-Demirguc and Detragiache, 1997; Parry, 1999; Kane and Rice, 1998). Subjective decision-making by the management of banks may lead to extending credit to business enterprises they own or with which they are affiliated, to personal friends, to persons with a reputation for non-financial acumen or to meet a personal agenda, such as cultivating special relationship with celebrities or well connected individuals. A solution to this may be the use of tested lending techniques and especially quantitative ones, which filter out subjectivity (Griffith and Persuad, 2002).

To reduce the lender's credit risk, the lender may perform a credit check on the prospective borrower, may require the borrower to take out appropriate insurance, such as mortgage insurance or seek security or guarantees of third parties, besides other possible strategies. In general, the higher the risk, the higher will be the interest rate that the debtor will be asked to pay on the debt.

1.1.2 Classification of Credit Risk

Credit Risk can be classified in the following way:

Credit default risk - The risk of loss arising from a debtor being unlikely to pay its loan obligations in full or the debtor is more than 90 days past due on any material credit obligation; default risk may impact all credit-sensitive transactions, including loans, securities and derivatives.

Concentration risk - The risk associated with any single exposure or group of exposures with the potential to produce large enough losses to threaten a bank's core operations. It may arise in the form of single name concentration or industry concentration.

Country risk - The risk of loss arising from a sovereign state freezing foreign currency payment (transfer/conversion risk) or when it defaults on its obligations (sovereign risk).

1.1.3 Overview of Commercial Banks in Liberia

Currently, there are nine commercial banks in the banking industry in Liberia with a combined assets of L\$ 5.699 billion and liabilities of L\$ 4.825 billion. The banks are the Liberian Bank for Development & Investment (LBDI), Ecobank Liberia Limited (ELL), International Bank Liberia Limited, First International Bank, and Global Bank Liberia Limited. LBDI and ELL are the two banks that have branches in and out of the city. All of the commercial banks provide credit, deposits account, remittances, transfers services, and currency exchanges services. As at June 2005, Demand deposits constitute 70% of the total industry deposits followed by Savings deposits 30%. Most of the banks require minimum deposits for savings in order to encourage savings.

The involvement of commercial banks in microfinance sector development is very vital to the Central Bank of Liberia (CBL), which is the regulatory authority of financial institutions in Liberia. To this end, CBL has a great role in formulating regulations that will enhance the development of Microfinance activities in Liberia. Plans are underway at the Central Bank to establish a Micro finance unit, which the Bank hopes will facilitate the process of giving credit to

people whom commercial banks will normally not want to give credit to because of asymmetric information between lenders and borrowers.

Global experience reveals that sustainable microfinance can be successfully implemented in post conflict environment like Liberia. To this end, all of the essential and preferred conditions are sufficiently present to allow for a sequenced approach to restoring and gradually expanding microfinance services in Liberia.

It has been estimated that the demand for micro-credit from small, medium term, enterprises ranges from 62,000 to 82,000 customers with a combined loan values ranging from US\$ 9 to US\$19 million. It can be established that the supply of credits reaches 8,200 customers with a combined loan portfolios of less than US\$25,000. It is evident that the supply of microfinance services serves a fraction of the demand for microfinance. From a global experience, the gap between the demand for and supply of microfinance can be closed by the establishment of prudent, and professional institutions or bank units that are trained in providing sustainable financial products and services to the lower segment of the markets.

The Central Bank in an effort to ensure that low income Liberians have access to credit, is in the process of establishing a microfinance unit within the Bank. Two staff members of the Bank were recently in Italy undergoing micro finance methodology. In relation to rural finance, the Central Bank has in recent months been in the process of establishing rural payments centers, which the Bank envisages, will culminate into the foundation of rural banking in Liberia.

1.2 Research Problem

This study is very unique to the commercial banking sector of Liberia, as it is unique because it looks at the poor credit risk management in commercial banks in Liberia. Commercial banks are incurring major losses as a consequence of underperforming loans due to the lack of poor credit risk management by these banks. Coming out of 15 years civil war, the country financial sector has been badly destroyed, leading to in adequacy of capital, lack of trustworthiness of businesses, individual inabilities to meet up with their obligations to the banks. The regulatory arm of the financial institutions the Central bank of Liberia has not been enforcing regulations to enable these financial institutions to perform well. The financial sector is not getting full cost-

efficiency, although the CBL gives out credit reference to borrowers before commercial banks lend fund.

There is high level of nonperforming loans as commercial banks are unable to study the characteristics of borrowers including the ability to pay back loans, collateral backing loans provided to borrowers and other factors that will put banks in the best position to collect borrowed funds. In this case many borrowers default on loan payments leading the commercial banks with huge uncollected loans.

Weaknesses in the Kenya banking system became apparent in the late 1980s and were manifest in the relatively controlled and fragmented financial system. Differences in regulations governing banking and non-bank financial intermediaries, lack of autonomy and weak supervisory capacities to carry out the Central Bank's surveillance role and enforce banking regulations, inappropriate government policies which contributed to an accumulation of nonperforming loans, and non-compliance by financial institutions to regulatory requirements of the 1989 Banking Act among others posed a challenge to the Kenya banking system. Many banks that collapsed in the late 1990's were as a result of the poor management of credit risks which was portrayed in the high levels of non-performing loans (Central Bank Supervision Report, 2005).

The liberalization of the Kenya banking industry in 1992 marked the beginning of intense competition among the commercial banks, which saw banks extend huge amounts of credit with the main objective of increasing profitability. Some of the loans were "political loans" granted with little or no credit assessment; other loans were made to insiders, all of which subsequently became non-performing. The low quality loans led to high levels of non-performing loans and subsequently eroded profits of banks through loan provisioning some of which appeared out rightly political.

Commercial banks adopt different credit risk management policies majorly determined by ownership of the banks (privately owned, foreign owned, government influenced and locally owned), credit policies of banks, credit scoring systems, banks regulatory environment and the caliber of management of the banks. Banks may however have the best credit management

policies but may not necessarily record high profits. In addition although there are industry standards on what is a good credit policy and what is not and further banks have different characteristics. The market may thus be seen to regard an individual banks' poor performance more lenient when the entire banking sector has been hit by an adverse shock such as a financial crisis. Banks may be forced to adjust their credit policy in line with other banks in the market where a herding behaviour is practiced by banks. Looking at the emphasis that is laid on credit risk management by commercial banks the level of contribution of this factor to profits has not been analyzed. Rajan (1994) notes that expanding lending in the short-term boosts earnings, thus the banks have an incentive to ease their credit standards in times of rapid credit growth, and likewise to tighten standards when credit growth is slowing.

The study seeks to unearth the various approaches to credit risk management. This study intends to address the following research questions: What is the relationship between credit risk management practices and financial performance of commercial banks in Liberia?

1.3 Research Objectives

- i) To establish the credit risk management practices employed by commercial banks in Liberia.
- ii) To determine the relationship between credit risk management and financial performance in commercial banks in Liberia.

1.4 Value of the study

First, the study will be beneficial to commercial bank managers as its focus is on credit risk management which is the core source of business for many banks.

The study will present varied practices which can be shared by many commercial banks in the industry and the regulatory board in general. The future researchers will use this study as a form of reference for future studies, the study will also suggest future research activities that can be explored.

The study will be significant to the investors since they will be able to know the rates. This will help them to know the performance thus will make good decisions on the bank to invest in when

they compare the returns. Investors also rely on information about banks in order to channel their investments in several sectors of the economy as commercial banks play a pivotal role in all financial transactions in any economy therefore all investors need appropriate information on the performance of all commercial banks in a economy to enable them decide which bank to do business with.

Finally, the regulators of commercial banks, Central bank of Liberia will be able to know the performance of the banks. This will help to determine the extent of risk especially when the commercial banks are seeking loans and the Central bank will be able to adopt appropriate regulatory framework to regulate the activities of commercial banks in Liberia.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on the credit. This chapter presents theoretical background and defines the process of risk management by the commercial banks.

2.2 Theoretical Review

Risk management framework is important for banks. In conjunction with the underlying frameworks, basic risk management process that is generally accepted is the practice of identifying, analyzing, measuring, and defining the desired risk level through risk control and risk transfer. BCBS (2001) defines financial risk management as a sequence of four processes; the identification of events into one or more broad categories of market, credit, operational and other risks into specific sub-categories; the assessment of risks using data and risk model; the monitoring and reporting of the; risk assessments on a timely basis; and the control of these risks by senior management.

BCBS (2006), hold that risk management processes, require supervisors to be satisfied that the banks and their banking groups have in place a comprehensive risk management process. This would include the Board and senior management to identify, evaluate, monitor and control or mitigate all material risks and to assess their overall capital adequacy in relation to their risk profile. In addition, as suggested by Al-Tamimi (2002), in managing risk, commercial banks can follow comprehensive risk management process which includes eight steps: exposure identification; data gathering and risk quantification; management objectives; product and control guidelines; risk management evaluation; strategy development; implementation; and performance evaluation (Baltoni, 1998; Harrington and Niehaus, 1999).

2.2.1 Dynamic Risk Management Theory ✓

This theory presents and tests an infinite horizon, continuous time model of a firm that can dynamically adjust the use and maturity of risk management instruments whose purpose is to reduce product price uncertainty thereby mitigating financial distress losses. The dynamic setting relaxes several restricting assumptions common to static models. Specifically, it assumes that 1) the firm can adjust its use of risk management instruments over time, 2) risk management instruments expire as time progresses and that the available maturity of the risk management instruments is shorter than the life time of the firm, and 3) there are transaction costs associated with initiation and adjustment of risk management contracts.

The model produces a number of new time series and cross-sectional implications on how firms use short-term instruments to hedge long-term cash flow uncertainty. Numerical results describe the optimal timing, adjustment, and rolling-over of risk management instruments, and the choice of contract maturity in response to changes in the firm's product price. The model predicts that firms that are either far from financial distress or deep in financial distress neither initiate nor adjust their risk management instruments, while firms between the two extremes initiate and actively adjust and/or roll-over their risk management instruments.

2.2.2 Enterprise Risk Management Theory

A corporation can manage risks in one of two fundamentally different ways: (1) one risk at a time, on a largely compartmentalized and decentralized basis; or (2) all risks viewed together within a coordinated and strategic framework. The latter approach is often called "enterprise risk management, or "ERM" for short. It suggests that companies that succeed in creating an effective ERM have a long-run competitive advantage over those that manage and monitor risks individually. The argument in brief is that, by measuring and managing its risks consistently and systematically, and by giving its business managers the information and incentives to optimize the tradeoff between risk and return, a company strengthens its ability to carry out its strategic plan.

In the pages that follow, it starts by explaining how ERM can give companies a competitive advantage and add value for shareholders. Next we describe the process and challenges involved

in implementing ERM. We begin by discussing how a company should assess its risk “appetite,” an assessment that should guide management’s decision about how much and which risks to retain and which to lay off. Then we show how companies should measure their risks. Third, it discusses various means of laying off “non-core” risks, which, as we argue below, increases the firm’s capacity for bearing those “core” risks the firm chooses to retain. Though ERM is conceptually straightforward, its implementation is not. And in the last—and longest—section of the chapter, and provide an extensive guide to the major difficulties that arise in practice when implementing ERM.

