Credit Risk Management in Islamic Banks: With Special Reference to Non-performing Finance in the Sudanese Banks, 2002-2014

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Elzein Abd Allah Yousif Ahmed

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Credit Risk Management in Islamic Banks: With Special Reference to Non-Performing Finance in the Sudanese Banks, 2002-2014

Elzein Abd Alla Yousif Ahmed

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DECLARATION

I hereby declare that this thesis is based on my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at the University of Gezira or any other similar institution.
DEDICATION

To my family
AKNOWLEGEMENTS

The utmost praise is to be to Allah Who taught by the pen, taught man what he knew not; and prayer and peace be upon the teacher of humanity; Mohammed - the messenger, his wives - the mothers of the believers, and his offspring.

It gives me great pleasure to express my gratitude to my supervisors: Dr. Osman Ibrahim El-Syyed; former professor of Economics at the universities of Khartoum and El-Nilein, and Dr. Mohammed El-Amin Tegel-Asfia; a professor of Accounting and Finance at the University of Gezira, for their guidance, discussions, and help without which this thesis would have never been completed. Also, I would like to thank the management of the Central Bank of Sudan for financing the study, and for providing basic data about the non-performing loans in the Sudanese Islamic banks. My thanks are also extended to the Ministry of Interior represented in the General Department of Prisons for making it possible to collect data from banks' clients who were prosecuted and jailed (Al-Huda and Omdurman Women prisons) for failure to pay-back the finance provided by the banks. My thanks should, also, be extended to the previous and current management of the Institute for Islamization of Knowledge at the University of Gezira; my colleagues including the researchers, the employees, and the workers, however, special thanks are due to Miss Fawziyya Abdul Wahab and Miss Inaam Hasan for helping with typing some parts of the thesis. Lastly, my thanks are due to the staff of the Center for Population Studies at the University of Gezira, especially Dr. Aiman Mahjoub for technical help regarding data entry, and Madam Fatin Abdul Karim for her patience with data entry.
ABSTRACT

The study tried to investigate the interrelationship between the rising non–performing loans (finances) and credit risk management in the Sudanese Islamic banks in the period from 2002 to 2014. As such, some questions were asked including: how big is the problem? What reasons stand behind it? In addition, what are the roles of the regulatory and banking institutions in the rise and buildup of NPLs (finance)? To answer these questions, the study pursued such objectives as: to elaborate on the extent of NPLs (finance) problem; to investigate the main reasons standing behind it; to explore the credit risk management approaches used; and to draw some recommendations. To attain these objectives, the research used a descriptive-analytical methodology. The course of the study was determined through testing a number of hypotheses including: that the problem of non-performing loans/finances has been spurred by weak legal and regulatory framework of the supervisory authorities; that the problem of NPLs/finances has been spurred by lack of (or weak) credit risk management frameworks in the banks concerned; and that the problem of NPLs/finances has been spurred by adverse macroeconomic conditions. In view of these hypotheses, the following results were obtained: that the legal and regulatory framework of the supervisory authorities is reasonable and did not spur the problem; that the credit risk management frameworks in the banks under study is not weak, and therefore, did not spur the problem; that the adverse macroeconomic conditions surrounding the various economic sectors in Sudan have spurred the problem. In view of the findings, the study raised some recommendations including: The serious process of studying the bankruptcy law with a view of amending it in the light of the soul of the Islamic shari’a, which calls for due consideration of the conditions surrounding the debt-inflicted entities, and making possible for them the extension of the payback period of the due financial facilities; intensification of efforts to make sure that there is commitment to the policies, measures, and tools set by the regulatory institutions in charge; designing of a strategic development plan for the financial industry in Sudan including the insurance sector, and taking into consideration the related standards set by international organizations in order to obtain regional and international endorsement; intensification of efforts aiming at innovating and developing new Islamic financial products that fit the various sectors’ needs, hence enhancing the process of financial diversification, which reduces risk, in turn; and Making sure that the staff in charge of bank risk management, in general, and credit risk management, in particular, is always well-trained to carry out its duties. In addition, recommendations for further studies are raised including: studies that need to be carried out at all levels of the factors responsible for the problem of NPLs (Finance) including the institutions and the people in both the internal and external environments of the banking institutions; and studies about the problem of non-performing loans/finances in Islamic banks need to be taken in other contexts of countries to make sure that such a problem and its influencing factors are not inherent to Islamic banks.
ملخص الدراسة

تناولت هذه الدراسة البحث في طبيعة العلاقة بين تراكم الديون (التمويلات) الهالكة والأطر التي تدار بما مخاطر الائتمان في البنوك الإسلامية السودانية. وعليه فقد حاولت الدراسة الإجابة عن بعض الأسئلة منها: هل هو الدور الذي لعبه الجهاء الرقابية، والبنوك ذاتها في ظهور هذه المشكلة وتامها؟ بالإضافة إلى دور حالة الاقتصادية الكلي في تطور المشكلة، وعليه، هدفت الدراسة إلى تقصي الحقائق حول حجم هذه المشكلة ومعرفة أسبابها. ثم النظر في مناهج إدارة مخاطر الائتمان في هذه البنوك وتقييمها. وتحقيق هذه الأهداف وتوجيه مسار البحث تم وضع مجموعة من الفرضيات منها: مشكلة الديون (التمويلات) الهالكة حفزتها مشكلة ضعف الأطر القانونية والتنظيمية للجهات ذات الصلة، ومشكلة الديون (التمويلات) الهالكة حفزتها عدم أو ضعف أطر إدارة مخاطر الائتمان في البنوك المعنية. اتبعت الدراسة المنهج الوصفي-التحليلي مستخدمة أدوات الاستبانة ومقابلة لمسح عينة مكونة من منشآت: الإدارات العليا في رئاسات البنوك الإسلامية، والمحافظين الذين تم حمايتهم وإصدارهم السجن (الهدى - الرجال وسجن النساء بأم درمان). في الحقيقة يعتبر المساس المباشر لذلك النوع من العملاء (وهم في الحبس) تقدراً لهذه الدراسة حيث تركز الدراسات عادة على استطلاع رأي العاملين بالبنوك دون غيرهم ولاحة في حالة استطلاع رأي العملاء فاعليته تؤخذ من يتوارى منهم على الجهات الرئيسية لتمكن المصارف، وبالتالي فإن العينت تكون غير مناسبة. ووصفت الدراسة مجموعة من النتائج منها: معقولية الأطر القانونية والتنظيمية للجهات ذات الصلة وعدم إثارة مشكلة الديون (التمويلات) الهالكة، معقولية أطر إدارة مخاطر الائتمان في البنوك الإسلامية وعدم اثارة مشكلة الديون (التمويلات) الهالكة، وساهمت ظروف الاقتصاد الكلي في ظهور مشكلة الديون (التمويلات) الهالكة، تسبب السلوك المراود لعملاء المصارف وحمايتهم في إتاحة مشكلة الديون (التمويلات) الهالكة، ونظر في أمر قانون اللائحة الحبس، وإصدار مشروطات ترشد على إنجاز العمل المعمر حتى لا يتفاقم الضرر على الاقتصاد الكلي. أخيراً، تقدمت الدراسة مجموعة من التوصيات منها: العمل على الاستبان الدائم للسياسات والأدوات التي تضعها الجهات الرقابية لإدارة أطر مخاطر الائتمان بتأزيج المصارف عن تأثر جودة البنوك، وضمان الامتثال لأوامر البنوك الإسلامية، وضع خطة استراتيجية لتطوير صناعة التمويل الإسلامي في السودان بما في ذلك اتباع المعايير المتقدمة التي تضعها المؤسسات الدولية ذات الصلة كبنك التمويل الإسلامي، وتنمية البنوك الإسلامية، ونظامية القبول الإسلامي وعالمية للكيانات الإسلامية وتطوير منتجات إسلامية جديدة تلبى الحاجات الخاصة لمختلف القطاعات الاقتصادية، وضمان القيام بمزيد من الدراسات لكل الشرائح ذات الصلة بضمان تأثير التمويل المصري من مؤسسات وأفراد، وعوامل أخرى في البيئة الداخلية والخارجية للبنوك الإسلامية، وعلى كل المستويات. وأخيراً، القيام بدراسات شبيهة في دول إسلامية أخرى حتى لمعرفة أسباب التوتر في مصارفها الإسلامية.
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CHAPTER ONE

INTRODUCTION

1.1 Background

In recent years there have been appalling recurrences of credit crises in individual economies as well as worldwide. According to the IMF (2008), over the period 1970 to 2007, 124 systematic banking crises were identified\(^1\). Such crises, take place despite the presence of regulatory standards, for example, Foster (2004) pointed out that by June 2002, the European Commission confirmed its decision to require all companies with their shares listed on a recognized European stock exchange to present their financial statements from 2005 in accordance with international accounting standards (IAS), issued by the International Accounting Standards Board (IASB). According to the (IMF 2008), at the peak of such crises, NPLs reached 26.8% in Albania’s banking sector (in 1994); 30% in Algeria (in 1990); 9%, 17%, 27%, and 21.1% in Argentina (in 1980, 1989, 1995, and 2001, respectively); 65% and 30% in Cameroon (in 1987 and 1995, respectively); 35% in Ghana (in 1982); 32.5% in Indonesia (in 1997); 40% in Kuwait (in 1982); 35% in Japan (in 1997); 30% in Malaysia (in 1997); 75% in Mali (in 1987); 77% in Nigeria (in 1991); 40% in Russia (in 1998); 13% in Sweden (in 1991); and 4.1% in the United States (in 1988). However, financial crises are often spurred by market as well as liquidity factors such as market risks relating to foreign exchange and financial derivatives; and shortages in liquidity.

Although in the conventional financial systems such credit crises could be interpreted as inherent in the systems through their very mechanisms, in Islamic financial systems credit crises should be of less recurrence because of the nature of the Islamic contracts upon which financial transactions are based, and which reduce uncertainty and fraud (gharar) by prohibiting them.

\(^1\) According to the IMF, in a systematic banking crisis, a country’s corporate and financial sectors experience a large number of defaults and financial institutions and corporations face great difficulties repaying contracts on time. As a result, non-performing loans increase sharply and all or most of the aggregate banking system capital is exhausted.
In Sudan, considering regulations as well as institutions, the financial system could be described as Islamic. For example, the central banking activities are generally based on shari'ah; including the use of Islamic financial instruments as well as the abolition of the interest rate. Yet, Islamic banks in Sudan are generally facing huge credit problems represented in mounting amounts of Non-Performing Loans (NPLs) (finance). Such NPLs (finance) have negative consequences on the business environment as a whole through reducing the return on investment; and particularly on banks through reducing their competitiveness and probably threatening them with bankruptcy.

1.2 The Problem Statement

Despite the fact that Islamic banks are supposed (by the very nature of the Shari'ah principles upon which financial contracts are based) to deal with the problems inherent in conventional banks, they face a host of challenges. According to Khan (2008), at present Islamic banks are extremely exposed to all sorts of risks, such as those relating to interest rates, liquidity and non-payment. For example, in Sudan Islamic banks have started their operations as early as 1978; with the establishment of Faisal Islamic Bank, yet some problems such as NPLs (finance) threaten the development of these banks. For, NPLs/finances constitute more than a quarter of the financial resources available to such banks. This casts light on the risks facing Islamic banks in Sudan and the processes through which such risks are managed. Hence, it could be argued that Islamic banks in Sudan are undergoing an enormous risk of NPLs (finance) that, if not properly addressed, may lead to an acute crisis in the financial system and perhaps to its collapse.