2.2.3 Corporate Hedging Theories

Many empirical studies have attempted to find support for different theories of corporate financial risk management. However, most of them have failed to determine which theories are supported by empirical observation of corporate hedging and which are not. After a spate of new research in this field in the late 1990s there have been few studies that have added to our understanding of corporate hedging behavior. Incidentally, most valuable papers in recent years concentrated on methodological issues such as the endogeneity problem (Jin and Jorion, 2006), the inclusion of non-derivative hedging (Davies *et al.*, 2006; Judge, 2006), and assumptions about the purpose of derivative use (Faulkender, 2005).

The financial economics approach to corporate risk management has so far been the most prolific in terms of both theoretical model extensions and empirical research. This approach builds on the classic Modigliani-Miller paradigm (Miller and Modigliani, 1958), which states conditions for irrelevance of financial structure for corporate value. The paradigm was later extended to the field of risk management. Rationales for hedging deduced from the irrelevance conditions include: higher debt capacity (Miller and Modigliani, 1963); progressive tax rates; lower expected costs of bankruptcy (Smith and Stulz, 1985); securing internal financing (Froot *et al.*, 1993); information asymmetries (Geczy *et al.*, 1997); and comparative advantage in information (Stulz, 1996). The ultimate result of hedging, if it indeed is beneficial to the firm, should be higher value – a hedging premium.

Evidence in support of the predictions of financial economics theory for corporate hedging is poor. Although risk management does lead to lower variability of corporate value (e.g. Jin and Jorion, 2006), which is the main prerequisite for all other effects, there seems to be little proof of this being linked with benefits specified by the theory. One of the most widely cited papers by Tufano (1996) finds no evidence to support financial hypotheses, and concentrates on the influence of managerial preferences instead.

2.2.4 Models of Credit Risk Management

2.2.4.1 Basel I Accord on Credit Risk Management

Basel I is the round of deliberations by central bankers from around the world, and in 1988, the Basel Committee (BCBS) in Basel, Switzerland, published a set of minimum capital requirements for banks. This is also known as the 1988 Basel Accord, and was enforced by law in the Group of Ten (G-10) countries in 1992. Basel I is now widely viewed as outmoded. Indeed, the world has changed as financial conglomerates, financial innovation and risk management have developed. Therefore, a more comprehensive set of guidelines, known as Basel II are in the process of implementation by several countries and new updates in response to the financial crisis commonly described as Basel III. (<http://www.bis.org>).

The Basel I Committee was formed in response to the messy liquidation of a Cologne-based bank (Herstatt Bank) in 1974. On 26 June 1974, a number of banks had released Deutsche Mark (German Mark) to the Bank Herstatt in exchange for dollar payments deliverable in New York. On account of differences in the time zones, there was a lag in the dollar payment to the counterparty banks, and during this gap, and before the dollar payments could be effected in New York, the Bank Herstatt was liquidated by German regulators. This incident prompted the G-10 nations to form towards the end of 1974, the Basel Committee on Banking Supervision, under the auspices of the Bank of International Settlements (BIS) located in Basel, Switzerland (<http://www.basel.int/>).

The Accord primarily focused on credit risk. Assets of banks were classified and grouped in five categories according to credit risk, carrying risk weights of zero (for example home country sovereign debt), ten, twenty, fifty, and up to one hundred percent (this category has, as an



example, most corporate debt). Banks with international presence are required to hold capital equal to 8 % of the risk-weighted assets. The creation of the credit default swap after the Exxon Valdez incident helped large banks hedge lending risk and allowed banks to lower their own risk to lessen the burden of these onerous restrictions (<http://www.basel.int/>).

Since 1988, this framework has been progressively introduced in member countries of G-10, currently comprising 13 countries, namely, Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Spain, Sweden, Switzerland, United Kingdom and the United States of America. Most other countries, currently numbering over 100, have also adopted, at least in name, the principles prescribed under Basel I. The efficiency with which they are enforced varies, even within nations of the Group (<http://www.basel.int/>).

2.2.4.2 Basel II Accord on Credit Risk

Basel II is the second of the Basel Accords, which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. Advocates of Basel II believe that such an international standard can help protect the international financial system from the types of problems that might arise should a major bank or a series of banks collapse. In practice, Basel II attempts to accomplish this by setting up rigorous risk and capital management requirements designed to ensure that a bank holds capital reserves appropriate to the risk the bank exposes itself to through its lending and investment practices. Basel II uses a "three pillars" concept – (1) minimum capital requirements (addressing risk), (2) supervisory review and (3) market discipline. Basel II pillar deals with only one risk, credit risk, which is dealt with in a simple manner (<http://www.bis.org/publ/bcbs189>).

2.2.4.3 Capital Requirement

The standardized requirements in place for banks and other depository institutions, which determines how much capital is required to be held for a certain level of assets through regulatory agencies such as the Bank for International Settlements, Federal Deposit Insurance Corporation or Federal Reserve Board. These requirements are put into place to ensure that these institutions are not participating or holding investments that increase the risk of default and that

they have enough capital to sustain operating losses while still honoring withdrawals. Also known as "regulatory capital" (Basel II Accords, 2006 Revision).

The Basel Accords, published by the Basel Committee on Banking Supervision housed at the Bank for International Settlements, sets a framework on how banks and depository institutions must calculate their capital. In 1988, the Committee decided to introduce a capital measurement system commonly referred to as Basel I. This framework has been replaced by a significantly more complex capital adequacy framework commonly known as Basel II. After 2012 it will be replaced by Basel III. Another term commonly used in the context of the frameworks is Economic Capital, which can be thought of as the capital level bank shareholders would choose in absence of capital regulation. For a detailed study on the differences between these two definitions of capital, refer to (Basel II Accords, 2006 Revision).

2.2.4.4 Supervisory Review

Banks are required to be issued with a bank license by the regulator in order to carry on business as a bank, and the regulator supervises licenced banks for compliance with the requirements and responds to breaches of the requirements through obtaining undertakings, giving directions, imposing penalties or revoking the bank's licence (Basel II Accords, 2006 Revision).

2.2.4.5 Market Discipline

The regulator requires banks to publicly disclose financial and other information, and depositors and other creditors are able to use this information to assess the level of risk and to make investment decisions. As a result of this, the bank is subject to market discipline and the regulator can also use market pricing information as an indicator of the bank's financial health (Basel II Accords, 2006 Revision).

Buyers and sellers in a market are said to be constrained by market discipline in setting prices because they have strong incentives to generate revenues and avoid bankruptcy. This means, in order to meet economic necessity, buyers must avoid prices that will drive them into bankruptcy and sellers must find prices that will generate revenue (or suffer the same fate).

Market discipline is a topic of particular concern because of banking deposit insurance laws. Most governments offer deposit insurance for people making deposits with banks. Normally, bank managers have strong incentives to avoid risky loans and other investments. However, mandated deposit insurance eliminates much of the risk to bankers. This constitutes a loss of market discipline. In order to counteract this loss of market discipline, governments introduce regulations aimed at preventing bank managers from taking excessive risk. Today market discipline is introduced into the Basel II Capital Accord as a pillar of prudential banking regulation (Basel II Accords, 2006 Revision).

2.3 Credit Risk Management Practices

2.3.1 Risk Identification

There are few conceptual studies on risk identification of financial institutions (Kromschroder and Luck, 1998; Luck 1998; Tchankova, 2002; Barton et al. 2002) and few empirical studies that include risk identification of banks (Al-Tamimi, 2002; Al- Tamimi and Al-Mazrooei, 2007). Risk identification is the first stage of risk management (Tchankova, 2002) and a very important step in risk management (Al-Tamimi and Al- Mazrooei, 2007). The first step in organizing the implementation of the risk management function is to establish the crucial observation areas inside and outside the corporation (Kromschroder and Luck, 1998). Then, the departments and the employees must be assigned with responsibilities to identify specific risks. For instance, interest rate risks or foreign exchange risks are the main domain of the financial department.

It is important to ensure that the risk management function is established throughout the whole corporation; apart from parent company, the subsidiaries too have to identify risks, analyze risks and so on. There are many other approaches for risk identification, for instance, scenario analysis or risk mapping. An organization can identify the frequency and severity of the risks through risk mapping which could assist the organization to stay away from high frequency and low severity risks and instead focus more on the low frequency and high severity risk. Risk identification process includes risk-ranking components where these ranking are usually based on impact, severity or dollar effects (Barton et al. 2002). Accordingly, the analysis helps to sort risk

according to their importance and assists the management to develop risk management strategy to allocate resources efficiently.

In relation to commercial banks' practice of risk management, Al-Tamimi (2002) found that the UAE commercial banks were mainly facing credit risk. The study also found that inspection by branch managers and financial statement analysis are the main methods used in risk identification. The main techniques used in risk management are establishing standards, credit score, credit worthiness analysis, risk rating and collateral. The recent study by Al-Tamimi and Al-Mazrooei (2007) was conducted on banks' risk management of UAE national and foreign banks. Their findings reveal that the three most important types of risks encountered by UAE commercial banks are foreign exchange risk, followed by credit risk, then operating risk.

Risk identification is positively significant to influence risk management practices. In the case of banks, studies made especially on risk identification and risk mitigation includes the work of Haron and Hin Hock (2007) on market and credit risk, and Archer and Haron (2007) specifically on operational risk. Haron and Hin Hock (2007) explain the inherent risk; credit and market risk exposures in Banks. Also, they illustrate the notion of displaced commercial risk that is important in Banks. They conclude that certain risks may be considered as being inherent in the operations of both and conventional banks. Although the risk exposures of Banks differ and may be complex than conventional financial institution, the principles of credit and market risk management are applicable to both. In addition, the IFSB's standards on capital adequacy and risk management guiding principles mark the first steps in an ongoing process of developing prudential standards and filling regulatory gaps in the field of finance.

Archer and Haron (2007) show that Banks are exposed to a number of operational risks that are different from those face by conventional banks. They argue that the complexities of a number of their products, as well as there relative novelty in the contemporary financial services market, combined with the fiduciary obligations of bank when it acts as a custodian, imply that for Banks operational risk is very important consideration. Because of that, the IFSB has taken the position while Investment Account Holders may be considered in the absence of misconduct and negligence by the bank to bear credit and market risks of assets in their funds have been invested

by the bank, the latter must be considered as being exposed to the operational risk arising from its management of those funds.

Empirical studies made by Khan and Ahmad (2001) found that Banks face some risks arising from profit-sharing investment deposits. Here, the bankers considered these unique risks more serious than conventional risks faced by financial institutions. The results of survey of risk perception in different modes of financing shows that risk level is considered elevated. The high perception of risks may be an indication of the low degree of active risk management due to the absent of risk control through internal processes and control, especially in the case of operational risk (Iqbal and Mirarkhor, 2007). Also, Noraini (2005) indicates that credit risk in banks perceived to be the most important risk.

According to standard economic theory, managers of value maximizing firms ought to maximize expected profit without regard to the variability around its expected value. However, there is now a growing literature on the reasons for active risk management including the work of Stulz (1984), Smith, Smithson and Wolford (1990), and Froot, Sharfstein and Stein (1993). Santomero (1995) lists dozens of contributions to the area and at least four distinct rationales offered for active risk management. These include managerial self-interest, the non-linearity of the tax structure, the costs of financial distress and the existence of capital market imperfections.

2.3.2 Risk Analysis and Assessment

There are many conceptual studies made on risk analysis and assessment by reference to measurement and mitigation of risk. In practice, it is useful to classify the different risks according to the amount of damage they possibly cause (Fuser et al, 1999). This classification enables the management to divide risks that are enabling to threat the existence of the corporation from those which can only causing slight damages. Frequently, there is an inverse relationship between the expected amount of loss and its corresponding likelihood, i.e. risks that will cause a high damage to corporation, like earthquakes or fire, occur seldom, while risks that occur daily, like interest rate risks or foreign exchange risks, often cause only relatively minor losses, although these risks can sometimes harm the corporations seriously.

The empirical findings by Al-Tamimi and Al-Mazrooei (2007) highlighted that UAE banks are somewhat efficient in analyzing and assessing risk and there is a significant difference between UAE national and foreign banks in the practice of risk analysis and assessment. Additionally, the findings show that risk analysis and assessment are influencing risk management practices. It is also mentioned by Drzik (1995) that the BAI Risk Management Survey showed that large bank in the US had made a substantial progress in their development and implementation of risk measures. The measures use not only for risk control purposes, but also for performance measurements and pricing. In the context of banking, few conceptual studies (Sundararajan, 2007; Jackson-Moore, 2007) discuss the risk measurement aspects particularly on the unique risk.

A comprehensive risk measurement and mitigation methods for various risk arising from financing activities and from the nature of profit and loss sharing in the source of funds especially investment account holders are explained by Sundararajan (2007). He concludes that the application of modern approaches to risk measurement, particularly for credit and overall banking risks is important for Banks. Also, he suggests that the need to adopt new measurement approaches is particularly critical for Banks because of the role play, the unique mix of risks in finance contracts.

However, Noraini (2005) indicates that Banks are perceived not to use the latest risk measurement techniques and Shari'ah compliant risk mitigation techniques due to different Shari'ah interpretation of these techniques. Also, appropriate measurement of credit and equity risks in various finance facilities can benefit from systematic data collection efforts, including by establishing credit and equity registry. Jackson-Moore (2007) suggests that bank need to start collecting data, and there can be significant advantages in pooling information and using common definitions, standards, and methodologies for operational risk which is argued can lead to significant losses in all financial institutions. Finally, it is found that risk analysis and assessment particularly on measuring risk in banking institutions is important for risk management practices.

2.3.3 Risk Monitoring

Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place (IRM, AIRMIC and ALARM; 2002). Risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps bank management to discover mistake at early stage (Al-Tamimi and Al-Mazrooei, 2007). Monitoring is the last step in the corporate risk management process (Pausenberger and Nassauer, 2002). According to them, control has to be established at different levels. The control by the management board will not be enough to ensure the effective functioning of the risk monitoring system, because the management board members do not have time on their hands to exercise extensive control. Hence, the management board will install an independent unit to complete the task of internal supervision. This task is the responsibility of the internal audit. Also, the supervisory board is obliged to control the risk management process. The supervisory board is supported by the auditor. If the auditor discovers a defect, he will have to inform the supervisory board and the management board.

According to Parrenas, (2005), the shareholders of the corporation can use their rights to demand information in order to judge the efficiency of the risk management system. The director's report enables the shareholders to assess the status of the corporation knowledgeably and thoroughly. Khan and Ahmad (2001) conducted a survey of risk management practices and found that on average the lowest percentage is on the measuring, mitigating and monitoring risk that is 69% score as compared to risk management policies and procedures that is 82.4%, and internal control of banks that is 76%. Al-Tamimi and Al-Mazrooei (2007) found that there is significant difference between UAE national and foreign banks in risk monitoring and controlling. Also, the UAE commercial banks have an efficient risk monitoring and controlling system and it has positive influence on risk management practices.

According to Baldoni, (1998), the area of interest rate risk is the second area of major concern and on-going risk monitoring and management. Here, however, the tradition has been for the banking industry to diverge somewhat from other parts of the financial sector in their treatment of interest rate risk. Most commercial banks make a clear distinction between their trading activity and their balance sheet interest rate exposure. Investment banks generally have viewed

interest rate risk as a classic part of market risk, and have developed elaborate trading risk management systems to measure and monitor exposure. For large commercial banks and European-type universal banks that have an active trading business, such systems have become a required part of the infrastructure. Akkizidis and Khandelwal, (2008). But, in fact, these trading risk management systems vary substantially from bank to bank and generally are less real than imagined. In many firms, fancy value-at-risk models, are up and running. But, in many more cases, they are still in the implementation phase. In the interim, simple ad hoc limits and close monitoring substitute for elaborate realtime systems. While this may be completely satisfactory for institutions that have little trading activity and work primarily on behalf of clients, the absence of adequate trading systems elsewhere in the industry is a bit distressing.

2.3.4 Bank Risk Management Systems

According to Parrenas, (2005), the banking industry has long viewed the problem of risk management as the need to control risks which make up most, if not all, of their risk exposure, credit, interest rate, foreign exchange and liquidity risk. While they recognize counterparty and legal risks, they view them as less central to their concerns. Where counterparty risk is significant, it is evaluated using standard credit risk procedures, and often within the credit department itself. Likewise, most bankers would view legal risks as arising from their credit decisions or, more likely, proper process not employed in financial contracting.

Accordingly, the study of bank risk management processes is essentially an investigation of how they manage these four risks. In each case, the procedure outlined above is adapted to the risk considered so as to standardize, measure, constrain and manage each of these risks. To illustrate how this is achieved, this review of firm-level risk management begins with a discussion of risk management controls in each area. The more difficult issue of summing over these risks and adding still other, more amorphous, ones such as legal, regulatory or reputational risk, will be left to the end. Tchankova, (2002)

2.3.5 Credit Risk Management Procedures

According to Fallon, (1996), each bank must apply a consistent evaluation and rating scheme to all its investment opportunities in order for credit decisions to be made in a consistent manner

and for the resultant aggregate reporting of credit risk exposure to be meaningful. To facilitate this, a substantial degree of standardization of process and documentation is required. This has led to standardized ratings across borrowers and a credit portfolio report that presents meaningful information on the overall quality of the credit portfolio. In a single rating system, a single value is given to each loan, which relates to the borrower's underlying credit quality.

At some institutions, a dual system is in place where both the borrower and the credit facility are rated. In the latter, attention centers on collateral and covenants, while in the former, the general credit worthiness of the borrower is measured. Some banks prefer such a dual system, while others argue that it obscures the issue of recovery to separate the facility from the borrower in such a manner. In any case, the reader will note that in the reported system all loans are rated using a single numerical scale ranging between 1 and 10.8. For each numerical category, a qualitative definition of the borrower and the loan's quality is offered and an analytic representation of the underlying financials of the borrower is presented. Parrenas, (2005) hold that such an approach, whether it is a single or a dual rating system allows the credit committee some comfort in its knowledge of loan asset quality at any moment of time. It requires only that new loan officers be introduced to the system of loan ratings, through training and apprenticeship to achieve a standardization of ratings throughout the bank. Given these standards, the bank can report the quality of its loan portfolio at any time, along the lines of the report presented.

According to Luck, (1998), total receivables, including loans, leases and commitments and derivatives, are reported in a single format. Assuming the adherence to standards, the entirety of the firm's credit quality is reported to senior management monthly via this reporting mechanism. Changes in this report from one period to another occur for two reasons, loans have entered or exited the system, or the rating of individual loans has changed over the intervening time interval. The first reason is associated with standard loan turnover. Loans are repaid and new loans are made. The second cause for a change in the credit quality report is more substantive.

Variations over time indicate changes in loan quality and expected loan losses from the credit portfolio. In fact, credit quality reports should signal changes in expected loan losses, if the rating system is meaningful. Studies by Harrington, (1999) on their rating system have illustrated the relationship between credit rating and ex post default rates. A similar result should be

expected from internal bank-rating schemes of this type as well. However, the lack of available industry data to do an appropriate aggregate migration study does not permit the industry the same degree of confidence in their expected loss calculations.

For credit quality report to be meaningful, all credits must be monitored, and reviewed periodically. It is, in fact, standard for all credits above some dollar volume to be reviewed on a quarterly or annual basis to ensure the accuracy of the rating associated with the lending facility. In addition, a material change in the conditions associated either with the borrower or the facility itself, such as a change in the value of collateral, will trigger a re-evaluation. This process, therefore, results in a periodic but timely report card on the quality of the credit portfolio and its change from month to month. Haron and Hock, (2007). Generally accepted accounting principles require this monitoring. The credit portfolio is subject to fair value accounting standards, which have recently been tightened by The Financial Accounting Standards Board (FASB). Commercial banks are required to have a loan loss reserve account which accurately represents the diminution in market value from known or estimated credit losses. IFSB, (2005).

As an industry, banks have generally sought estimates of expected loss using a two-step process, including default probability, and an estimate of loss given default. This approach parallels the work of Harrington, (1999) referred to above. At least quarterly, the level of the reserve account is re-assessed, given the evidence of loss exposure driven directly from the credit quality report, and internal studies of loan migration through various quality ratings. Absent from the discussion thus far is any analysis of systematic risk contained in the portfolio. Traditionally mutual funds and merchant banks have concerned themselves with such risk exposure, but the commercial banking sector has not. This appears to be changing in light of the recent substantial losses in real estate and similar losses in the not-too-distant past in petrochemicals. Grais, and Kulathunga, (2007).

According to Fuser et al, (1998), many banks are beginning to develop concentration reports, indicating industry composition of the loan portfolio. This process was initially hampered by the lack of a simple industry index. SIC codes were employed at some institutions, but most found them unsatisfactory. Reports such an industry grouping to illustrate the kind of concentration reports that are emerging as standard in the banking industry. For the investment management

community, concentrations are generally benchmarked against some market indexes, and mutual funds will generally report not only the absolute percentage of their industry concentration, but also their positions relative to the broad market indexes. Unfortunately, there is no comparable benchmark for the loan portfolio. Accordingly, firms must weigh the pros and cons of specialization and concentration by industry group and establish subjective limits on their overall exposure. Fuser et al, (1998)

Drzik, (1995) hold that credit report is not the result of any analytical exercise to evaluate the potential downside loss, but rather a subjective evaluation of management's tolerance, based upon rather imprecise recollections of previous downturns. In addition, there is the emergence of portfolio managers to watch over the loan portfolio's degree of concentration and exposure to both types of risk concentration discussed. Most organizations also will report concentration by individual counterparty. To be meaningful, however, this exposure must be bank wide and include all related affiliates. Both of these requirements are not easily satisfied. For large institutions, a key relationship manager must be appointed to assure that overall bank exposure to a particular client is captured and monitored. This level of data accumulation is never easy, particularly across time zones.