Accordingly, a number of questions could be raised to address the problem: How big is the NPLs/finances problem of Islamic banks in Sudan and what reasons stand behind it? What is the role of the supervisory institutions as well as the banking institutions in dealing with the problem? And, whether there are any kind of financial instruments used to deal with the problem and, if found, how effective?
1.3 Objectives of the Study

The main objective of this study is to discuss the problem of NPLs (finance) in the Sudanese Islamic banks. Meanwhile, the sub objectives are:

2.1 To elaborate on the extent of the NPLs (finance) problem in Islamic banks
2.2 To investigate the main reasons standing behind the problem of NPLs (finance).
2.3 To explore the credit risk management approaches in Islamic banks.
2.4 To draw some recommendations for remedial actions.

1.4 Hypotheses

In accordance with the above-mentioned statement of the problem and objectives, the study tested the following hypotheses:

4.1 That the problem of NPLs (finance) in the Sudanese Islamic banks has been spurred by weak legal and regulatory framework of the supervisory authorities.
4.2 That the problem of NPLs (finance) in the Sudanese Islamic banks, has been spurred by lack of (or weak) credit risk management frameworks in the banks concerned.
4.3 That the problem of NPLs (finance) in the Sudanese Islamic banks has been spurred by adverse macroeconomic conditions surrounding the various economic sectors in Sudan.
4.4 That the problem of NPLs (finance) in the Sudanese Islamic banks has been spurred by inappropriate and poorly trained human resources in charge of the risk management processes in the banks concerned.
4.5 That the problem of NPLs (finance) in the Sudanese Islamic banks has been spurred by cunning bank clients who just wanted to misappropriate these banks of the finance they had received.
4.6 That bank clients being not real business entrepreneurs have spurred the problem of NPLs (finance) in the Sudanese Islamic banks.
4.7 That the problem of NPLs (finance) in the Sudanese Islamic banks has been spurred by lack of initiatives taken by official institutions in charge of NPLs (finances) to mitigate the problem in cooperation with banks' clients.

1.5 Methodology and Data

Most studies about credit risk management, especially the ones investigating the problem of non-performing loans (finances), in particular, try to discern the basic reasons behind that problem by collecting data various surveys. Likewise, the present study uses an analytical-descriptive risk management framework as an approach to deal with the problem mentioned above. The framework consists of assessing a number of elements including the business environment, the role of supervisory authorities, the role and responsibility of senior management, the role of internal control, supervision, and staff in charge of risk management, types and quality of tools (instruments) used to mitigate the problem, and quality of bank debtors.

The study used two questionnaires and interviews as tools for data collection from two samples; the senior bank management, and bank clients who had experienced financial distress and failure, and whose loans (finances) have become non-performing. However, unlike most studies the present one is deemed more plausible. For, instead of surveying bank clients at the gates of the banks, i.e., clients who are not yet experiencing financial distress, it deals with clients who are actually experiencing financial distress and failure, and who have ended up being prosecuted and jailed, which represents the basic aspect of novelty is such kind of studies. Descriptive statistics, obtained by means of the so-called Statistical Package for the Social Sciences (SPSS), were used as indicators to reach judgments about the various hypotheses related to the state of credit risk management in the Islamic banks, in particular the Sudanese ones.

1.6 Scope of the Study

As the Islamic Shari'ah, generally, provides the guiding principles to be observed in financial Mua'mlat (transactions), it can be argued that the study encompasses all Islamic banks no matter where they are. Yet, due to the difficulty having to do with collecting data that might be deemed of a secret nature because of the nature of the issue discussed and
the kind of respondents, the study is confined to the Sudanese Islamic banks. Considering
the same reasons posing the difficulty in data collection, the study covers the period from
2002 to 2014. The choice of this particular period is based on the fact that the problem of
NPLs (finance) has been most clear in terms of an increasing trend, especially up to the
year 2011; and an issue that has drawn the attention of the official authorities concerned
such as the CBOS.

1.7. Importance of the Study

The study tries to contribute to an area of research; credit risk management in Islamic
banks (in Sudan) that still in need of more and more efforts to carry out similar studies.
Such kind of studies will help deal with the problems in this kind of emerging finance,
which needs support for more stabilization and competitiveness, therefore, enhancement
of its international endorsement. In approaching the problem of NPLs (finance), the
current study goes beyond the conventional way of investigation that has always disregard
bank clients as an influential factor in NPLs (finance), and even if taken into consideration
it is confined to the clients whose finance is not yet classified and decided as non-
performing. The finance of the bank clients surveyed and interviewed by this study is
classified as non-performing because the said clients are in prisons (Al-huda and
Omdurman Women). This makes the nature of the data obtained unique of its kind;
therefore, more depth of investigations and results is achieved.

1.8 Organization of the Study

To accomplish its purpose, the study unfolds itself into a writing structure that included
an introductory chapter laying down the foundations of the research by stating the problem
under investigation; the objectives of the study; the hypotheses to be tested; methodology
and data; the scope of the study; the importance of the study; and the organization of the
study. The second chapter comes to throw light on the main concepts and issues of
financial risk management, in general, and credit risk management, in particular, under
the umbrella of "bank credit risk management". The third chapter presents previous
literature, in terms of, a discussion and a review, where the issue of risk management in
banks is approached.
Meanwhile, chapter four focuses on NPLs (finance) as an appalling issue that does not only threaten banking systems, but also the international financial system. Therefore, some light is shed, in this chapter, on some regional and international experiences with NPLs (finance). In addition, the chapter discusses the problem of NPLs (finance) in Sudan and examines the structure of the banking system and the macroeconomic environment in which it operates; as a framework in which the problem has grown up. Chapter five, presents the methodology of the study, where the methods and data are described. The study concludes with chapter six, where the data is analyzed and discussed, and a conclusion and recommendations are drawn.

For a sharper focus of the study, the next chapter deals with the bank credit risk management, where basic issues and concepts on risk management, in general, and credit risk management, in particular, are presented.
CHAPTER TWO

BANK CREDIT RISK MANAGEMENT

2.1 Introduction

This section lays down the conceptual foundation for the study. Its importance comes from the fact that it provides the key for understanding the rest of the sections and subsections constituting the various contents of the study. As such, the very title of the study provides the main pivot of this conceptual framework. Accordingly, some light will be shed on the concept of credit, in terms of definition, nature, kinds, importance, and policies and procedure.

The various risks and perils surrounding commercial bank business will be reviewed. In addition, a definition of the concept of risk management, in particular bank risk management, and its development will be reviewed. Moreover and finally, the definition of non-performing loans as a problem will, also, be discussed.

2.2 Credit

Generally, credit is defined as a transaction between two parties in which one (the creditor or lender) supplies money, goods, services, or securities in return for a promised future payment by the other (the debtor or borrower). Also, credit is defined as a "permission to delay payment for goods and services until after they have been received." However, with regard to banking, credit is defined as “a bank trust in its client when extending to him/her a sum of money (or other facilities) for use in a specific purpose within a specific period of time and in accordance with specific terms of settlement and a return there from." For the purpose of investigating the above-mentioned...

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problem, the study uses the concept of credit expressed in the last definition. Accordingly, no matter what kinds of Islamic financial modes used by Islamic banks, the business transactions between these banks and their clients take place in the sense of credit, i. e., trust.

From the above definitions, it is obvious that the concept of credit has a multifaceted nature involving different parties of interests, different time horizons, different interests, and different interlinked processes of exchange. Hence, one can classify the elements of credit as follows:

1. The credit parties: usually there are two or more parties involved in any credit transaction, the creditor is, of course the bank in this case, and the debtor, which could be a single person or entity or more.\(^{(5)}\)
2. The subject of the credit: the subject of the credit is the money or semi-money (cheques), which is transferred from the creditor to the debtor.
3. The purpose of the credit: the purpose of the credit is one of the most important elements of the credit transaction. For it shows the ordering of priorities in terms of economic sectors (and subsectors) as well as geographic locations. In so doing, considering the purpose of the credit into the credit process determines the extent to which bank management is committed by the implementation of the national economic policies, at large, and the bank's own policies and strategy in using the sources of credit available to it.
4. The credit duration: any credit transaction involves a time duration that specifies specific dates for the starting of enjoyment of the credit facility provided, as well as the determination of the manner in which the debt settlement process including the final date to clear the principal amount and the return. Thus, any default or delay in settlement on the part of the debtor after a grace period following the final settlement date, would lead to the reclassification of the credit facility as a bad debt, a non-performing loan, or otherwise.

\(^{(5)}\) In case of syndicated loans the credit is presented by a group of banks.
5. The Collateral: present day banking business is comprehensive, intricate, and being carried out in a competitive globalized market. This, in turn, necessitates that banks adopt various procedure, including provision of collateral on the part of the debtor, to make sure that their depositors' money is safe and available at any time. That is, banks request specific collaterals against the credit facilities they issue in order to safeguard themselves against the risks associated therewith, i.e., the credit risks. Such collaterals could be in the form of real or financial assets; and may sometimes be substantiated with other customers, of the bank, when they enhance the credit worthiness of their fellow customers through recommendations. Another important aspect of the issue has to do with the various types of credit. Such types are largely determined by the various stakeholders involved in the credit process as well as the lines of business that absorb the bank's activities. Hence, the following credit types could be described:

- According to the economic sector: generally, banking credit provision is directed to three different sectors including the business sector, the family sector, and the government sector. The credit provided to the business sector is distributed among the public sector companies, the private sector companies, and the co-operative sector.

- According to the number of creditors: taking into consideration the number of creditor banks, two types of credit could be described: Firstly, single bank credit, which is the dominant one in commercial bank business, and mostly in the form of facilities than in the form of loans. Secondly, multi-bank credit, where a number of banks form a syndicate to offer the required finance which, in turn, could be of a long-term nature; that the amount is huge; and the nature of the project or the activity to be financed is full of risks.

- According to the finance period: the nature and objectives of banks determine the nature of credit in relation to the governing terms. As such, three types of credit can be classified: Short-term credit; medium-term credit; and long-term credit. The short term credit is usually
offered to finance the current expenditure of clients and for a period not exceeding one year. Such kind of credit usually takes three forms: Working capital finance, phase finance, and seasonal finance. The medium-term credit is offered by banks to their clients to finance expansion, replacement, and renovation activities and, usually for a period between one to three years. Lastly, the long-term finance, which is usually offered to finance new projects and extends for a period exceeding five years.

- According to the collateral: the credit offered on collateral basis is the most commonplace form of credit in the banking business. Usually, there are two kinds of collateral used to safeguard the bank against any default by its debtor clients. That is, the personal collateral; and the physical collateral. Credit facilities offered on the basis of personal collateral are largely determined by a strong financial position of the client; good reputation of the client, and good experience and know-how of the activity to be financed. Meanwhile, credit facilities backed by the physical collateral are the tradition in the banking business. Such collaterals fall in the form of financial securities, commodities, commercial securities, contracts related to project development, stock of goods, real state and lands, …, etc.

- According to the purpose: the purpose behind the credit facility requested necessitates that kind of credit to fall into two forms: credit offered to finance the client's current expenditure including part of the working capital; purchase of raw materials; payment of wages and salaries, and the like. Secondly, credit offered to finance the client's investment expenditure, for example, the expansion of the production capacity.

- According to the currency nominated: the currency in which the financial facility is offered necessitates that credit falls into two categories, i.e., local currency credit, and foreign currency credit. The
local currency credit forms the majority of the banking business, especially when banking institutions are local-oriented. However, foreign currency credit may be used in tandem with local credit when banking institutions are involved in external trade activities.

- According to the mode of settlement: the agreements set between banking institutions and their client debtors stipulate specific modes of repayment of the offered finance. Hence, the following types of credit emerge:
  - Banking credit that is paid back as a lump-sum.
  - Banking credit that is paid back in specific installments and on specific dates.
  - Banking credit in which the payback of finance provided is determined in accordance with an agreement mostly left to the discretion of the debtor client to determine the mode of finance.