Nonetheless, such a relationship report is required to capture the disparate activity from many parts of the bank. Transaction with affiliated firms needs to be aggregated and maintained in close to real time. Each different lending facility is reported. In addition, the existing lines of credit, both used and open, need to be reported as well. Generally, this type of credit risk exposure or concentration report has both an upper and lower cut-off value so that only concentrations above a minimum size are recorded, and no one credit exposure exceeds its predetermined limit. The latter, an example of the second technique of risk management is monitored and set by the credit committee for the relationship as a whole. (Barton et al,2002).

For institutions that do have active trading businesses, value-at-risk has become the standard approach. Similar systems are in place at other firms. In that much exists in the public record about these systems, there is little value to reviewing this technique here. Suffice it to say that the daily, weekly, or monthly volatility of the market value of fixed-rate assets are incorporated into a measure of total portfolio risk analysis along with equity's market risk, and that of foreign-

denominated assets. For balance sheet exposure to interest rate risk, commercial banking firms follow a different drummer. Given the generally accepted accounting procedures (GAAP) established for bank assets, as well as the close correspondence of asset and liability structures, commercial banks tend not to use market value reports, guidelines or limits. Rather, their approach relies on cash flow and book values, at the expense of market values. (Baldoni, 1998)

This system (gap methodology), has been labelled traditionally a gap reporting system as the asymmetry of the repricing of assets and liabilities results in a gap. This has classically been measured in ratio or percentage mismatch terms over a standardized interval such as a 30-day or one-year period. This is sometimes supplemented with a duration analysis of the portfolio. However, many assumptions are necessary to move from cash flows to duration. Asset categories that do not have fixed maturities, such as prime rate loans, must be assigned a duration measure based upon actual repricing flexibility. A similar problem exists for core liabilities, such as retail demand and savings balances. Nonetheless, the industry attempts to measure these estimates accurately, and include both on- and off-balance sheet exposures in this type of reporting procedure. Archer and Haron, (2007).

According to Drzik, (1995), most banks, however, have attempted to move beyond this gap methodology. They recognize that the gap and duration reports are static, and do not fit well with the dynamic nature of the banking market, where assets and liabilities change over time and spreads fluctuate. In fact, the variability of spreads is largely responsible for the highly profitable performance of the industry over the last two years. Accordingly, the industry has added the next level of analysis to their risk management procedures. Currently, many banks are using balance sheet simulation models to investigate the effect of interest rate variation on reported earnings over one-, three- and nine-year horizons. These simulations, of course, are a bit of science and a bit of art. They require relatively informed repricing schedules, as well as estimates of prepayments and cash flows.

In terms of the first issue, such an analysis requires an assumed response function on the part of the bank to rate movement, in which bank pricing decisions in both their local and national franchises are simulated for each rate environment. In terms of the second area, the simulations require precise prepayment models for proprietary products, such as middle market loans, as well

as standard products such as residential mortgages or traditional consumer debt. In addition, these simulations require yield curve simulation over a presumed relevant range of rate movements and yield curve shifts. Once completed, the simulation reports the resultant deviations in earnings associated with the rate scenarios considered. Whether or not this is acceptable depends upon the limits imposed by management, which are usually couched in terms of deviations of earnings from the expected or most likely outcome. Drzik, (1995)

According to Iqbal and Mirakhor, 2007, every institution has an investment policy in place which defines the set of allowable assets and limits to the bank's participation in any one area; see, all institutions restrict the activity of the treasury to some extent by defining the set of activities it can employ to change the bank's interest rate position in both the cash and forward markets. Some are willing to accept derivative activity, but all restrict their positions in the swap caps and floors market to some degree to prevent unfortunate surprises. As reported losses by some institutions mount in this area, however, investment guidelines are becoming increasingly circumspect concerning allowable investment and hedging alternatives. In this area there is considerable difference in current practice. This can be explained by the different franchises that coexist in the banking industry. Most banking institutions view activity in the foreign exchange market beyond their franchise, while others are active participants. The former will take virtually no principal risk, no forward open positions, and have no expectations of trading volume. Iqbal and Mirakhor, (2007).

2.4 Financial Performance Measures in Commercial Banks ✱

Performance measurement systems are considered to be important for evaluating the accomplishments of firm goals, constructing strategies for development, making decisions for investments and compensating managers. Sound financial health of a bank is the guarantee not only to its depositors but is equally significant for the shareholders, employees and whole economy as well. As a sequel to this maxim, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively. In this paper, an effort has been made to evaluate the financial performance of commercial banks.

A number of studies in literature have investigated banks' performance by using variety of approaches. Kaplan and Norton (1992) used balanced scorecard method to measure business performance. The balanced scorecard method includes both financial and nonfinancial measures such as institutional learning process, growth, internal business processes, customer-employee satisfaction etc. Financial Performance measures in Commercial banks looks at capital adequacy, asset quality, management capability, earnings analysis, liquidity analysis. The Measures are discussed below:

2.4.1 Capital adequacy analysis

Capital adequacy is a reflection of the inner strength of a bank, which would stand it in good stead during the times of crisis. Capital adequacy may have a bearing on the overall performance of a bank, like opening of new branches, fresh lending in high risk but profitable areas, manpower recruitment and diversification of business through subsidiaries or through specially designated branches, as the RBI could think these operational dimensions to the bank's capital adequacy achievement (Shankar, 1997).. The computation of capital adequacy ratio is done by taking ratio of equity capital and loan loss provisions minus non-performing loans to total assets. Expressed as a percentage, the ratio shows the ability of a bank to withstand losses in the value of its assets.

2.4.2 Assets Quality Analysis

Asset quality is another important aspect of the evaluation of a bank's performance under the Reserve Bank of guidelines, the advances of a bank are to be disclosed in a classified manner as:

- Standard
- Sub-Standard
- Doubtful and loss asset

2.4.3 Standard Asset/Advance

Standard assets are those assets that are performing and loan is paying interest and installment at due date, further they do not carry more than normal risk. Formerly, no provisions were

required. However, banks will now have to make a general provision of 0.25 percent on standard assets as well.

2.4.4 Sub-Standard Asset/Advance

Sub-standard assets are those assets that have been classified as non-performing for a period less than or equal to three quarters. In such cases, the current networth of the borrower/guarantor or the current market value of the security charged is not enough to ensure recovery fully. It has fully developed weaknesses that jeopardize the liquidation of a debt.

2.4.5 Loss Asset/Advance

Loss assets are the ones where loss has been identified but the amount has not been written off wholly or partly. Such an asset is uncollectible/unrecoverable and of such little value that its continuance as a bankable asset is not warranted although there may be some salvage value. Since the loss assets are to be written off, 100% provision needs to be made for loss assets.

Under the above classification, the advance/asset which cease to earn income/interest is termed as non-performing asset and a bank has to keep a provision for its probable loss.

2.4.6 Management Capability Ratios

The performance of Management capacity is usually qualitative and can be understood through the subjective evaluation of Management systems, organization culture, control mechanisms and so on. However, the capacity of the management of a bank can also be gauged with the help of certain ratios of off-site evaluation of a bank. The capability of the management to deploy its resources, aggressively to maximize the income, utilize the facilities in the bank productively and reduce costs etc. (Purohit, et.al-2003).

2.4.7 Earning Ratios

The 'Earnings/Profit' is a Conventional Parameter of measuring financial performance. Higher income generally reflects a lack of financial difficulties and so would be expected to reduce the likelihood of failure of a bank (Cole and Gunther, 1996). In the pre-liberalization phase (before 1991), interest income used to be reckoned on accrual basis with little variation therein. In the

absence of any uniform norm on provisioning against bad debts and depreciation in investment, the variation in accounting profit was mainly due to provisions and contingencies. Some semblance of uniformity was first introduced in 1992-93 with the phased implementation of prudential accounting standards which however brought about a wide variation in the current period income, as interest income was henceforth required to be reckoned on a realization basis. This is reflected in the emergence of operational performance measure in the shape of earnings analysis (Hansda, 1995). The earnings analysis has been done by analysts like Sankaranarayan, (1995). Business India Study (2002), Kapil et.al, (2003), and so on, with the help of various accounting ratios.

2.4.8 Liquidity Ratios

The ability of a bank to provide liquidity requires the existence of a highly liquid and readily transferable stock of financial assets. Liquidity and transferability are the key ingredients for such transactions. The liquidity requirement means that financial assets must be available to owners on short notice (a day or less) at par. The transferability requirement means that ownership rights in financial assets must be portable, at par, to other economic agents, and in a form acceptable to the other party (Sinkey, Joseph F, JR. 1998).

2.5 Review of Past Studies

There are many conceptual studies that show the important aspects of risk management process that firms need to have in order to practice risk management Tchankova (2002); Kromschroder and Luck, 1998; Luck 1998; Fuser et al, 1999; Barton et al, (2002). Some empirical findings such as Al-Tamimi and Al-Mazrooei, (2007) show positive relationships between risk management practices and the various aspects of risk management process, and some findings (e.g. Boston Consulting Group, (2001); Al-Tamimi, (2002); KPMG, 2003; Parrenas, (2005); Al-Tamimi and Al-Mazrooei, (2007) show the important aspect of risk management practices by various financial institutions. In the context of banking, studies made on theoretical side of risk and risk management in banking Iqbal and Mirarkor, (2007); Akkizidis and Khandelwal, (2008); Grais and Kulathunga, (2007); Haron and Hin Hock, (2007); Greuning and Iqbal, (2007);

Sundararajan, (2007); Archer and Haron, (2007) explain the framework and the aspect of risk management process, and some empirical evidence Khan and Ahmed, (2001); Noraini, (2005) examine the perception and level of risk management practices by Banks.

According to BCG, (2001), credit risk is the oldest and important risk which banks exposure and important of credit risk and credit risk management are increasing with time because of some reasons like economic crises and stagnation, company bankruptcies, infraction of rules in company accounting and audits, growth of off-balance sheet derivatives, declining and volatile values of collateral, borrowing more easily of small firms, financial globalization and BIS risk-based capital requirements. Greuning and Iqbal, (2007) define credit risk as the risk of losses caused by the default of borrowers. Default occurs when a borrower cannot meet his financial obligations. Credit risk can alternatively be defined as the risk that a borrower deteriorates in credit quality. This definition also includes the default of the borrower as the most extreme deterioration in credit quality. Credit risk is managed at both the transaction and portfolio levels. But, banks increasingly measure and manage the credit risk on a portfolio basis instead of on a loan-by-loan.

According to Fuser and Meier, (1997), in credit risk management banks use various methods such as credit limits, taking collateral, diversification, loan selling, syndicated loans, credit insurance, and securitization and credit derivatives. Credit risk has an importance place, but, credit risk measurement and credit risk management are not to be in desired level. It is important for staff of banking institutions to understand the aspect of risk in the banking operations and the risks that are inherent and exposed in their business operations. Better understanding of risk management is also necessary especially in the financial intermediation activities where managing risk is one its important activities.

Boston Consulting Group (2001) found that the sole determining success factors is not the technical development but the ability to understand risk strategically and also the ability to handle and control risk organizationally. Secondly, in order to realize a risk based management philosophy, the attitude and mindset of the employees need to be changed whereby they must be brought to understand that managing risk is crucial for success. This implies that there must be intensive training, clearly defined structures and responsibilities, as well as commitment to

change. In addition, it was identified that banks concentrate on risk management primarily to enhance their competitive positions.

Al-Tamimi and Al-Mazrooei (2007) found that the UAE banks staff have good understanding of risk and risk management, which might give an indication about the ability of these banks to manage risks efficiently in the future. Moreover, understanding risk and risk management had positive effect on risk management practice although it is insignificant. From the literature, it shows that understanding risk and risk management is an important factor of risk management practices. The risks associated with the provision of banking services differ by the type of service rendered. For the sector as a whole, however the risks can be broken into six generic types: systematic or market risk, credit risk, counterparty risk, liquidity risk, operational risk, and legal risks.

According to Haron and Hock, (2007), systematic risk is the risk of asset value change associated with systematic factors. It is sometimes referred to as market risk, which is in fact a somewhat imprecise term. By its nature, this risk can be hedged, but cannot be diversified completely away. In fact, systematic risk can be thought of as diversifiable risk. All investors assume this type of risk, whenever assets owned or claims issued can change in value as a result of broad economic factors. As such, systematic risk comes in many different forms. For the banking sector, however, two are of greatest concern, namely variations in the general level of interest rates and the relative value of currencies. Because of the bank's dependence on these systematic factors, most try to estimate the impact of these particular systematic risks on performance, attempt to hedge against them and thus limit the sensitivity to variations in undiversifiable factors.

Harrington, (1999) posit that most banks track interest rate risk closely. They measure and manage the firm's vulnerability to interest rate variation, even though they can not do so perfectly. At the same time, international banks with large currency positions closely monitor their foreign exchange risk and try to manage, as well as limit, their exposure to it. In a similar fashion, some institutions with significant investments in one commodity such as oil, through their lending activity or geographical franchise, concern themselves with commodity price risk.

Others with high single-industry concentrations may monitor specific industry concentration risk as well as the forces that affect the fortunes of the industry involved.

Credit risk arises from non-performance by a borrower. It may arise from either an inability or an unwillingness to perform in the pre-committed contracted manner. This can affect the lender holding the loan contract, as well as other lenders to the creditor. Therefore, the financial condition of the borrower as well as the current value of any underlying collateral is of considerable interest to its bank. The real risk from credit is the deviation of portfolio performance from its expected value. Accordingly, credit risk is diversifiable, but difficult to eliminate completely. This is because a portion of the default risk may, in fact, result from the systematic risk outlined above. In addition, the idiosyncratic nature of some portion of these losses remains a problem for creditors in spite of the beneficial effect of diversification on total uncertainty. This is particularly true for banks that lend in local markets and ones that take on highly illiquid assets. In such cases, the credit risk is not easily transferred and accurate estimates of loss are difficult to obtain. IFSB, (2005)

Counterparty risk comes from non-performance of a trading partner. The non-performance may arise from counterparty's refusal to perform due to an adverse price movement caused by systematic factors, or from some other political or legal constraint that was not anticipated by the principals. Diversification is the major tool for controlling nonsystematic counterparty risk. Counterparty risk is like credit risk, but it is generally viewed as a more transient financial risk associated with trading than standard creditor default risk. In addition, counterparty's failure to settle a trade can arise from other factors beyond a credit problem. Moore, (2007)

Liquidity risk can best be described as the risk of a funding crisis. While some would include the need to plan for growth and unexpected expansion of credit, the risk here is seen more correctly as the potential for a funding crisis. Such a situation would inevitably be associated with an unexpected event, such as a large charge off, loss of confidence, or a crisis of national proportion such as a currency crisis. In any case, risk management here centers on liquidity facilities and portfolio structure. Recognizing liquidity risk leads the bank to recognize liquidity itself as an asset, and portfolio design in the face of illiquidity concerns as a challenge. Moore, (2007).

According to Khan and Ahmed, (2001) operational risk is associated with the problems of accurately processing, settling, and taking or making delivery on trades in exchange for cash. It also arises in record keeping, processing system failures and compliance with various regulations. As such, individual operating problems are small probability events for well-run organizations but they expose a firm to outcomes that may be quite costly. Kromschroder and Luck, (1998) define legal risks as endemic in financial contracting and are separate from the legal ramifications of credit, counterparty, and operational risks. New statutes, tax legislation, court opinions and regulations can put formerly well-established transactions into contention even when all parties have previously performed adequately and are fully able to perform in the future.

Environmental regulations have radically affected real estate values for older properties and imposed serious risks to lending institutions in this area. A second type of legal risk arises from the activities of an institution's management or employees. Fraud, violations of regulations or laws, and other actions can lead to catastrophic loss, as recent examples in the thrift industry have demonstrated. All financial institutions face all these risks to some extent. Non-principal or agency activity involves operational risk primarily. Since institutions in this case do not own the underlying assets in which they trade, systematic, credit and counterparty risk accrues directly to the asset holder. If the latter experiences a financial loss, however, legal recourse against an agent is often attempted. Therefore, institutions engaged in only agency transactions bear some legal risk, if only indirectly. KPMG, (2003).

2.6 Conclusion

The past chapter looks at previous studies carried out by other researchers on credit risk management as it was noted that credit risk management is a key factor to the financial performance of commercial banks. All the previous studies established that without a proper credit risk management measure, commercial banks stand to incur losses on high default by borrowers in loan repayment. Equally so, researchers also established that when commercial banks put in place proper credit risk management mechanism, they will be able to tackle the problem of bad loans.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology used to carry out the research. It presents the research design, the population, sample size and sampling procedure, data collection and analysis.

3.2 Research Design

Research design refers to the way the study is designed, that is, the method used to carry out a research. This study adopts a descriptive design. Descriptive research is the investigation in which quantity data is collected and analysed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time (Mugenda and Mugenda, 2003). Descriptive research design is chosen because it enables the researcher to generalise the findings to a larger population. This therefore generalise the findings to all the commercial banks in Liberia.

3.3 Population

Target population can be defined as a compute set of individuals, cases/objects with some common observable characteristics of a particular nature distinct from other population. The population was the nine commercial banks in Liberia. This was a census study of all the nine commercial banks.

3.4 Data Collection Procedures and Instruments

3.4.1 Data Instruments

The Researcher developed the instruments which were used to collect the necessary information. Questionnaires are commonly used to obtain important information about the population. The questionnaire contained the questions which were structured of closed-ended question and also a

few open ended. These types of questions were accompanied by a list of possible alternatives from which respondents were required to select the answer that best describes their responses.

The main advantage of close ended questions was that they were easier to analyse since they were in an immediate usable form. They were also easy to administer because each item was followed by an alternative answers and were economical to use in terms of time saving.

3.4.2 Data Collection Procedure

The study used both primary and secondary data.

Primary Data - Refers to the information the researcher obtained from the field. The data will be obtained by use of the questionnaire. The questionnaire was self-administered to some respondents while for other it was researcher administered.

Primary data was collected using semi-structured questionnaires. The questionnaires was administered using drop and pick method. The questionnaires was used because they allowed the respondents to give their responses in a free environment and helps the researcher get information that would not have been given out had interviews been used. Secondary data on the performance was collected from the financial statements of the banks.

3.4.3 Data Validity and Reliability

Validity measures the accuracy of the research instrument methods according to the purpose of the study. The instrument was tested to verify that it measures what it is supposed to. The self-administered questionnaire was validated using the content validity, which is a process of logical analysis that involves careful and critical examination of items in the questionnaire. The officers of the selected respondents were interviewed to validate the questionnaire.

Reliability implies that a measuring instrument should be able to give reliable and stable results. If it is reliable other researchers should be able to come to the same results if they use the same method. To determine the reliability, a single test was administered to assess the internal consistency of the instrument.

3.5 Data Analysis

Questionnaires were edited for completeness and consistency. Responses coded to facilitate basic statistical analysis using the software package, statistical package for the social sciences (SPSS). Data was analyzed using descriptive statistics such as mean, standard deviations, frequencies and percentages.

Descriptive analysis was used to determine frequencies central tendencies (highlighting mean, median and mode) as well as the standard deviation to determine the average distance of each score from the mean. The descriptive assisted the researcher review.

3.5.1 Model Specification

The study utilized a regression analysis with the equation of the form. The basis of a Regression Model is to provide a statistical technique for estimating the relationships among variables, specifically the relationship between Financial Performance and Credit Risk management. Study done by Al-Tamimi and Al-Mazrooei (2007) showed a positive relationship between risk management practices and various aspects of risk management process using the same model.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + X_5 + \epsilon$$

Where:

a = constant/the intercept point of the regression line and the y – axis

Where b₁, b₂.....b₅ are the coefficients of the independent variables that were determined

Y = Financial Performance as measured by ROA

X₁ = Risk Identification

X₂ = Risk Analysis and Assessment

X₃ = Risk Monitoring

X₄ = Bank Credit Risk Management

X₅= Credit Risk Management Procedures

ϵ = any other variable that can contribute to the information Asymmetry.

The independent variables X₁, X₂, X₃, X₄, and X₅ were operationalized and measured using various questions posted to the respondents in a questionnaire.

To test the strength of the model t-test was applied because the sample size is small. The level of significance of a t-test compares the means of two samples (or treatments), even if they have different numbers of replicates. In simple terms, the t-test compares the actual difference between two means in relation to the variation in the data (expressed as the standard deviation of the difference between the means).

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DICUSSION

4.1 Introduction

The data obtained was analyzed, presented and interpreted in this chapter. This chapter presents and interprets the findings of the study based on the research objectives. The chapter presents findings on risk management practices employed by commercial banks in Liberia, and the relationship between credit risk management and financial performance.

4.2 Research Findings

Parameters considered were the number of years worked, and the designation they held in the bank. This was important because it enabled the researcher to have an overview of the respondents in relation to their working experience and designations within their banks. Tables 4.1 and 4.2 below present these findings.

Table 4.2.1 No of Years Worked in the Bank

Years worked	Frequency	Percent	C. frequency
1-5	6	85.7	85.7
11-15	1	14.3	100.0
Total	7	100.0	

Source; Research Findings

A majority of the respondents (85.7%) have worked for between 1 – 5 years, while the remainder had worked for between 11 – 15 years. It is considered that the respondents are adequately experienced and they understood the questionnaire and so their responses can be relied upon.

Table 4.2.2 Current Designation of the Respondents in the Bank

Parameter	Frequency	Percentage	C. percent
Credit risk manager	3	42.9	42.9
Head of department	4	57.1	100.0
Total	7	100.0	

Source; Research Findings

The research study revealed that 42.9% of respondents were credit risk managers, while 57.1% were departmental heads. Considering that the topic of study centers on credit risk management, the respondents were drawn from the relevant departments and are therefore considered to be adequately informed on the topic of study and are therefore capable of giving reliable responses.