- According to the activity: from a macroeconomic perspective credit can be categorized into a number of groups as follows:
  1. Banking credit provided to commercial activities.
  2. Banking credit provided to industrial activities.
  3. Banking credit provided to the mineral activities.
  4. Banking credit provided to the agricultural activities.
  5. Banking credit provided to the construction activities.
  6. Banking credit provided to the transportation activities.
  7. Banking credit provided to the tourism activities.
  8. Banking credit provided to the service activities.

However, in conventional finance the whole range of credit types are formulated and created through a wide spectrum of financial products designed and developed under the umbrella of the free market economy (the capitalist economy) by means of the rate
of interest as a pivot of the determining market mechanism. That is, the rate of interest is the main factor used in the allocation of financial resources.

On the other hand, in Islamic banking the various types of credit are found, however, they are formulated and created within the precincts of Islamic Sharia that demarcates the foundations of financial transactions (Muamalat). Accordingly, all types of credit are created through special financial products designed and developed in accordance with specific Islamic financial contracts. However, the process of credit creation which comes as a normal activity of banking institutions, while conducting their main function of mediating between surplus fund units and deficit funds units in an economy, has great significance to the whole economic performance due to the following.

- Credit creation represents the source of money supply (the quantity of money in circulation) in the economy. It is well known that money supply influences the real sector economy through influencing the price levels.

- Credit creation enhances and streamlines a smooth exchange of goods and services both nationally and internationally.

- Credit creation plays an important role in increasing the efficiency of the process of resource allocation in an economy.

Accordingly, intervention, on the part of related authorities, becomes a necessity. Such intervention is made through setting some policies and procedure.

2.2.1 Credit policies

Credit policy can be defined as "the general framework consisting of a set of principles and rules that organize the process of studying, approving, and following up credit facilities; defining activities to be financed and related credit ceilings; and setting related costs of finance and time boundaries (for settlement), as well as setting the conditions to

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be fulfilled for each type of credit facilities"(7). Generally, the credit policy should be characterized with comprehensiveness and flexibility so as to accommodate the various factors of internal and external environments surrounding the banking business. Therefore a good credit policy enhances the bank's ability to avoid unexpected credit risks that may end up in financial losses; shaky image and trust in the bank; and eventually exposing the bank to insolvency and/or bankruptcy. In addition, a good credit policy must seek to fulfill the following objectives:

1. Streamlining the bank's activities and operations with the national economic policies and the priorities set therein to promote economic growth and development.

2. Realizing a suitable return through minimizing losses and increasing revenues. Also, supporting bank sustainability through ongoing buildup of reserves and, therefore, sound financial position.

3. Creating a platform for a positive mutual understanding between the bank and its clients, therefore enhancing bank image and trust.

4. Rationalizing the credit decision through setting certain standards for credit approval.

5. Supporting the process of team working and performance–oriented conduct among the bank’s employees as a result of invigorating the bank corporate culture.

Therefore, to fulfill the above mentioned objectives, the bank board of directors as well as the senior management should make sure that the bank strategy has emphasized and clearly stated the importance of credit policy and its direct influence on the various credit risks faced by the bank. Accordingly, the development of a good credit policy should have taken into consideration a number of related elements.

2.2.1.1 Elements of Credit Policy

Generally, there are five interrelated elements constituting the principles of credit policies: credit ceilings; proportion of collateral to the approved amount of a loan; priority sectors and activities; bank credit authorities, rate of mark ups and commissions; and system, rules, and procedure.

2.2.1.1.1 Credit Ceilings

At the outset comes the total credit to be extended by the bank. In carrying out its ordinary business, the bank tries to strike a balance between its targeted levels of profitability, and liquidity. Hence the volume of credit to be extended depends on the bank's management decision on the state of tradeoff between profitability and liquidity. In addition, credit ceilings involve the determination of specific volumes of credit to cash, and every type of credits to each geographical area; and to each of the clients(8). The determination of the various levels of credit ceilings may be accomplished as an internal decision of the bank; or as policy instruments used by the monetary authorities in pursuit of certain objectives.(9)

Moreover, credit ceilings are imposed on the various activities related to the different economic sector in an economy. In addition, credit ceilings imposed in accordance with different geographic areas are based on the rationale that each area, with its unique socio-economic conditions, represents its own business potential. Finally, varied degrees of experience in business together with the appropriate capacity to payback the credit extended, necessitates making credit decisions that set credit ceilings on basis of the extent to which a client is creditworthy, i.e., different clients enjoy different credit ceilings.

2.2.1.1.2 Collateral-to-loan proportions

One of the most important aspects of the bank credit policy is the determination of the loan proportions, i.e., the estimation of the amount of credit to be extended on the basis of

(8) Al-Khadairi, Ibid.
(9) Monetary authorities may be pursuing an Inflation reducing policy target, for example.
the proportion of the collaterals\textsuperscript{(10)} provided by the client, to the amount of credit applied for.

Generally, the easier to liquidate the collaterals provided; and the higher their prices are, the higher their loan proportions and vice versa. Accordingly, the bank set the maximum credit ceilings in terms of loan proportions for each and every kind of marketable collaterals provided by the client. The task of determining the appropriate proportion is carried out after it has been confirmed that the collateral meets all the specified conditions including:

(1) One’s legal ownership of the collaterals; one’s legal right to mortgage or sale such collaterals; and the extent to which the bank could be able to control that collateral.

(2) The extent to which the collateral is demanded in the market, and how easy it is to liquidate and at what price.

(3) The extent to which the type of collateral is in tandem with the policies and decisions of both the government and the bank concerning encouragement or not of the use of certain types of collaterals when applying for credit facilities.

2.2.1.1.3 Priority sectors and activities

The government efforts to spur economic development may necessitate making decisions and policies that encourage investments in certain economic sectors and activities vis-à-vis others. Also, the bank might have its own priority list of economic sectors and activities in extending credit. Such prioritization could be made on basis of present or future profitability. In addition, the bank efforts to diversify its credit portfolio may lead its management to adopt a method of prioritization.

\textsuperscript{(10)} The task of deterring the appropriate proportion is carried out after it has been confirmed that the collaterals meet all the specified conditions including one's legal ownership of the collateral; one's legal
2.2.1.4 Credit authority identification

The process of credit extension requires that credit operations are done with fastness, precision, and rationality. However, such requirements cannot be met without delegation of authority to carry out certain tasks or recommendations within the process of deciding upon the amounts of credit facilities applied for by the clients. The identification of credit authorities is made through an organizational structure describing the various levels of bank administration, delegated by the board as the highest credit authority, and the related job description for each level.

2.2.1.5 Mark-ups and fees determination

Returns, in terms of, mark-ups and fees should be stated clearly in the bank credit policy. For, the bank's plan of available funds uses, as well as, its marketing plan for its financial products and services, largely depends on the rates set for mark-ups and fees. However, it worth to mention here that the bank is not absolutely free to determine such rates: some factors, for example, the central bank credit policy; the degree of bank competition in the market as well as the cost of finance; and the bank capacity to employ the available funds, do contribute to the determination of the rates set by the bank.

2.3 The bank's Rules and Regulations

The sets of regulations, rules, and procedure, which are developed overtime formulate and nurture the bank’s culture influencing a lot of aspects of bank employee behavior and conduct and, therefore, indirectly influencing the levels of credit ceilings set by the bank.

Yet, despite the continuous efforts exerted by the bank management to diversify its credit extension portfolio, through offering the aforementioned types of credit, and the adoption of various kinds of rules, procedures, and regulations, banking business usually faces a lot of risks that sometimes, and when inadequately dealt with, may end up in poor bank performance such as diminution in income and NPLs that may, in turn, lead to even liquidation or bankruptcy. This indicates that risk is part and parcel of any business including bank business. Therefore, if the bank is to pursue its profitability objectives, it
should adopt a risk strategy to strike a balance between its profitability targets and the prevailing levels of risk. The risk strategy may opt for risk transference (to other parties); risk elimination; risk acceptance; or a mix of these options. No matter what strategy the bank adopts; the bank's risk framework should be comprehensive, flexible, and sustainable to deal with the various kinds of risks it faces. But the question now is: What is risk? And, what are the kinds of risks commercial banks face, in general, and the risks faced by commercial Islamic banks, in particular? The answers to these questions would be approached in the sections and subsections to follow.

### 2.4 The Concept of Risk

Literally, risk means the possibility of meeting danger or suffering harm, loss, .. etc.\(^{(11)}\) This meaning is not different when the world risk is dealt with as a term; where it refers to the probability of loss. Also, it is the likelihood of losses resulting from vents such as changes in market prices or default on credit payments. It can also be defined as the probable variability of returns\(^{(12)}\). Moreover, the term has subtle difference with that of the term exposure meaning the possibility of loss. In fact, exposure to financial markets affects most organizations, either directly or indirectly. For, when an organization has financial market exposure, there is a possibility of loss (but also an opportunity for gain or profit). However, according to McNeil, Frey and Embrechts (2005)\(^{(13)}\) risk is "any event or action that may adversely affect an organization's ability to achieve its objectives and execute its strategies". Yet, risk is strongly related to uncertainty. In fact, risk designates any uncertainty that might trigger losses. On the other hand, looking positively to the term facilitates discerning the fact that risk is, also, related to returns or profitability.

Notwithstanding, it is noteworthy here to point to the fact that in conventional finance, as opposed to Islamic finance, institutions, let them be financial or otherwise, determine the level of risk they want to assume at their own discretion, i.e., in accordance with the risk strategy and framework they adopt within the surrounding environment of

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the regulatory framework and market conditions. Contrary to that, in Islamic finance institutions are not left unconstrained to decide on their own with regard to their financial decisions. For instance, the preservation of wealth (mal) is considered as one of the basic objectives of sharia. Such objective should always be taken into consideration whenever an institution (or an individual) takes a decision concerning allocation of money and wealth. In fact, in Islam man is considered as a vicegerent of Allah (S.W.T) on earth. Hence to actualize his vicegerency, man should always submit to Allah (S.W.T) by executing all of His ordinances.

Therefore, from a sharia perspective the preservation of wealth takes a two-dimensional form: preservation from a point of view of existence; where positive efforts are exerted to develop that wealth, for example, keeping it in a safe place and custody, and invest it in real permissible (halal) activities. On the other hand, preservation of mal is taken from a point of view of depletion; where activities such as gambling and extravagance in consumption and other irrational spending, which is forbidden (haram) in Islam, are restrained. In the light of the latter, excessive risk (gharar) is deemed impermissible and whenever present in a transaction makes it null and void. According to Al-darir (1990), gharar is defined as "something or event having an indiscernible repercussion"(14). Thus, if the level of risk is normal sharia does not preclude business parties from executing their transactions. However, unlike conventional finance, Islamic finance levels the ground for all participant parties in business and, therefore, goes for the distribution of risks among such parties, i.e., its approach to finance is a risk sharing one, and not an approach of risk concentration on one party alone. Now the question is: What are most commonplace risks commercial conventional (and Islamic) banks usually experience?

The nature and severity of risks experienced by commercial banks are determined by a multifaceted package of factors. Such factors range from international, for example, due to the globalization of finance; they could also be related to the national environment,

for example, the financial and credit policies. In addition, market infrastructure, competitive conditions, and sector and line of business conditions play a great role in the determination of factors influencing commercial bank risks. Lastly, factors relating to the banking organization, in terms of management systems and staff do also influence the risk profile of banks.

2.5 Bank risks

Generally, commercial banks experience the following risk categories:

- Operational risk
- Liquidity risk
- Reputation risk
- Foreign exchange risk
- Market risk
- Credit risk

2.5.1 Operational Risk

Operational risk refers to the possibility that operating expenses may significantly deviate from the expected level, hence causing a reduction in net income and firm value. According to Bessis (2002), operational risks are those of malfunction of the information system, reporting systems, internal risk-monitoring rules and internal procedures designed to take timely corrective actions, or the compliance with internal risk policy rules. Such a kind of risk emanates from two sources; technology and people (all lines of staff), for example, system failure may delay a delivery of an urgent transaction or process checks thereby causing huge financial losses. Moreover, employee processing errors, theft, and fraud, as well as customer fraud may lead to bank inefficiency and sometimes undue

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(15) According to Bessis (2002), banking risks are defined as "adverse impacts on profitability of several distinct sources of uncertainty"

(16) Interest rate risk is intentionally ignored. For Islamic commercial banks do not directly experience it because they do not deal in interest based business.
financial losses. What is noteworthy at this juncture is that no matter how banking institutions adopt stringent controls, there is always a possibility of loss due to the presence of the human factor in risks pertaining to operation processes.

2.5.2 Liquidity Risk\(^{(17)}\)

The banking business of taking deposits and making loans render liquidity risks unavoidable. Therefore, banks would always be carrying out the task of matching liabilities with funding. According to Koch and MacDonald(2004), "liquidity risk is the current and potential risk to earnings and the market value of stockholder's equity that results from a bank’s inability to meet payment or clearing obligations in a timely and cost-effective manner". Thus, when there is an unexpected cash shortfall, the bank management should make a prompt step to meet the requirement for cash through increases in deposits and borrowings, loan (qard) repayments, investment maturities and the sale of assets. Sometimes, there is an acute inadequacy of liquidity and, therefore; the bank might opt for the sale of assets at less than the prevailing market prices, especially when warnings of bank insolvency become discernible. Yet, a bank has; also, to avoid excessive liquidity since it leads to low asset yields and poor earnings.

2.5.3 Legal Risk

Legal risk can be defined as "the risk that contracts are not legally enforceable (ultra vires) or documented incorrectly, leading to a loss for the firm"\(^{(18)}\). Legal risk is often subsumed under the operational risk because of the agreements existing between the banking institution and its counterparties. Such agreements should be capable of protecting the bank whenever there are disputes and problems with the counterparties. Accordingly, bank management should save no effort to scrutinize every piece of detail concerning legal documents and agreements. For, legal procedure is, usually, adopted and

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\(^{(17)}\) The Liquidity of a bank can be defined as the ability to meet anticipated and contingent cash needs that arise from withdrawal of deposits, liability maturities and loan (qard) disbursements.

undertaken when the size of the transaction is huge, in which case failure to prove legal rights would end up in huge losses, too.

2.5.4 Reputation Risk

Reputational risk is often treated as part of the operational risk. It is also directly related to the legal risk. According to Jorion (2003), reputational risk is defined as the "risk of indirect losses to earnings arising from negative public opinion" p. 563. The negative public opinion could be formed through statements, made by current or ex-employees of the bank, to the media, or when the bank faces lawsuits, especially, in cases involving financial scandals. Although reputational risk has an indirect impact on a bank financial outcome, it is so serious that it may lead to financial bankruptcy.

2.5.5 Market Risk

Market risk is considered one of the most important risks facing banks. According to Koch and MacDonlad (2004), market risk is defined as "the current and potential risk to earnings and stockholders' equity resulting from adverse movements in market rates or prices". Market risk works through three instruments: Equity or security price risk, foreign exchange risk, and interest rate risk (in conventional finance). The equity and security price risk deals with how changes in market prices, interest rates, and foreign exchange rates affect the market values of any equities, fixed income securities, foreign currency holdings, and associated derivatives and other off-balance sheet contracts. Foreign exchange risk, in particular, arises from changes in foreign exchange rates that affect the values of assets, liabilities, and off-balance sheet activities denominated in currencies different from the bank's domestic currency. It exists because banks hold assets and issue liabilities denominated in different currencies. When the amount of assets differs from the amount of liabilities in a currency, a change in exchange rates produces a gain or loss affecting the market value of the bank's stockholders' equity. This risk is also found in off-balance sheet loan commitments and guarantees denominated in foreign currencies(19).

Having briefly reviewed the various categories of risks undergone by commercial banks, the remainder of this section will delve into credit risk, which is considered the most important risk undergone by commercial banks; and the main theme of this research. Therefore, a wider perspective will be taken to highlight it.

2.5.6 Credit Risk

Credit risk is associated with the quality of individual assets and the likelihood of default. Also, credit risk is connected to the potential variation in net income and market value of equity resulting from nonpayment or delayed payment of loans (or any Islamic financial facility in case of Islamic banks). According to McNeil, Frey, and Embrechts (2005), credit risk is “the risk of not receiving repayments on outstanding investments such as loans and bonds, because of the default of the borrower”\(^{(20)}\). However according to Jorion (2011), credit risk is defined as the "risk of an economic loss from the failure of a counterparty to fulfill its contractual obligations"\(^{(21)}\). Moreover, counterparty credit risk consists of both pre-settlement and settlement risk.

Pre-settlement risk is the risk of loss due the counterparty's failure to perform an obligation during the life of the transaction. This may include default on a loan or a bond (or any financial facility in case of Islamic banks) or failure to make the required payment on a derivative transaction usually, pre-settlement risk exists over long periods starting from the time it is contracted until settlement.

In contrast, settlement risk is due to the exchange of cash flows pertaining to a transaction, and is of a much shorter-term nature. That is, this risk arises as soon as an institution makes the required payment and exists until the offsetting payment is received. In addition, it is noteworthy to point to the fact that credit risk emanates from both external and internal factors. The external factors include changes in economic conditions, especially during downward trends of recession and in events of financial crises. Also, unfavorable market movements negatively affecting counterparties, lead to credit risk. In contrast, internal factors include: weakness in credit management and/or bank investments

\(^{(20)}\) See: Page No.3. 
\(^{(21)}\) See page No. 451
resulting from lack of staff experience or inadequate training; lack of a rational credit policy in the bank; weaknesses in pricing policies; and weaknesses in credit control procedures. However, the external and internal factors can further be classified into the following forms of credit risks:

1. Risks pertaining to the general conditions.

2. Risk pertaining to the counterparty debtor.

3. Risks pertaining to the business activity within which the debtor is involved.

4. Risks pertaining to the creditor bank.

Risks pertaining to the general condition are spurred by a number of reasons including:

a. The national credit policy adopted by the country's monetary authority. That is, the nature of credit policy, in terms of expansion or contraction and the allocation of credit in favor of certain economic sectors, sometimes has negative repercussions on bank performance and credit recovery, especially, when expectations do not come true. For example, in case of a contractionary credit policy that cost of credit rises up and therefore, the capacity of business projects to realize their objectives tend to be limited.

b. Unstable exchange rates, especially, when the national currency devaluates against foreign currencies, investment projects incur extra costs due to rising local prices of production factors, and the need to allocate more quantities of a national currency to obtain imported inputs. In such situations banks would be exposed to greater instances of credit default on the part of their counterparties.

c. Economic openness policies may ignite waves of consumerism behavior, and lead to a prevalence of materialistic values, which in turn, influence people attitudes and behavior. This situation motivates people to frantically seek ways for fast wealth acquisition and, therefore, credit
risks are even more likely to take place on the part of both bank employees and bank clients.

d. Tax systems are generally weak and faulty in developing countries. For example, tax rates, procedure, and policies are sometimes far from appropriate and may turn to be major factors behind business stress and failures. For, such businesses, which most likely represent bank clients, get affected in two ways: firstly, production costs are forced to be higher than usual, hence, misalignment of output prices and lower market competitiveness. Secondly, deferred payment of taxes would lead to the accumulation of larger sums of money owed to the tax authority, which may take legal action to levy the required amounts of payments. In both cases, businesses would experience financial stress. Such kinds of situations lead to credit default on the part of bank counterparties.

e. Regulations with regard to the establishment of investment projects, export and import policies, and the business law constitute the part of the infrastructure influencing the performance of financial, and non-financial, institutions in the economy. Accordingly, the conduciveness of the regulatory infrastructure would necessarily lead to better outcomes, i.e. reduce credit risks. In contrast, non-conducive regulatory infrastructure invokes uncertainty of business outcomes, i.e., and leads to higher credit risks. Such kinds of risks affect both banking corporations and the various kinds of business enterprises, which actually represent the credit counterparties of the banks. That is, the likelihood of banks experiencing credit defaults is even more exacerbated.

f. The market size represents an important element of success for investments and businesses. For, investment projects need to operate at full capacity of production in order to realize reasonable returns through achieving least-cost of production targets. However, limited local markets hinder the possibility of cost effectiveness of production because of limited demand
for goods and services. Moreover, even if businesses opt for export outlets other aspects of risks would emerge.

g. Sometimes excessive liquidity lures banks to engage in an irrational and undeclared competition activities in order to win the biggest market segment of credit facility seekers. Of course, in doing so bank management loose grip of its own credit policies and, therefore, may end up in poor client qualities. The accumulation of such kinds of clients would lead to the accumulation of bad, and failure, credit facilities, which in turn, lead to the buildup of credit risks. Therefore, irrational competition between banks often lead to banking stress and exacerbate the risk environment surrounding them, regardless of the regulatory provisions and policies.

h. The nature of business activity influences the risk profile of the activity itself, for example, agricultural production usually experiences a myriad of seasonal risks including pests, climatic conditions, and sometimes over production itself. Thus, banks operating in agrarian economies or those banks concentrating their activities on agricultural sectors, often experience these kinds of risks.

Secondly, risks pertaining to the counterparty debtor most likely come as a result of the following reasons:

- Problematic Projects: the zeal and eagerness, on the part of companies and business owners, to acquire bank credit facilities may lead to non-deliberate investment decisions including the establishment of projects on the basis of faulty feasibility studies. The same thing could happen due the existence of the irrational competition between banks, as mentioned above, where due diligence in studying feasibility studies may not take place. When such situation prevails bank credit parties may become unable to repay the value of credit facilities owed to the banks.

- Undue Borrowing: at times business owners find no difficulty in accessing credit facilities of various bank institutions, and in excess of
what their business activities actually need. No doubt, such kinds of businesses eventually fall in traps of debts. For, such undue borrowing would, most likely, means that the use of such funds is not focused on the main purpose behind the business activity. Thus, the business would default on payback of the borrowed amount, and may end up in liquidation or bankruptcy.

- Lack of Experience: a large portion of bank credit counterparties consists of small and medium size business especially in emerging and developing economies. When such small and medium size businesses are run by their owners, whether as individuals or families, who lack experience in running business, in general, or in certain activities or sectors, often expose their businesses to a number of risks that lead to financial stress and default on credit facilities owed to other counterparties including banks.

- Mismanagement: business risks that lead to credit defaults are sometimes spurred by mismanagement. For, poor management often stands behind financial problems due to the lack of commitment in a biding by the overall business strategy and poor financial planning. The poor financial planning, in particular, lead to misuse of financial resources and imbalances in the assets-liability management processes. Therefore, business entities suffering from mismanagement would, most likely, find themselves in positions of credit risks and may default on credit payments due to banks and other counterparts.

- Market Share Reduction: the market share, especially, volume of sales determines the amount of returns and, therefore, the amount of profits vis-a-vis costs. Accordingly, any reduction in the main market where a business entity distributes its products (or offer its services) would become a source of risk that may end up in inability of paying back financial funds owed to other parties including banks.
- Financial resources mix: in cases of family and individual owned business, the management may mix financial resources of the owners with those of other parties including banks. The seriousness of such mix of financial resources appears when the management disburses the financial resources on personal and family purposes and not on business purposes.

- Problematic bank client: problems with the client dealing with the bank start at the outset when the client intentionally provides the bank with the wrong information about the business activities and financial results of their business operations. Moreover, the client becomes problematic when he/she does not abide by the bank's directives and stipulations set when the credit facility is disbursed. Also, client dishonesty and his/her dependence on VIPs (very important persons) and/or the use of illegal ways to obtain finance from the bank, and to announce bankruptcy of the project are some aspects of problems pertaining to bank clients. In addition, some clients flee their countries while still owe their banks due payments. That would mean: such clients do not want to pay or they are really unable to pay. Such kinds of behaviors on the part of the bank client would necessarily represent some sorts of risks facing bank credit.