4.2.1 Risk Management

The research study sought to find out if the banks had specific credit policies to guide loan risks. Responses indicated that 100% of the banks had in place policies to manage loan risks.

The parties used by the banks to formulate their credit management policies were also studied. The extent to which these parties were used by the banks was captured. The findings are presented in the tables 4.3 – 4.6

Table 4.2.3 Parties used to Formulate Policy

Party involved	Mean	Standard deviation
Employees	2.8571	1.34519
Consultants	3.5714	.53452
Others	3.0000	1.91485

Source; Research Findings

A likert scale was used to capture responses on the extent of use of the respective parties. In the scale, 1 represented “not at all” 2, “little extent”, 3 “moderate extent”, 4 represented “great extent” while 5 was for “very great extent”. Consultants were the most used by the banks to formulate their risk management policies, with a mean score of 3.5 and a standard deviation of 0.53. This means most banks used consultants to a great extent. The least used strategy was using employees, with a mean score of 2.85, meaning most banks use employees to a moderate extent. The fact that the banks heavily rely on consultants is an indication of lack of internal capacity capable of responding to the rigors of credit policy formulation. The findings also revealed that there were other parties besides consultants and employees who helped in formulating policies. These were the Liberia central bank and credit committees. The involvement of the central bank is an indication of the involvement of the government in the banking sector to protect borrowers and lenders. The table 4.3 summarizes these findings.

Table 4.2.4 Employees and the Extent they were used to Formulate Policy

Extent	Frequency	Percentage	C. percent
Not at all at all	2	28.6	28.6
Moderate	2	28.6	57.1
Great extent	3	42.9	100.0
Total	7	100.0	

Source; Research Findings

From the research findings it was evident that banks do not solely rely on their employees to formulate policy on lending and credit. Three 3(42.9%) which was less than half of the banks surveyed used employees to a great extent. Two of the banks surveyed did not use employees at all to formulate strategy. Two banks were found to use employees to some extent to formulate policy. These findings correspond to the general trends in the developing world where the role of policy formulation which is highly technical is left to experts. (4 of the banks can be use as sources, the banks are; the Guaranty trust Bank LTD 2012, United Bank of Africa LTD 2012, Airiland First Bank Liberia 2012, International Bank LTD 2012. This issue of policy formulation involving consultant is mainly done in Liberia due to the lack of inability of bank employees, base on this, banks involve consultants in the process.

Table 4.2.5 Consultants' Role in policy Formulation

Extent	Frequency	Percent	C. percent
Moderate	3	42.9	42.9
Great	4	57.1	100.0
Total	7	100.0	

Source: Research Findings

The findings revealed that all the banks employed the services of consultants to formulate their policies. The use of consultants is a standard practice in the banking practice in the banking industry and this enables banks adopt the latest and most effective strategies in their operations.

Table 4.2.6 Use of Others Expert in Formulating Credit Risk Policy

Extent	Frequency	Percentage	C. percent
Not at all	3	42.9	42.9
Moderate	2	28.6	71.4
Great extent	2	28.6	100.0
Total	7	100.0	

Source; Research Findings

The respondents were asked to indicate the other persons who are responsible for policy formulation. This was important to the study because the researcher wanted to know very clearly how risk in the banking industry can be minimized through policy formulation since recovery of loans is heavily dependent on the soundness of the lending policies in place. Three of the banks that were surveyed did not seem to have any particular group as being responsible for policy formulation. Four of the banks 4(57.2%) however indicated that they usually relied on guidance and data from the Liberia central bank to aid their credit policy. Table 4.6 shows the summary of these findings.

4.2.2 Risk Analysis Assessment

Table 4.2.7 Risk Analysis Assessment

Parameter	N	minimum	maximum	mean	Std deviation
Availability of policy on risk	7	1	1	1.00	0.00
Standard procedures for risk assessment	7	1	1	1.00	0.00

Source; Research Findings

The respondents were asked to indicate whether the banks had a specific policy for risk analysis and assessment. The responses expected were to be '1' or '2' where 1 was yes and 2 was no. The findings revealed that all the banks surveyed had specific risk analysis policies since the mean for the responses was 1. The findings are as presented in table 4.7.

In addition, all banks surveyed had a standardized approach to risk assessment (table 4.7). This shows that the banks settle for the procedure they consider most effective.

The analysis and assessment parameters the institutions adopt to test the level of risk they face was also established. A five point Likert scale was used to capture opinions. The scale was 1 representing "not at all" 2, "little extent", 3 "moderate extent", 4 represented "great extent" while 5 was for "very great extent". The tables 4.8 – 4.12 below present these findings.

Table 4.2.8: Descriptive Statistics on Parameters Adopted to Test Risk Level

variable	N	mean	Std deviation
Outstanding debt	7	3.5714	1.81265
Bankruptcies	7	3.5714	1.39728
late payments	7	4.0000	1.00000
Credit history	7	4.4286	.53452
Valid N (list wise)	7		

Source; Research Findings

The parameter most important to the banks was length of credit history, with a mean score of 4.4 and a standard deviation of 0.5. This means most respondents hence banks use this parameter to a great extent. Amount of outstanding debt and bankruptcies were also highly used, though they had lower mean scores of 3.57. These findings show that all these parameters were important to the banks surveyed and were used from great to very great extent. Table 4.8 above summarizes these findings.

Table 4.2.9: Amount of Outstanding Debt

Extent	Frequency	Percentage	C. frequency
Not at all	2	28.6	28.6
Great extent	2	28.6	57.1
Very great extent	3	42.9	100.0
Total	7	100.0	

Source; Research Findings

42.9% of respondents or participating banks used amount of outstanding debt and bankruptcy parameters to analyze and assess applicants to a very great extent (table 4.9 and 4.10) 28.6% of banks use bankruptcies only moderately or to a little extent.

Table 4.10 Bankruptcies Experienced

Extent	Frequency	Percent	c. percent
Little extend	2	28.6	28.6
Moderate	2	28.6	57.1
Very great extent	3	42.9	100.0
Total	7	100.0	

Source; Research Findings

However, 42.9% of the banks use bankruptcy to a very great extent. This indicates the weight banks have put on this parameter as a determinant of the credit worthiness of potential applicants. This parameter is rated very highly (table 4.10).

Table 4.11: Inspection of Late Payments

Extent	Frequency	Percent	C. percent
Moderate	3	42.9	42.9
Great extent	1	14.3	57.1
Very great extent	3	42.9	100.0
Total	7	100.0	

Source; Research Finding

42.9% of banks use inspection of payments parameter to a moderate extent, while a similar proportion uses this extent to a very great extent. Once again, this parameter is a highly weighted predictor of credit worthiness by a significant 40% of the banks surveyed (table 4.11).

Table 4.12 Credit History Evaluation

<i>Extent</i>	<i>Frequency</i>	<i>Percent</i>	<i>C. percent</i>
<i>Great extent</i>	4	57.1	57.1
<i>Very great extent</i>	3	42.9	100.0
<i>Total</i>	7	100.0	

Source; Research Findings

To validate findings on the use of length of credit history by a majority of banks, 42.9% of banks surveyed used this parameter to a very great extent while 57.1% of banks used it to a great extent (table 4.12). This finding indicated that the length of credit history is the most important parameter to a majority of banks when it comes to analyzing credit applications.

Table 4.13: Do you offer Training in Loans Department

<i>Variable</i>	<i>Frequency</i>	<i>Percent</i>	<i>C. frequency</i>
<i>Training is not offered</i>	0	0	0
<i>Training is offered</i>	7	7	100
<i>Total</i>	7	100	

Source; Research Findings

All banks surveyed offer training to their employees to improve their skills in risk analysis (table 4.13). This finding indicates the high premium these banks put on their loan evaluation experts to the point of putting in place measures to improve their capacity and skills, over and above other loan evaluation approaches such as using computerized programmes.

4.2.3 Risk Monitoring

The research study sought to find out from the respondents the choice of monitoring techniques that their banks employed as their strategy of mitigating against risk. Amongst the choice of techniques that the respondents were to respond to included collateralization, the use of guarantors, insurance, and securitization.

Table 4.14: Mitigation techniques

<i>Risk technique used</i>	<i>Yes</i>		<i>No</i>		<i>Total</i>
	<i>Frequency</i>	<i>Percent</i>	<i>Frequency</i>	<i>Percent</i>	
<i>Collateralization</i>	7	100	0	0.00	7
<i>Guarantors</i>	7	100	0	0.00	7
<i>Insurance</i>	7	100	0	0.00	7
<i>Securitization</i>	2	22.2	5	77.8	7

Source; Research Findings

The research study revealed that majority of the banks used collateralization, guarantors and insurance as a means of militating against risk. The acceptance and use of securitization was still low at 22.3%, with only two banks using it as a technique of reducing risk. This can be attributed to the fact that the securities market is in its infant stages in the Liberian economy. Table 4.14 summarizes these findings.

4.2.5 Bank Credit Risk Management

In addition to mitigation measures, the study also sought to find out from the respondents the kind of securities that their banks accepted as collateral in risk monitoring. The findings are summarized in tables --- 4.15 to 4.20

Table 4.15 Use of Jewelry

Extent	Frequency	Percent	C. percent
<i>Not at all</i>	4	57.1	57.1
<i>Moderate</i>	3	42.9	42.9
Total	7	100.0	100.0

Source; Research findings

The researcher was interested in knowing the extent to which jewelry was used as collateral for purposes of securing credit from the banks by customers. The findings revealed that majority of the banks (57.1%) were yet to embrace the concept of jewelry at all as collateral. Some banks however were noted to be using jewelry to a moderate extent for collateral. This may be explained by the fact the jewelry business not been extensively developed and entrenched amongst the Liberian culture and therefore clear evaluation procedures in place.

Table 4.16 Cash Deposit

Extent	Frequency	Percent	C. percent
<i>Moderate</i>	3	42.9	42.9
<i>Great extent</i>	3	42.9	85.7
<i>Very great extent</i>	1	14.3	100.0
Total	7	100.0	

Source; Research Findings

The researcher sought to know from the respondents the extent to which their institutions used cash deposits as security collateral. The extent of use was noted to vary from very great extent to moderate extent. The effective use of cash as a security seemed as a popular option as a security since 57.7 % of the respondents indicated that the use of cash was to a great extent or more.

Three of the banks were found to use cash as a security to a moderate extent. Table 4.16 summarizes the findings.

Table 4.17 Life Insurance

Extent	Frequency	Percent	C. percent
<i>Moderate</i>	6	85.7	85.7
<i>Very great extent</i>	1	14.3	100.0
<i>Total</i>	7	100.0	

Source; Research Findings

The researcher examined the use of life insurance as collateral security for loans. The findings revealed that all the banks used life insurance policies as a form of collateral. The use of insurance was noted to be moderate in 85% of the banks while one bank used the same to a very great extent (table 4.17)

Table 4.18 Debentures

Extent	Frequency	Percent	C. frequency
<i>Not at all</i>	3	42.9	42.9
<i>Little extent</i>	3	42.9	85.7
<i>Great extent</i>	1	14.3	100.0
<i>Total</i>	7	100.0	

Source; Research Findings

The researcher sought to find out from the respondents the extent to which debentures were used as form collateral. The findings revealed that debentures were hardly used since they were

considered to be unreliable within the Liberian economy. More than 85% of the banks used debentures to a very little or no extent. This is a common trend in the developing world where inflation is very high and debentures are not always viewed as unpredictable securities. Table 4.18 presents these findings.

Table 4.19: Land

Extent	Frequency	Percent	C. frequency
<i>Not at all</i>	3	42.9	42.9
<i>Moderate</i>	2	28.6	71.4
<i>Great extent</i>	2	28.6	100.0
<i>Total</i>	7	100.0	

Source; Research Findings

The use of land as a security was also examined. Three of the banks were found not be using land as a security at all. This is unlike the trend in other countries where land is a prime asset and therefore highly used as a form of collateral. Table 4.19 presents these findings.

Table 4.20 Shares

Extent	Frequency	Percent	C. frequency
<i>Not at all</i>	5	71.4	71.4
<i>Moderate</i>	2	28.6	100.0
<i>Total</i>	7	100.0	

Source; Research Findings

Credit Reminder

The use of credit reminders as a form of credit monitoring was also investigated. As summarized in table 4.21, 85.7% of the banks gave their clients credit reminders after 1-3 months, while only 14.3% gave the reminders after 3-6 months. All the banks surveyed used this strategy. The frequency with which banks gave credit reminders is an indication of the agency with which the banks were keen on recovering their debt.

Table 4.21: Frequency of Issuing Credit Reminders

Extent	Frequency	Percent	C .frequency
1-3 months	6	85.7	85.7
3-6months	1	14.3	100.0
Total	7	100.0	

Source; Research Findings

The researcher wanted to know what the frequency of issuing credit reminders to the customers was. This was necessary to the researcher because the frequency is an indication of how closely the monitoring of loans repayments was done in order to determine appropriate causes of action in good time. The findings revealed that majority credit reminders 6(87.5%) were issued at intervals of less than three months which was considered sufficient to notify members who had fallen behind in their installment repayments. One respondent indicated that the credit reminders were issued between three and six months

Table 4.22 Components of Risk Management Systems

<i>strategy used</i>	<i>Yes</i>		<i>No</i>		<i>Total</i>
	<i>Frequency</i>	<i>percent</i>	<i>Frequency</i>	<i>percent</i>	
<i>Credit reminder</i>	3	42.86	4	57.43	7
<i>Loan guideline</i>	5	71.43	2	28.57	7
<i>Credit criteria</i>	7	100	0	0.00	7
<i>Credit ration loan agreement</i>	2	28.57	5	71.43	7
<i>Risk mitigation</i>	7	100	0	0.00	7
<i>Training</i>	4	57.14	3	42.86	7
<i>Credit culture</i>	5	71.43	2	28.57	7

Source; Research Findings

The researcher sought to find what the main components of risk management systems strategies were. The findings revealed that the key components that were used were risk mitigation and the credit criteria applied at the time of applying for the loan. Table 4.22 summarizes these findings.

Effectiveness of credit management practices and their effectiveness of organizational performance

Table 4.23 Parties used to Formulate Policy

parameter	Minimum	Maximum	Mean	Std deviation
<i>Identification</i>	4.00	5.00	4.8571	.37796
<i>Assessment</i>	3.00	5.00	4.4286	.97590
<i>Monitoring</i>	4.00	5.00	4.7143	.48795
<i>Management</i>	4.00	5.00	4.8571	.37796
<i>Procedures</i>	4.00	5.00	4.7143	.48795

Source; Research Findings

The researcher was interested in knowing the extent to which management practices were effective in the performance of the organization. The findings revealed that whereas risk identification and bank credit risk management were viewed as very effective (4.86), risk assessment had the least score 4.42 implying that there existed challenges in the process of assessment. The banks therefore needed to focus their energies in improving on assessment procedures in order to improve on organizational effectiveness.

4.2.5 Risk Identification

The respondents were required to indicate if their institutions used specific procedures to identify risks. Responses from the respondents indicated that all the banking institutions had specific procedures that were used as guidelines to identify risks. The research study further sought to find out the extent to which different departments were involved in the process formulating strategies for risk identification. The parties under consideration were grouped into three groups namely employees, consultants, and others. The findings are summarized in table 4.23 - 4.25

Table 4.24 Employees

Extent	Frequency	Percent	C. percent
<i>Moderate</i>	4	57.1	57.1
<i>Great extent</i>	2	28.6	85.7
<i>Very great extent</i>	1	14.3	100.0
<i>Total</i>	7	100.0	

Source; Research Findings

Employees were used to identify risk only to a moderate extent by a majority of the banks (57.1%), while only 14.3% of the banks surveyed used employees to identify risk to a very great extent. Considering that the practice the world over is to hire external experts to formulate credit risk management practices and risk identification being one of the tasks in formulating risk

management policies, it is believed that risk identification is incorporated in the scope of work of credit risk management policy formulation, which as earlier discussed, is contracted to external consultants. Table 4.23 summarizes these findings.

Table 4.25 Consultants

Extent	Frequency	Percent	Valid Percent	C. Percent
<i>Little extent</i>	2	28.6	28.6	28.6
<i>Moderate</i>	1	14.3	14.3	42.9
<i>Great extent</i>	4	57.1	57.1	100.0
Total	7	100.0	100.0	

Source; Research Findings

Consultants are used to a great extent by a majority of banks surveyed (table 4.24). This could be because risk identification, which is a task, carried out during the formulation of credit management policies, requires expertise, which the bank is assured of by contracting the best available risk management consultants.

Table 4.26: Others

Extent	Frequency	Percent	C. percent
<i>Not at all</i>	2	28.6	28.6
<i>Moderate</i>	3	42.9	71.4
<i>Great extent</i>	1	14.3	85.7
<i>Very great extent</i>	1	14.3	100.0
Total	7	100.0	

Source; Research Findings

Under others, most banks (42.9%) reported using other risk identification approaches only to a moderate extent, while close to 30% reported that they do not use any other risk identification approaches other than consultants and employees. The reliability of consultants as a traditional approach to conducting risk management tasks, including risk identification was therefore confirmed in this study. Table 4.25 above presents these findings.

Table 4.27 Risk Identification

Parties involved	mean	Std deviation
<i>External auditors</i>	2.5714	1.13389
<i>Internal auditors</i>	2.8571	1.34519
<i>Other parties</i>	2.8571	1.46385
<i>Middle level managers</i>	3.2857	1.25357
<i>Senior employees</i>	3.8571	.37796

Source; Research Findings

The research study sought to find out from the respondents the parties that were mainly involved in the process of identifying risks. The findings were summarized as shown in table 4.26. The findings revealed that the banks relied mostly on both senior and middle level managers to identify risk. The mean scores for middle managers and senior employees were found to be 3.86 and 3.29 respectively. The standard deviation for the spread in the senior employees was least at 0.38 meaning all respondents indicated that greatest responsibility of identifying risk lay with the senior employees.

Table 4.28 ANOVA Table

Departments /staff category		Sum of squares	Degrees of freedom	Mean square	F	significance
Internal Auditors	Between Groups	10.857	6	1.810	.	.
	Within Groups	.000	0	.	.	.
	Total	10.857	6			
External Auditors	Between Groups	7.714	6	1.286	.	.
	Within Groups	.000	0	.	.	.
	Total	7.714	6			
Senior Employees	Between Groups	.857	6	.143	.	.
	Within Groups	.000	0	.	.	.
	Total	.857	6			
Middle Level Mangers	Between Groups	9.429	6	1.571	.	.
	Within Groups	.000	0	.	.	.
	Total	9.429	6			
Other parties involved in risk identification(credit committees)	Between Groups	12.857	6	2.143	.	.
	Within Groups	.000	0	.	.	.
	Total	12.857	6			

Source; Research Findings

The research was interested to know if the strategies used by the different banks in risk identification differed from each other using an ANOVA.

(Analysis of variance) test. The findings are summarized in table 4.28. The findings revealed that the use of senior employees in risk identification as strategy was the most popular amongst all the banks as this had the least sum of squares 0.86. The manner and the extent to which the

banks surveyed used the different group categories in risk identification differed significantly both within and between the groups each since the p values in all the group categories were less than 0.001 as shown in table 4.28. This may explain the fact that operational and management strategies used by the various banks in risk identification are not the same. Whereas for instance two the banks used shares as security for loans, the rest of the banks were yet to adopt the same. It can be said that while some banks were ready to quickly adapt to new strategies to diversify their risk portfolio by broadening security by base, some banks preferred wait and see. This explains were some banks had not embraced the use of shares and jewelry as securities.

4.3 Interpretation of findings

This section attempts to provide vivid interpretation of the findings obtained relating to the objectives of the study. (The Relationship Between Credit Risk Management Practices and Financial Performance of Commercial Banks in Liberia). The study reviews that, the banks used various strategies to evaluate and asses risk of credit to a various extend. These strategies were put into place in order to assist the banks maintain a good credit practices to boost their financial performance.

Findings obtained showed how these banks employed the formulations of polices and procedure of credit risk. These policies and procedures were used to manage credit risk, helping the banks to carry on a good credit risk management practices. The study revealed that training was a key component of risk management and risk analysis that which helped employees to do early risk detection. This was to improve the skills and competencies of the banks employees. Banks also used monitoring techniques to mitigate against risk and other processes including the use of collateralization, insurance guarantors and securitization. The acceptance and use of securitization was low amongst commercial banks which findings noted can be attributed to the fact that the market is still in its infant stages in the Liberia economy.

Other measures used to mitigate against included the use of jewelry, the findings revealed the majority of the bank were yet noted to embrace the concept of jewelry at all as collateral some banks however were noted to be using jewelry to a moderate extend. Cash deposit, shares and debentures all of which were used to varying degrees. The effective use of cash deposit the study

noted is the popular use (14.3%) which indicate that the use of cash is to a great extend or more. The used of insurance was noted to be used at a moderate extend by the banks.

Overall, the findings show a positive relationship between the credit risk management practices and financial performance. Without a proper credit risk management practice commercial banks incur huge financial losses. Credit risk management practices enhanced good financial positions of the various banks survey. Because of the credit risk management practices put in place, had helped each banks to be able to carry out a good credit practices that which had increased the banks returns (ROE) by the interests paid by the borrowers.

5.2 Summary

This section of the study provides a summary of major findings during the course of the research, taking into account key factors identified by respondents to complete quantitative questionnaires to the population ERAC study.

It will also recommend the way forward for addressing the problems facing the credit risk management financial performance of commercial banks. Additionally, research gaps in the area under study will be highlighted for further research opportunities.

Using a multiple regression technique, the study analyzed the relationship between credit risk management and the financial performance of commercial banks.