Thirdly, regarding credit risks pertaining to the bank, the following reasons may represent the main sources of such risks:

1. Credit study reasons: some of the reasons relating to the credit study upon which the decision of credit provision is based include:

   - Lack of principles of good credit provision as guidelines of credit decisions.

   - Weakness in client credit worthiness.

   - Lack of unequivocal and well formulated credit decisions.

   - Inadequate surveillance and control processes on the part of the credit authority carrying out such responsibilities.
- Irresponsible credit management that does not depend on credit studies of bank clients.

- Inability to obtain reliable data about the bank clients when evaluating their capacity to pay back the credit facilities offered.

- Lack of cross checking such documents as ownership contracts, legal status, financial positions, certificates of experience in business management,…, etc. attached to the credit facility application provided by the client.

- Inadequate assessment of the real financial need of the client, hence the provision of credit facilities in excess of the actual needed, with the use of these excesses in activities other than the business ones.

- Lack of follow up of the use of the credit facilities provided to the bank clients.

2. Bank credit policy: each bank has its own credit policy that is formulated and adopted to create the required balance between the sources and the uses of funds. However, the bank credit policy may turn to be a source of credit risks that may include:

   a. Lack of the credit policy that is clear, integrated, and comprehensive.

   b. Weakness in the bank human resource that lack adequate qualifications and training to understand and implement the bank credit policy.

   c. Lack of an effective credit information system to be used in the bank credit management process.

   d. Weakness in the general management system of the bank including the internal control.
3. Collaterals: collaterals are tangible and intangible assets that are used as securities for the credit facilities offered by banks. Such collaterals are liquidated into cash whenever due payments of the credit facilities turn into failure. Therefore, the main aspects of such collaterals are their values to cover the amount of the credit facilities offered, and the speediness with which they are liquidated, i.e., turned into cash. Accordingly, the credit authority must have a system for assessing the collaterals provided. Otherwise, some risks may emerge as results of:

- Overvaluation of collaterals offered by the bank clients.

- Overlooking of stipulations and terms related to collaterals such as ownership, store keeping, and laws and regulations governing the exchange of these collaterals.

- Lack of conducting regular and strict information surveys about the kind of products used as collaterals, especially these kinds of products experiencing drastic-changing prices.

- Lack of insuring the collaterals against the risk related to them.

- Lack of following up the turnover of the collateral products (especially goods) to make sure they satisfy the stipulated standard.

- Approval of collateral withdrawal by the bank client before the overdue repayments have been settled completely to the bank.

- Complexity of enjoying more than one finance while using the same collaterals offered to the banks.

- Lack of obtaining non-traditional collaterals that influence the client psychologically and socially not to default on any kind of credit repayments owed to the banks.
- Inaccuracy of credit risk assessment related to the transactions financed, where it's often the bank's management natural inclination to maximize profits that brings risks up.

Having generally reviewed the various kinds of risks that face both conventional banks and Islamic banks, with special emphasis on credit risk as a main theme of this study, in the section to follow the study will shed light on the kinds of risks specific to the Islamic banks. For, Islamic banks philosophy, and therefore, objectives differ from that of conventional banks. Moreover, the principles upon which the financial counteracts and transactions are based are completely different from those of conventional finance.

2.6 Islamic Bank Risks

It is, generally, believed that Islamic banks face more risks than conventional banks. This statement is, to a large extent, true because Islamic banks face the same risks experienced by conventional banks in addition to the risks, which are considered as specific to them. Perhaps the situation might be different if Islamic banks operate in an ideal Islamic social system where the whole environment of the political, social, and economic subsystems is functioning in accordance with the Sharia principles. Of course, this is not the case in today's Islamic world where the afore-mentioned subsystems are dominated by materialistic values.

In general, Islamic finance uses two approaches in financial transactions (Muamlat): transactions based on fixed return contracts such as Mudharaba, Salam, Ijarah, and Istimna. And, transactions that are based on variable return contracts such as Musharaka and Mudharaba. In practice, Islamic bank finance operations concentrate on the fixed return contracts approach, which actually represents their domain of credit risk. Such risks, which are special to the Islamic banks, have to do with the Sharia aspects of the contracts. In the case of Murabaha contracts, the following sources of risk may take place:\(^{(22)}\):

1. When the bank client buys the goods from the supplier, and thereafter initiates a *Murabaha* contract with bank to obtain such goods. Then he/she personally takes the bank cheque to the supplier without the bank buying the goods itself and making sure of their compliance with standards.

2. When the bank client is indebted to the supplier of the goods, the client presents the amount indebted in a form of a bill without the bank knowing that. Then a *Murabaha* contract is issued and finance is provided by the bank in just a disguised form.

3. When the client initiate a *Murabaha* contract where he/she has a hidden agenda in the transaction. For example, when the client exchange roles with the supplier to obtain finance or when he/she does the same with his/her family members.

4. When the finance process between the client and the bank is completed in one session without the bank having to assume any effort other than offering the finance, which is the case when there is mediation through senior management and government officials, i.e., a case of favoritism and corruption.

5. When the client needs money, he/she agrees with the supplier to provide him/her with the goods which, when the *Murabaha* contract is enforced with the bank, is sold back to the supplier at less than the initial prices, at the same time.

The various kinds of risks mentioned above, and others that have not been mentioned here, differ in their nature and degree of concentration from one bank to another in the same country and across countries, and from one region to another; and across the world. Regardless of the degree of development of the banking system and the environment in which banks run their business, the ultimate fact is that these risks exist, and will continue to exist and haunt banking institutions.

However, the existence of these risks has led banks, monetary authorities, and specialist regional and international organizations to deal with them through general frameworks of strategies, policies, tools, techniques, and regulations, i.e., a whole system of risk management.
2.7 Risk Management

Risk management is defined as a process by which managers identify, assess, monitor, and control risks associated with a financial institution's activities\(^{(23)}\). According to the Oxford dictionary of finance (1993), risk management is defined as "the control of an individual's or company's chances of losing on an investment. Managing risk can involve taking out insurance against a loss, hedging a loan interest rate rises, and protecting an investment against a fall in interest rates. A bank will always try to manage the risks involved in lending by adjusting the level of charges and interest rates to compensate for a percentage of losses". Thus, it is clear that risk management is a process involving an evolving and interlinked set of functions that is part and parcel of the bank management as a whole. The ultimate goal of risk management is to facilitate a consistent implementation of both risks and business policies. Moreover, that management process covers all necessary management actions for taking decisions and monitoring operations that influence the risk and return profiles of transactions, sub-portfolios of business lines or the overall bank portfolio. They extend from the preparation of decisions, to decision-making and control. They include all procedures and policies required to organize these processes. Risk management combines top-down and bottom-up processes with horizontal processes. The top-down and bottom-up views relate to the vertical dimension of management, from general management to individual transactions, and vice versa. The horizontal layers refer to individual transactions, business lines, product lines and market segments, in addition to the overall global level. They require moving back and forth from a risk-return view of the bank to a business view, whose main dimensions are product, families and the market segments\(^{(24)}\). The question now is what are the strategies and products used by banks to deal with the different kinds of risks they face? Generally, banks, and other financial institution, adopt three broad alternatives for managing risks\(^{(25)}\):

1. Do nothing and actively, or passively by default, accept all risks.

2. Hedge a portion of exposures by determining which exposures can and should be hedged.

3. Hedge all exposures possible.

These alternatives are directly, or indirectly, embedded in the risk management system and the risk culture in the bank as a whole, and practically take place through top-down or bottom-up channels. However, what is to be emphasized here is that it is an integrated process starting from the front-line desk to the board of directors and vice versa. Some of the steps taken within this process may include the following:

2.7.1 **Self-assessment Techniques**

Self-assessment techniques are of fundamental importance to the risk management process. For, such techniques involve no cost, spontaneous and highly protective because it is the bank own staff that are best placed to identify risks. The success of this kind of technique depends on the dominant risk culture in the bank and the characters of the employees in charge of risk management. This why there is a great influence of bank senior management and board of directors on self-assessment techniques through the objective standards and policies set to determine employee selection and corporate culture. Other aspects of the kind of employee, who have sensitivity to risk management processes, are qualification and training. Without good qualifications that are supported by well-designed training doses employees would not be able to accumulate the required experience and sense that help them discern the risk sources and inlets.

2.7.1.1 **Diversification**

Diversification is considered as one of the most important general strategies of risks facing financial institutions. Diversification takes place when an institution adds more investments to a particular portfolio to hedge against the investments already in it. By doing so, the institution reduces the risk inherent in any one investment, and increases the possibility of making a profit, or a voiding a loss. To obtain the best expected results of diversification, institutions, usually, use two types of it: horizontal diversification,
which involves investing in similar investments, and vertical diversification, which involves investing in very different investments.

Moreover, whereas diversification is useful in reducing, or managing unsystematic risk, it is of no avail for reducing systematic risks arising from events such as economic and political instability, eruption of wars, inflation, devaluation of currencies, …, etc.

2.7.1.2 Risk Modeling

Banks, like other financial institutions, adopt various modeling techniques to measure the risks they face, and deal with them. That is, banks use mathematical modeling methods to arrive at formulas reflecting their risk profiles. Then the whole model(s) is transposed into a computer software that is fed with all the required data concerning the surrounding risks in order to obtain solutions that help in risk measurement and evaluation, and therefore, help in pricing the various kinds of financial instruments including those used to hedge the risks. However, conventional banks have become preoccupied with quantitative risk modeling, especially in recent years, under the umbrella of financial engineering. However, the recent recurrent financial crises have shown that the risk management approaches are faulty, especially the modeling methods. According to Hubbard (2009)\(^{(26)}\) "where scientific data does exist, the data shows that most methods fail to account for known sources of error in the analysis of risk or, worse yet, add error of their own"

In the light of the main theme of this study, i.e., credit risk management, the section to follow will shed some light on the way credit risk management is carried out by banking organizations.

3.7.1.3 Credit Risk Management

Credit risk, or the risk that the counterparty will not pay back the money is the most prevalent, the most important, the most acknowledged throughout the banking history, and the most that needs to be managed. Thus, credit risk management is defined as "a process that involves the identification of potential risks, the measurement of these risks,\(^{(26)}\) Douglas W. Hubbard. 2009. The Failure of Risk Management: Why It's Broken and How to Fix It. New Jersey: John Wiley & Sons, P.4.
the appropriate treatment, and the actual implementation of risk models"(27). As such banks follow a number of ways to undertake the process of credit risk management. Some of such ways include(28):

1. **Selection**: To start a good credit risk management banks should start with a good selection of the related counterparts, clients and products. Good risk assessment models and qualified credit officers are key requirements for a good selection strategy. Of course, important credit decisions are made at credit committees. For counterparts with a higher default risk, more collateral is asked for to reduce recovery risk. The recovery risk is also reduced by requiring more stringent covenants, e.g., on assets sales. A good selection strategy also implies a good pricing of the products in line with the estimated risk.

2. **Limitation**: In credit risk management, limitation restricts the exposure of the bank to a given counterpart, it helps a void the situation that one loss or a limited number of losses endanger that bank's solvency. The total amount of exposure to riskier counterparts is more restricted by a system of credit limits. The limit setting of the bank determines how much credit a counterpart with a given risk profile can take.

3. **Diversification**: The manner in which banks approach allocation processes of their financial resources will provide a good diversification of the risk a cross various borrowers of different types, industry sectors and geographies. Diversification strategies spread the credit risk in order to avoid a concentration on credit risk problems.