The study of indicators shows that market fundamentals and institutional factors such as lack of capacity for credit risk management which results in the use of consultants by banks to enhance credit risk policies influence financial performance. Due to data limitations and difficulties in capturing institutional factors, the study did not include an institutional dimension. Further empirical studies will have to be conducted to understand the relationship between credit risk management and financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter interrupts the data analyzed on the relationship between credit management practices and financial performance in commercial banks in Liberia. It summarizes the findings in chapter four of the study and put forth conclusions and recommendations. It also addresses the research gap in the study and the incapacity of the bank employees in formulating credit policy. It also gives the conclusion of the study and recommendations to improve the financial sectors of Liberia.

5.2 Summary

This section of the study provides a summary of major findings during the course of the research, taking into account key factors outlined by respondents to sample questionnaire distributed to the population under study.

It will also recommend the way forward for addressing the problems facing the relationship between credit management financial performances of commercial banks. Additionally, research gap in the area under study will be highlighted for further research opportunities.

Using a multiple regression technique, this study analyzed the relationship between credit risk management and the financial performance of commercial banks.

The study of indicators shows that market fundamentals and institutional factors such as lack of capacity for credit risk managers which results in the use of consultants by banks in formulating credit risk policies influence financial performance. Due to data limitations and difficulties in capturing institutional factors, as with all empirical models having an institutional dimension, empirical analysis has been limited to observable fundamentals.

The findings show a strong positive relationship between credit risk management policy and the financial performance of commercial banks in Liberia as banks without credit risk management policies incur huge financial losses.

5.3 Conclusion

The study is aimed at examining the relationship between credit risk management and financial performance of commercial banks in Liberian financial sector. For the pre-liberalization period, the credit risk management practices by commercial banks were not effective as most banks incur losses on credit due to the lack of effective policy. Variations in the credit policies by seven of the nine commercial banks reflect monetary and fiscal policy actions, where expansionary fiscal policy partly increased inflationary pressure and the monetary authority. During the post-liberalization period, most banks used the services of consultants to formulate their credit risk management policies which reduced the risk posed by defaulting on loans.

However, Liberia's experience indicates a compelling need for capacity building of bank employees and managers in credit risk management practices to protect banks against credit related problems.

The results show that banks incur losses because of lack of credit risk management policies to safeguard against defaulting on loans and high cost incur from hiring consultants to perform credit risk management tasks. The increase in spread in credit problems in the post-liberalization period stemmed from the failure to meet the prerequisites for successful financial reforms and the lag in adopting indirect monetary policy tools and reforming the legal system.

Variations in the credit policies are attributable to bank efforts to maintain threatened profit margins. For example, banks that faced increasing credit risk as the proportion of non-performing loans went up responded by hiring consultants to put in place proper credit risk management system. High non-performing loans reflect the poor business environment and distress borrowing, which is attributed to the lack of alternative sourcing for credit when banks

do not have in place effective credit risk management policies, and the weak legal system in enforcement of financial contracts.

Fiscal policy actions and the hiring of consultants to formulate credit risk management practices saw a decrease in losses incur by banks on credit.

5.4 Policy Recommendations

In the light of these conclusions, some policy recommendations that would follow logically from them can be outlined:

Commercial banks in Liberia should focus more attention on capacity building and special training of bank managers whose function relate to credit and loans to serve as a conduit of giving them sufficient knowledge on how to deal with credit issues and mitigate credit risk faced by these banks.

The legal system of Liberia should be reformed to enhance the enforcement of financial contracts. This would work as an incentive for banks to invest in information capital, thus reducing the information asymmetry problem. Consequently, the proportion of nonperforming loans will be reduced hence lower risk premium attributed to credit risk. In addition, efforts should be made to revitalize the growth of the economy and to attain macro stability in order to increase the return on investment and reduce uncertainty.

It is necessary to strengthen the institutional framework, including review of the regulatory and legal framework. This should target enhancing confidence among depositors and investors and strengthening enforceability of loan contracts.

As a result, this will enhance stability in the financial sector and reduce costs of capital to investors. It should also serve to strengthen the supervisory and monetary control role of the Central Bank and will avoid the current conflict between monetary and fiscal policy in the giving out of loans. At the same time, there is an urgent need to strengthen the credibility of monetary

policy. This also allows the financial sector to gain stability and thus reduce risk to investors. Enhancing enforcement of contracts would also reduce risk premium in the financial sector. Macroeconomic stability is vital for a successful financial liberalization process, thus policy actions should be taken to ensure sustainable growth of the economy.

5.5 Limitations of Study

This research experienced numerous hindrances as some commercial banks refused to provide some information required claiming that they could not provide sensitive bank information.

Due to the inability of some of the commercial banks to respond to questionnaires distributed to them in the manner and form required, the study was only able to gather, analyze and utilize the information provided by seven of the nine commercial banks in Liberia and these were used to form conclusions on the relationship between credit risk management and financial performance of Liberian commercial banks.

The study was also limited by the failure of commercial banks to provide quantities data about the monetary cost losses incur as a consequence of lack of effective credit risk management policies and also the amount incurred on hiring consultants to develop their credit risk management policies.

The nine commercial banks also did not respond timely in filling out questionnaires send to them thereby delaying the time for the conclusion of the study. Due to the distance Liberia is from Kenya, the filled questionnaires were also transported through a third party taking days to arrive in Nairobi from Monrovia, impacting the completion of the study.

5.6 Suggestions for Further Research APPENDICES

For a more encompassing and exhaustive empirical analysis, disaggregated financial data, especially for the banking subsector are required. These data are required in order to capture factors such as: impact of Credit risk on, i.e. the level of non-performing loans, Market power, Transaction costs, and Banks' adjustment strategies at the end of the period, Interest rate risk as reflected in loan-term structure and available deposit facilities, an in-depth study on institutions and risk analysis.

In addition, it would be interesting to examine the credit risk management policies information content in terms of forecasting macroeconomic variables such as investment, inflation and growth. What is the relationship between the credit risk management and growth of the Liberian economy versus loans performance? What is the implication of the lack of credit risk management policies by commercial banks on loans payments? These are questions that should be addressed in future given the importance of the subject for the financial market.

APPENDICES QUESTIONNAIRE

SECTION A: GENERAL INFO Appendix I:

Note: The information in this questionnaire will be treated confidentially and will not be used for any other purpose other than research.

1. What is your current designation within the Bank?

Credit Risk Manager

Head of Department

Credit Officer

2. How many years have you been in the Banking industry?

1-3 years 4-10 years 11-15 years

16-20 years above 21 years

SECTION B: CREDIT RISK MANAGEMENT

3. Does your organization have specific credit policies for managing loan risks?

Yes No

If yes, in your view, how much do the following parties contribute in formulating the credit management policies for the bank? (Use a five-point scale where 1=Not at all, 2=little extent, 3=moderate extent, 4=good extent, 5=very great extent)

Parties involved in credit risk management	1	2	3	4	5
Employees					
Customers					
Other parties					

APPENDIX II QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

Note: The information in this questionnaire will be treated confidentially and will not be used for any other purpose other than academic

1. What is your current designation within the Banks?

Credit Risk Manager []

Head of Department []

Credit Officer []

2. How many years have you been in the Banking industry?

1 – 5 years [] 6 – 10 years [] 11 – 15 years []

16 – 20 years [] above 21 years []

SECTION B: CREDIT RISK MANAGEMENT

3. Does your organization have specific credit policies for managing loan risks?

Yes []

No []

If yes, to what extent do you involve the following parties in formulating the credit management policies for the loans? (Use a five point scale where: 1=Not at all, 2=little extent, 3=Moderate, 4=Great extent, 5=Very great extent)

Parties involved in credit policies	1	2	3	4	5
Employees					
Consultants					
Other, please specify					

SECTION C: RISK ANALYSIS AND ASSESSMENT

4. (a) Does your institution have a policy on risk analysis and assessment?

Yes [] No []

(b) Are there any standardized procedures for analyzing and assessing risk?

Yes [] No []

5. Kindly select the analysis and assessment (s) your institution adopts to test the level of risk facing the institution.

	1	2	3	4	5
The character, reputation and credit history of the applicants					
Amount of outstanding debt					
Bankruptcies					
Inspecting late payments					
Length of credit history					

6. Does your organization offer training to officers in the loans department to assist in analyzing and assessing the risk facing the institution?

Yes [] No []

SECTION D: RISK MONITORING

7. Which of the following risk mitigation techniques of monitoring credit risk does your institution use?

Collateralization []

Guarantor []

Insurance []

Securitization []

8. To what extent does your institution use the following securities as collateral in facilitating risk monitoring?

Jewelry	1	2	3	4	5
Cash deposit					
Assets					
Life insurance policy					
Debentures					
Land					
Shares					

9. Credit reminders are part of credit monitoring procedures. How often does your institution provide credit reminders to your clients?

After 1 to 3 months

After 3 to 6 months

After 6 to 9 months

After one year

SECTION E: BANK CREDIT RISK MANAGEMENT PROCEDURES

10. To what extent does your bank use the following bank credit risk management practices?

Collateralization	1	2	3	4	5
Guarantor					
Insurance					
Securitization					

11. What actions does your institution take in case a customer defaults the loan

Sue customer in court

- Public auction
- Claim with insurance
- Ask customers to pay loan without interest
- Use collateral as security

12. Which of the following are the key components of Risk management Systems strategies?

- Credit reminder
- Guideline for loan
- Credit criteria
- Credit recipe ration loan and agreement
- Risk mitigation
- Training
- Credit culture

13. Kindly rate the effectiveness of the following credit management practices and their effectiveness on the organization performance using 5 as very effective, 4 as more effective, 3 as effective, 2 as less effective and 1 as not effective.

	5	4	3	2	1
Risk Identification					
Risk analysis and Assessment					
Risk Monitoring					
Bank Credit Risk management					
Credit Risk Management Procedures					

SECTION F: RISK IDENTIFICATION

14. Does your organization have specific procedures in risk identification?

Yes []

No []

If yes, to what extent do you involve the following parties in formulating the risk identification?
 (Use a five point scale where: 1=Not at all, 2=little extent, 3=Moderate, 4=Great extent, 5=Very great extent)

Parties involved in risk identification process	1	2	3	4	5
Employees					
Consultants					
Other, please specify					

To what extent does your organization involve the following parties in the risk Identification process? (Use a five point scale where: 1=Not at all, 2=little extent, 3=Moderate, 4=Great extent, 5=Very great extent)

Parties involved in risk identification	1	2	3	4	5
Internal auditors					
External auditors					
Senior employees					
Middle and lower level employees					
Other, please specify					

APPENDIX III

LIST OF COMMERCIAL BANKS IN LIBERIA AS AT MAY 2012

1. Liberian Bank for Development & Investment (LBDDI)
2. Ecobank Liberia (Limited) (EBLL)
3. International Bank Liberia (Limited) (IBLL)
4. Global Bank (Liberia) Limited (GBLL)
5. First International Bank Liberia Limited (FIBLL)
6. United Bank for Africa Liberia Limited (UBALL)
7. Access bank Liberia The Microfinance Bank
8. Guaranty Trust Bank Liberia (GTBL)
9. Afriland First Bank

Source (<http://monrovia.usembassy.gov/pdfs2/list-commercial-banks.pdf>) as at 12th May 2012. www.cbl.lr)

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