4. **Credit enhancement**: When banks discern the fact that they are too exposed to a certain category of counterparts, they can buy credit protection in the form of guarantees from financial guarantors or via credit derivative products. By such protection, the credit quality of the guaranteed assets is enhanced. This is also known as credit risk mitigation.

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(28) Ibid P. 59, P. 12, University Press
To avoid problems and to build strong management information systems and to strengthen their credit risk management processes, bank organizations exert a lot of efforts to recruit a qualified, honest, and dedicated staff including credit officers who represent the bottom line of the credit risk management process. The credit officers should be well qualified and trained not only in specific business lines or activities but also in the various variants of the bank business activities and operations, i.e., bank credit officers should have an integrated and comprehensive knowledge of bank operations. Acquaintance of the economic, political, social, and environmental issues of the society is a must for a good credit officer.

The vital role of the credit officer is evident from the fact that the information provided in the credit facility application may hide an ugly face of the potential applicant though the information is true. That is, the experience and skills of the credit officer coupled with a common sense power that is augmented with dedication, honesty and interest in one's job, enable one to have a discerning eye to detect fraud and spot unusual situations and intentions of deceit.

Moreover, the credit officer should make sure that an information report about the potential credit counterparts fully conveys information on the following aspects\(^{(29)}\):

- Family background.
- The living standard the applicant enjoys.
- The applicant's own financial resources.
- The problems the applicant faces.
- The applicant's social status.
- Records of the applicant's previous business activities.
- The applicant's financial experience with other banks and individuals.

The applicant's legal power to deal with the bank.

Clearance of the tax file.

The nature of other business partners.

The quality of product or service offered.

Quality of performance management of the business.

Commitment to peer business standards.

Quality of governance.

Quality of management information system.

In addition to the above-mentioned aspects of information, Islamic banks entails that more information is needed on:

a. The applicant's commitment to the Islamic priorities in allocating investments.

b. The applicant's dealing in permissible (halal) activities.

c. The applicant's avoidance of dealing in interest (riba).

d. The applicant's avoidance of extravagance and conspicuous consumption.

e. The applicant's commitment to the Islamic modes of contracts (financial and non-financial).

However, it is not solely the ability, of the credit officer, to pass judgment about the potential credit counterparts that satisfy the requirement of credit risk management. Therefore, banks use other approaches such as credit scoring.
2.7.1.4 Credit Scoring

Credit scoring is a widely used credit risk management technique that analyzes the borrower’s risk. In the past, credit scoring focused on measuring the risk that a customer would not fulfill his/her financial obligations and run into payment arrears. However, more recently credit scoring has come to encompass loss and exposure risk, too. Nowadays, scoring techniques are used throughout the whole life cycle of a credit as a decision support tool or automated decision algorithm for large customer bases. Increasing competition, electronic sale channels and developments in banking regulations have been important catalysts for the application of automated and semi-automated scoring systems\(^{(30)}\).

Generally, a scorecard consists of a group of characteristics, statistically determined to be predictive in separating good and bad credit applicants/accounts. The scorecard characteristics may be selected from any of the sources of data available to the lender at the time of the application. Examples of such characteristics are demographics (e.g., time at residence, age, time at job, ..., etc), existing relationship with the bank (e.g., time at bank, number of products used, payment performance, ..., etc.), and so forth.

Each attribute, for example, the age range of (23-25) is assigned points based on statistical analysis, taking into consideration various factors such as the predictive strength of the characteristics, correlation between characteristics, and operational factors. The total score of an applicant is the sum of the scores for each attribute present in the scorecard for the applicant.

The successful use of credit scoring in managing bank credit risk depends on the extent to which the design and development of the scorecard; the credibility of the data-sources including data provided by the applicant, and data provided by credit bureaus; as well as the bank's organization of the internal data and the business insights, are carried out properly. As such the data sourcing (mining) may entail additional costs, however, the benefits reaped in terms of helping banks avoid huge losses, justify these costs. As well,

banks and other financial institutions resort to credit rating as an approach to manage the credit risk process.

2.7.1.5 Credit Rating

Credit rating is defined as "an assessment of the creditworthiness of an individual or a firm, i.e., the extent to which they can safely be granted credit"(31). Ratings are obtained through a thorough analysis of public and private information obtained from various relevant sources. Hence, the rating process involves a quantitative analysis, which takes into consideration the debt/financial facility structure, the financial statement, the balance-sheet data, and the sector information. In addition a qualitative analysis is carried out to augment the quantitative one. Some aspects of performance indicators considered by the qualitative analysis include: management quality, competitive position, and growth prospects.

Generally, credit ratings can be classified into various categories, for example according to the type of risk that is being considered. Thus, four types of risk can be distinguished: default ratings(32), recovery ratings(33), exposure ratings(34), and expected loss ratings. Moreover, ratings are defined for different time horizons. Short-term credit rating measures credit risk over a short time span (e.g., one year) and reflects a debtor's ability to fulfill his/her short-term financial obligations. Medium-and-long-term ratings typically consider longer time periods(35).

As for the time horizon for which the ratings measure credit risk, two broad rating philosophies can be distinguished. In a point-in-time rating system, the ratings measure credit risk over a relatively short time period, for example, one year. Therefore, they are

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(32) Default risk and recovery risk provide different perspectives on credit risk. Both can be merged into one overall risk measure that is called expected loss. Default ratings measure the relative default risk in terms of the probability of default.
(33) Recovery risk is the uncertainty of the recovery prospects when default has occurred. The recovery rating indicates the expected recovery rate.
(34) Future exposure may fluctuate for some types of financial products thereby introducing exposure risk.
greatly influenced by temporary shocks or cyclical effects in the borrower's condition. By using such system, the general economic situation will be directly or indirectly reflected in the credit assessment. On the other hand, in a through-the-cycle rating system, the ratings measure credit risk over a longer time horizon, for example five years or more, during which cyclic effects are filtered out. Through the cycle ratings are, generally, relatively stable and only change when changes in a debtor's risk profile are likely to be permanent.

Through-the-cycle ratings are, generally, provided by independent rating agencies of which the most famous internationally are: Moody's, standard & Poors, and Fitch. However, nowadays most financial institutions build their own internal rating systems using the point-in-time approach to measure credit risk and taking into account the current conditions and situation of a borrower. Stimulated by the Basel Accord, banks, in particular, have started developing more and more of internal rating systems. The extent to which such banks succeed in building good internal rating systems depends on their portfolio composition. However, even before the Basell II Capital Accord, banks used internal ratings as key summary measures for credit risk measurement, management, and decision making. As such, internal rating systems are tailored to the bank's individual needs, risk management practices, and internal operational processes.

Despite their crucial role in today's banks risk management, credit ratings may sometimes lead to big losses in terms of both financial loss and forgone opportunities in the credit market. For, the accuracy of the ratings depends a lot on the quality and relevance of the past experience, the quality of the model, the developers, and the rating analysts. Therefore, wrong ratings can occur via various sources: The use of non-representative data, a poor model, and wrong human expert judgment\(^{(36)}\).

Notwithstanding, due to the globalization of financial services and the resulting interrelations between financial systems across the world, with frequent financial crises contagion effects, some international efforts fruited in the presentation of Basel

\(^{(36)}\) A bank needs to accept that internal ratings can be subject to wrong assumptions, i.e., there emerge a risk that needs to be monitored and managed as well.
agreements to augment the international financial system through some financial requirements to be fulfilled by banks.

2.8 Credit risk management under Basel II

The Basel capital accord was concluded by the Basel Committee on Banking Supervision (BCBS) on July 15, 1988 in the Bank of International Settlements head office located in Basel\(^{(37)}\). Basically, the accord designates a minimum capital regulation framework for internationally active commercial banks so as to reduce the risk of the international financial system. The development of the accord culminated in Basel II, which aims at revising the rules of the 1988 Basel capital Accord in such a way as to align banks' regulatory capital more closely with risks.

The accord defines a uniform set of rules to calculate the minimum capital levels banks should hold as a buffer to protect their depositors and financial markets in the case of sever unexpected losses due to financial risks. Compared with Base I, the Basel II involves an important revision of the rules for credit risk towards higher risk sensitivity as well as greater reliance on the bank's internal expertise, internal historical databases, risk methodologies, models, and risk-parameter estimates. In turn, these methodologies require more stringent risk management practices and procedure.

The new Basel Accord is based upon three reinforcing pillars: Minimum capital requirement, supervisory review, and market discipline and reporting\(^{(38)}\). Therefore, under the first pillar; the minimum capital requirement comes the treatment of bank credit risk. That is, pillar one describes the rules to calculate and report the minimum regulatory capital standards for credit\(^{(39)}\). The credit risk charge, as a portion of the total capital requirements, can be calculated in three ways: The standardized approach, the foundation internal-ratings-based approach, and the advanced internal-ratings-based approach with increasing risk sensitivity.


\(^{(38)}\) Op cit p. 348.

\(^{(39)}\) As well as, for market and operational risk.
To complement the scene of risk management in banks, the following section will switch to throw some light on the issue of financial risks related to Islamic Banks. As mentioned earlier Islamic banks undergo the same risks face convention banks with the exception of the interest rate risk, in case they do not ever deal with conventional banks (both locally in case of dual financial systems operating both Islamic Banks as well as conventional banks, and globally when they deal with international conventional banks). In fact, the very nature of Islamic banks makes them experience some risks of their own. Such risks may even get exacerbated by the fact that Islamic banks mostly operate in socio-economic settings that are also conventional, i.e., not purely Islamic, as it has been mentioned earlier. In such situations, Islamic banks would mostly experience higher operating costs. In addition, they are forced to be regulated in accordance with the regulatory framework of conventional banks.

Accordingly, Islamic banks tend to use the same risk management techniques used by conventional banks with the exception of some methods such as financial derivatives, which are not permissible in Islamic finance. Thus, the following section discusses risk management in Islamic banks in relation to the Basel II accord and other regulatory framework.

One of the most significant aspects of the Basel II Accord is the greater use of the banks’ internal systems as an input to the capital assessment and adequacy calculations. Also, it provides incentives for banks to improve their risk management practices, with increasingly sensitive risk weights when banks adopt more sophisticated approaches to risk management. And, generally, it allowed greater national discretion on how specific rules may be applied, permitting countries to adapt the standards to different conditions in national financial markets\(^{(40)}\).

As for the minimum risk-based standard for capital adequacy, the Basel accord sets it at 8 percent of risk-weighted assets, of which Tier 1 should be at least 4 percent. Tier 2

amount is limited to 100 percent of Tier 1 capital\textsuperscript{(41)}. Tier 3 capital is limited to 250 percent of the amount of Tier 1 capital that is allocated for market risk.

Perhaps the question that poses itself is: Why focus on bank capital? And, the answer is straight forward; that it is vital for the bank performance and sustainability of its business; no matter the bank is Islamic or conventional. For, it is both a means of funding earnings generating assets and a cushion for stability. From the perspective of efficiency and returns, capital is part of a bank's sources of funding that can be applied directly to the purchase of revenue earning assets as well as be used to raise other funds, with the net benefit ultimately accruing to its shareholders. On the other hand, from the perspective of stability, bank capital is a cushion for absorbing shocks of business losses and maintaining solvency, with benefits accruing to depositors and other stakeholders\textsuperscript{(42)}.

Accordingly, an efficient bank management would always try to run a risk management process that would often try to keep an optimal bank capital structure (having to do with ratio of capital to deposits and the ratio of debt capital to equity capital). Islamic bank management in particular needs to be well informed and inculcated with the importance of adequate risk management. For, Islamic banks face tremendous challenges including:

1. The necessity of achieving international endorsement in the global financial system.

2. The necessity of leveling and supporting an equitable competition among banks, nationally, regionally, and internationally, and,

3. The necessity of creating an environment of financial stability in countries running financial systems where Islamic banks operate.

\textsuperscript{(41)} The calculation of Tier 2 capital (for example, inclusion of general provisions/loss reserves) depends on methods used to calculate the credit risk. That is, under the standardized approach to calculating credit risk, general provisions can be included in Tier 2 capital up to the limit of 1.25 percent of risk-weighted assets. Under the internal ratings-based approach to credit risk calculation, general loss reserves must be excluded from Tier 2.

Therefore, to be able to face these challenges, Islamic banks need to manage their risk in the light of Basel Accords. However, the nature of Islamic finance stipulates the use of Sharia-compliant financial products with some aspects of risk that are specific to them. For example, in the case of Murabaha, Salam, Istisnaa, and Ijara, some Islamic banks cannot levy financial charges in the event of late or non-payment, since if such banks benefit from such charges; this would represent an additional to the principal and hence may amount to *riba*\(^{(43)}\).

Recognizing such differences between Islamic and conventional banks, the Accounting and Audition Organization for Islamic Financial Institutions (AAOIFI) issued a draft document to be a standard on capital adequacy of Islamic financial institutions. This draft standard was further enhanced by the Islamic Financial Services Board (IFSB) by issuing the first capital adequacy standard for financial institutions (other than insurance) in December, 2006. According to Archer and Abdel Karim (2007) "in the context of institutions that offer IFS (Islamic Financial Services), if accounting information is to give a faithful representation of the economic transactions or events that it purports to represent, it is necessary that they be accounted for and presented in accordance with the substance as well as the form of the Sharia contracts that govern these transactions or events"\(^{(44)}\). As such, the capital adequacy standard set by the IFSB represents a corner stone in Islamic bank risk management.

### 2.9 Islamic Bank Capital Adequacy

The contractual relationships between an Islamic bank and its customers influence capital adequacy through the risk weights to be assigned as a basic step to calculate capital adequacy. The calculation of risk weights is different for Islamic banks than for conventional banks, due to\(^{(45)}\):

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\(^{(43)}\) Some Islamic fugaha (jurists) justify a levy of a financial charge in the case of intentional delay or non-payment.


(a) In Islamic banks assets based on trade are not truly financial assets and carry risks other than credit and market risks.

(b) In Islamic banks non-financial assets such as real estate, commodities, and Ijarah and Istisnah contracts have special risk characteristics.

(c) Islamic banks carry partnership and profit-and-loss sharing assets that have a higher risk profile.

(d) Islamic banks do not have well-defined instruments for mitigating and hedging risk, such as derivatives, which raises the overall riskiness of assets.

The IFSB standard deals with the minimum capital requirements for credit as well as market risks with relation to seven shari'a compliant financing and investment products: (a) Murabaha, (b) Salam, (c) Istisnaa, (d) Ijarah, (e) Mudarabah, and (g) Sukuk. According to the IFSB (2005), "The minimum capital adequacy requirements for IIFS shall be a CAR (capital adequacy ratio) of not lower than 8% for total capital. Tier 2 capital is limited to 100% of Tier 1 capital". Meanwhile, the IFSB has also issued a comprehensive document as guiding principles on risk management. As for credit risk, the document focuses on the importance of:

1. Having a strategy for financing, using various instruments in compliance with Sharia, whereby it recognizes the potential credit exposures that may arise at different stages of the various financing agreements.

2. Carrying out due diligence review in respect of counterparties prior to deciding on the choice of an appropriate Islamic financing instrument.

3. Having appropriate methodologies for measuring and reporting the credit risk exposures arising under each Islamic financing instrument.

\(^{(46)}\) As appendix will be provided for the part of the document related to credit risk.

\(^{(47)}\) The standard formula for CAR will be presented in an appendix together with the document's treatment of credit risk.
(4) Having in place *sharia*-compliant credit risk mitigating techniques appropriate for each Islamic financing instrument.

In fact, the role which has been played by the IFSB, and other similar organizations, is tremendous, and clearly fruited in a set of risk management documents that pave the way for a prudent Islamic bank management and supervision framework. If such framework is taken into consideration by institutions offering Islamic financial services by implementing it, then it will be possible for these institutions to stand on strong grounds to compete and get comparable with similar conventional institutions in the global financial market. However, such situation will not take place without a role to be played by the concerned regulatory and supervisory authorities within each country. For, the regulatory and supervisory authorities would make sure that the risk management framework is practically implemented in the real-life management of the financial institutions.

2.10 Role of Regulatory and supervisory authorities

The regulatory and supervisory systems represent the most important aspects of the financial infrastructure and environment influencing financial institutions at all levels including national, regional, and international. That is, financial regulation and supervision plays vital role in the development and soundness of the financial institutions, and the stability of the financial system as a whole. Therefore, the regulatory and supervisory framework should be designed in such a way as to fully realize the main purposes behind it. According to Brunnermeier (2009)\(^{(48)}\), traditional economic theory suggests that there are three main purposes behind regulation:

- To constrain the use of monopoly power and the prevention of serious distortions to competition and the maintenance of market integrity.

- To protect the essential needs of ordinary people in cases where information is hard or costly to obtain, and mistakes could devastate welfare.

- Where there are sufficient externalities that the social, and overall, costs of market failure exceed both the private costs of failure and the extra costs of regulation.

Currently the regulation and supervision practices, almost all over the world, are dominated by the guidelines drawn from the Basel Accords and the IFSB’s standards (for institutions offering Islamic financial services). Actually, the degree to which bank management and regulatory and supervisory authorities are keen on abiding by the requirements of regulation and supervision, determines the nature of bank performance and stability of the financial stability. However, in instances of weak institutions and corruption, regulation and supervision will not help. According to Boudriga, Taktak, and Jellouli (2009) regulatory devices either exert a counterproductive impact on bad loans or do not significantly enhance credit risk exposure for countries with weak institutions, corrupt business environment and little democracy. To reduce credit risk, the study calls for enhancement of the legal system, strengthening institutions and increasing transparency and democracy, rather than focusing only on regulatory and supervisory issues\(^{(49)}\). What is to be stressed here is that to have successful and sustainable Islamic financial institutions, including banks, the whole socio-economic settings surrounding them should be based on Sharia principles and run according to these principles. That is, to have full-fledged Islamic financial institutions and financial systems all the socio-economic institutions in the Islamic society should be established and managed in accordance with the Sharia principles.

To serve the purpose and domain of this study the review of the literature will highlight and discuss the research done on the areas of credit risk management and non-performing loans from both conventional and Islamic finance perspectives.

CHAPTER THREE
LITERATURE REVIEW

3.1 Conventional Bank Credit Risk Management

In a study evaluating credit risk management application in the Turkish banking sector, Anbar (2006) used an analytical-descriptive approach to survey a sample of 20 different types of local and foreign banks working in Turkey. He found that the banks had considered risk management more carefully after 2001, which is the same period the Banking Regulation and Supervision Agency (BRSA) started making some regulations about risk management. Moreover, he found out that the credit risk management was not up to the desired level, and that there were some shortcomings and problems including lack of sufficient data about credit risk measurement input\(^{(50)}\). Although the study was simple but it was, indeed, important because it encompassed different kinds of banks, and addressed almost all the variables relating to the process of credit risk management.

On studying the impact of capital requirement regulations on commercial banks’ credit risk in developing countries, Hassan and Hussain (2006) conducted a study involving 11 countries. They used a dataset where data on 300 banks from the 22 countries was used. Hence, they examined a five-year data span to look for changes in the relationship between capital adequacy and risk using a simultaneous equation model. However, they found that capital requirements regulations (Basel II) did not increase the capital ratios of the banks under study. Accordingly, they argued that "particular attention should be given to the business, environmental, legal, [and] cultural realities of such countries while designing and implementing such policies for developing countries"\(^{(51)}\).

Meanwhile, they found evidence that such capital requirements regulations did reduce portfolio risk of banks. They also found that capital ratios and portfolio risk were inversely related in contrast to the predictions of "buffer capital theory", "managerial a


version theory”, and "bankruptcy cost a voidance theory". In addition, they found that the level of financial development and credit risk were inversely related implying that as the financial sector of a country develops, it opens up a venues for alternative sources of finance, which results in reduced risk. Finally, their study found evidence that liberalization is associated with bank risk.

Indeed, the study is comprehensive and interesting, especially, it tackles the relationship between capital requirement regulations and bank risks. The finding that such requirements did not increase capital ratios led the researchers to emphasize that a host of factors influence the implementation of the capital requirement including cultural ones. This evidence is perhaps supported by the elements of the sample countries scattering around South America, Asia, and Europe\(^{(52)}\). This furnishes grounds for Islamic financial institutions to take into consideration the specialty of their foundation and source frameworks, upon which they are established, when dealing with the various kinds of risks they face\(^{(53)}\).

In addition Achou and Tenguh (2008), studied the relationship between bank performance and credit risk management. They used a regression model to test the nature of that relationship. The study found that non-performing loans, variable of the sample related to profitability, which means that better credit risk management results in better bank performance.

Of course, the result of the study is consistent with theory; however, the description of the data used did only show the five-year span of the time-series, and without indicating the number of banks surveyed. Definitely, this shortcoming casts doubt on the reliability of the results\(^{(54)}\).

Thiagarajan and Ramachandran (2011), investigated the relationship between credit risk and macro-economic and bank specific factors. The study included a total of 38

\(^{(52)}\) The countries are: India, Argentina, Hungary, Turkey, Venezuela, Slovenia, Malaysia, Thailand, and Chile.

\(^{(53)}\) The efforts done by the IFSB to develop a capital requirement framework for Islamic Financial Institutions will definitely lead to the development of the Islamic finance industry.

scheduled commercial banks listed in the Bombay Stock Exchange (BSE) to use a data set covering the period from 2001 to 2010. While the macroeconomic factors were represented by some variables like: the Gross Domestic Product (GDP), inflation, export-import ratio, real effective lending rate, and real effective exchange rate; the bank-specific factors were represented by variables such as Non-Performing Assets (NPA) total loans, total deposits, total equity, total assets, and operating expenses. The results indicated that there is a consistent increase in the total loans to total assets ratio for both public and private sector banks during the period of the study. In addition, the study showed that although there was a gradual decrease in the ratio of non-performing loans to total loans for both public and private sector banks from 2001 to 2008, there has been a gradual increase from 2009 to 2010, and this increase is significantly higher for private sector banks over the public sector ones. Also, there is a drastic and significant increase in the total loans to total equity ratio in the public sector banks during the last four years of the study\(^{(55)}\).

In fact, the results of the study are quite reasonable and explain very well the state of credit risk management especially in the post non-performing loans problem period, which led the Indian monetary authorities to launch comprehensive reformatory policies in the banking sector.

Moreover, Thiagarajan, Ayyappand, and Ramachandran (2011), studied the credit risk determinants of public and private sector banks in India using an econometric model, where non-performing assets are regressed on lagged non-performing assets in addition to a host of macroeconomic and bank-specific factors related to credit risk. The data set used reflected information on 22 public sector banks and 15 private sector banks for the period from 2001 to 2010.

The study showed that the lagged non-performing assets had a strong and statistically significant positive influence on the current non-performing assets. Also, the study revealed that both macroeconomic and bank-specific factors play a crucial role in

determining the credit risk of the commercial banking sector. No doubt, the study comes in line with other studies. However, it ignored another crucial determinant of bank credit risk; that related to the client.

Yap and et al. (2010)\(^{(56)}\), studied the factors affecting the Malaysian banks’ risk taking process. The study used a questionnaire to survey 200 officers of the commercial banks in the capital Kuala Lumpur and the state surrounding it (Selangor). The study highlighted a number of findings about the general profile of risk exposure, however, for the credit risk, it showed that inexperienced credit assessment officers, ineffective credit control, and poor administration of credit documentation are some of the internal elements that affect the bank’s credit risk exposure.

Abu Kamal (2007) conducted a study to evaluate the credit risk management systems and related strategies adopted by banks operating in Palestine, especially in consideration to the Basel II capital requirements. The study used an analytical descriptive approach to investigate the problem. The study showed the following findings:

1. The managing boards of directors of the banks under study adopt a strategy for credit risk management.

2. The managing boards of directors of the banks under study revise the bank credit policies; and implement appropriate corrections so that such policies come in conformity with the changing aspects of the bank’s internal and external environment.

3. Managing boards of the operating banks make sure that the executive management under control of the credit activities is carrying out its tasks in accordance with the strategies and policies, pertaining to credit risk management, which are approved by the managing boards.

4. Managing boards of the banks under study are closely following up the competency of the executive management in managing the credit activities

efficiently and effectively; and take the necessary procedure to identify, measure, and control risks.

5. The managing boards of the banks under study scrutinize the bank's financial results, periodically, through the managerial and financial reports.

6. The banks' senior managements abide by the strategies and goals set by the managing boards for credit risk management.

7. The credit facility departments, in the banks under study, carry out credit risk studies including market studies, managerial and technical assessment of the client's project, and financial analysis studies. In addition, the departments are capable of managing the levels of risks they decide to accept, and make sure not to have concentrated credit portfolios.

8. The banks have effective guidelines to control the credit extended through close follow-up so that credit risks are early detected and dealt with.

9. The banks are keen to have enough financial provisions to cover the expected losses in the credit portfolio.

10. The bank's staff involved in credit activities are qualified enough to analyses and assess the feasibility of extending credit.

11. The bank's staff in charge of internal auditing is independent and deals directly with the managing boards.

However, according to the study the banks surveyed find it difficult to measure credit risk as recommended by the Basel II capital requirements methods due to the following reasons:

(a) Lack of local credit rating companies.

(b) Little number of clients those are credit-rated by foreign credit rating companies.

(c) Lack of internal credit rating systems in the banks.
(d) Lack of comprehensive historical data, i.e., less quality of credit information, which can be used to measure credit risk.

(e) To put the capital requirements of Base II into place necessitates aligning the accounting system in accordance with the international accounting standards.

(f) Lack of the required training and education to develop the capacities and skills of the staff especially in the area of the internal rating systems; methods of measuring and mitigating credit risk, as set by Basel II.

(g) Lack of the required financial resources to invest in systems and technologies used in risk management (57).

The study is, indeed, important as it deals with the issue of Basel II capital requirements and their interrelationship with bank management, especially risk management. However, there are some contradictions in the results found by the study. For example, most of the findings from (1) to (11) are weakened by the findings, from (a) to (g), related to the difficulty banks face in measuring risk. As such the situation could be interpreted in two ways: Firstly, the author might have ignored that fact or could not disentangle the conflict among the different results. Secondly, and this more likely to be the core reason, the respondents might not provide the correct information when registering their responses. In addition, the study did not differentiate between Islamic and conventional banks operating in an Islamic country, Palestine. For, there are different risk profiles for the two opposing banks, which necessitate some light to be shed on Islamic banks risks.

On the other hand, de Lis, Pages and Saurina (2000), conducted a study to analyze the cyclical behavior of bank credit, loan losses and provisions for loan losses in Spain (58). Using a descriptive approach, the study found that in a context of strong competitive

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(57) See: Mervat Ali Abu Kamal-2007. Modern Credit Risk Management in Banks According to the International Standards "Basel II": Applied study on Operating Banks in Palestine (in Arabic), A study submitted in partial fulfillment to obtain an MBA from the Faculty of Commerce, The Islamic University.

pressures, there was a tendency for loose bank credit conditions in an upturn in view of the low level of, the then, contemporaneous non-performing loans, which according to the authors, might contribute to an over extension of credit. Hence, the low quality of such loans would only become apparent with the ex post emergence of default problems, which would tend to appear during downturns.

Regarding loan loss provisions in Spain, the study concluded that such provisions had traditionally had a pro-cyclical bias as they were largely linked to the volume of contemporaneous problem assets. Low provisioning in the upturn revealed that latent risks were not properly acknowledged and hence book profits were biased upwards during the upturn and downwards during the downturn.

Using an econometric model, Khemraj and Pasha (2011), studied the determinants of non-performing loans in the Guyanese banking sector. Consistent with international evidence, the study found that the real effective exchange rate had a significant positive impact on non-performing loans. Also, the study showed that GDP growth was inversely related to non-performing loans. Moreover, the study found that banks which charged relatively higher interest rates and lend excessively were likely to incur higher levels of non-performing loans. However, contrary to previous studies, the study did not support the view that large banks were more effective in screening loan customers when compared to their smaller counterparts\(^{(59)}\).

Abdelakader, Neila and Sana (2009) investigated the relationship between bank supervision and non-performing loans using an econometric model to obtain results on the main determinants thereof. They carried out a survey of 59 countries to obtain 259 observations on the specified variables over the period 2002–2006. Empirical results indicated that higher capital adequacy ratio and prudent provisioning policy seemed to reduce the level of non-performing loans. Also, the study reported a desirable impact of private ownership, foreign participation, and bank concentration. However, the findings did not support the view that market discipline leads to better economic outcomes and to reduce the level of problem loans. In contrast, all regulatory devices either exert a

\(^{(59)}\) See: Tarron Khemraj and Sukrishnalla Pasha at http//m.b5z.net/i/u/6126465/i/ S_Pasha_and_T_Khemraj.pdf on 15/11/2011 at 1:15 pm.
counterproductive impact on bad loans or do not significantly enhance credit risk exposure for countries with weak institutions, corrupt business environment, and little democracy. The study concluded that to reduce credit risk exposure, the effective way is through enhancing the legal system, strengthening institutions, and increasing transparency and democracy, rather than focusing only on regulatory and supervisory issues\(^{(60)}\).

Likewise Folack (2005), conducted a study to investigate the leading causes of non-performing loans during the economic and banking crises that affected a large number of countries in Sub-Saharan Africa in the 1990s. The study used an econometric model with observations representing the specified variables for a sample of banks in 16 African countries and covering the period 1993-2002. For the purpose of the study, the correlation and causality analysis focused on a number of macroeconomic and microeconomic (banking sector) variables. At the macroeconomic level, the study investigated the correlation between non-performing loans and a subset of economic variables: per capita GDP, inflation, interest rates, changes in the real exchange rate, interest rate spread, and broad money supply (M2). At the microeconomic level, it focuses on the association between non-performing loans and banking sector variables including return on asset and equity, net interest margins and net income, and interbank loans.

Empirical analysis showed that there was a dramatic increase in the loans, during the period of the study, and extremely high credit risk, with significant differences between the CFA and non-CFA countries, and substantially higher financial costs for the latter sub-panel of countries. The results, also, highlighted that a strong causality between these loans and, economic growth, real exchange rate appreciation, the real interest rate, net interest margins, and interbank loans, consistent with the causality and econometric analysis, which revealed the significance of the macro and microeconomic factors. Also, simulated results showed that macroeconomic stability and economic growth are associated with a declining level of non-performing loans; whereas adverse

Macroeconomic shocks coupled with higher cost of capital and lower interest margins were associated with a rising scope of non-performing loans\(^{(61)}\).

On the other hand Guo (2007), used an analytical approach to study the causes of non-performing loans in the Chinese banking sector. The study highlighted a number of reasons behind the buildup of such non-performing loans: Firstly, the non-standardized outside effect of the transformation from the planned economy to the market economy. Secondly, the underdeveloped mode of the Chinese enterprises' operation management. Thirdly, the weak monitoring system and poor decision-making. Fourthly, the rigid human resource management system\(^{(62)}\).

Despite the fact that the above-mentioned reasons are, by and large, commonplace in the literature on non-performing loans, the author did not substantiate the findings with numerical data.

Al-Thaher, Abdel-Jawad, and Omar (2007), carried out a study to identify the factors affecting the problem of troubled loans at Palestinian banks. The study used a descriptive approach to analyses the data, which was collected by means of a questionnaire that was distributed to a selected sample of credit officers of banks operating in Palestine in addition to another sample of defaulted clients. The factors causing the troubled loans problem were divided into three categories: bank's credit policy, market conditions, and client's behavior. As for the credit policy, the study revealed that credit analysis was inadequate and that there was a lack of information in this regard. It was also found out that follow up of clients after being granted credit facilities was not sufficient. Pertaining to the market conditions, it was found that prolonged closure policy and frequent military roadblocks, market losses, economic recession, lack of security, and weak legal system were main reasons behind the troubled facilities. With regard to the client's behavior, it was found that the failure to use the credit facility for the purpose that it was granted for; unplanned expansion of investment; increase of indebtedness, change of client's behavior;

and client's credibility had all led to the problem of troubled credit facilities. Finally, the study recommended that banks are urged to concentrate more on credit analysis and depend on accurate and reliable information for extending credit facilities\(^{(63)}\).

Al-Ibreed (2007), used a descriptive analytical approach to study the relative importance of non-performing loans at the Syrian Industrial Bank during the period 1998-2005. The results indicated that there was a clear weakness in conducting credit studies, and that there was a lack of following up the client's business activity\(^{(64)}\).

Also, Dash and Kabra (2010) conducted a study to examine the determinants of non-performing loans in India. An econometric approach was employed to accomplish the study by employing firm-level data covering a ten-year period (1998/99 – 2008/9) to examine the relationship between non-performing loans and several key macroeconomic and bank specific variables. The study showed that both bank specific and macroeconomic factors impact the portfolios of commercial banks in India. In particular, a significant positive relationship was found between non-performing loans and the real effective exchange rate indicating that any deterioration in the international competitiveness of the local economy (as reflected by an appreciation in the real effective exchange rate) might result in higher levels of non-performing loans\(^{(65)}\).

3.2 Credit Risk and NPLs at Islamic Banks

As it has been mentioned earlier – in the section entitled "Islamic Banks Capital Adequacy", the risk profile of Islamic banks differs from that of their conventional counterparts due to the differing foundational philosophies despite the fact that both share the same ground of being financial intermediaries. As such the rest of this sub-section will review some aspects of credit risk and non-performing loans in Islamic banks.

\(^{(64)}\) See: Nidal Al-Ibreed. 2007."An Analytical study of non-performing loans in the Syrian Industrial Bank"
Abdul Rahman and Shahimi (2010), used a regression model to examine the impact of financing structure on Islamic banks' credit exposure through four measures: real estate financing; financing specialization; short-term financing structure stability; and medium-term financing structure stability. While controlling the bank-specific variables, their findings indicated that real estate financing and financing structure stability, to some extent, influence credit risk exposure. However, the significant effects disappeared when they incorporated the macroeconomic variables in the framework implying that the impact of financing structure on credit risk exposure might be misleading when one ignores the role of macro-economic fundamentals\(^{(66)}\). The result, of course, entails that the process of decision-making should be considered with due deliberation.

Ahmed, Abubakar, and Isa, used an analytical descriptive approach to highlight credit risk management in a Malaysian Islamic Bank: Affin Islamic Bank Bhd. The study analyzed the financial performance ratios over the period 2004-2008 to accomplish its objectives. Results showed that Affin Islamic Bank recorded a credit risk (defined as non-performing financing/total financing) as high as 34% in 2004, which was improved to 32% in 2005. However, the bank managed to reduce credit risk over the years to record 2% and 1% in the years 2007 and 2008, respectively. The bank success in mitigating its credit risks came as a result of employing many strategies involving both structural reforms by having a dedicated risk management team, and operational changes in terms of financing, as well as, risk management process embodied in a good risk management framework. In addition, the authors argued that the inclusion of a Sharia Advisory Council provided another level of risk assessment and evaluation\(^{(67)}\).

Moreover, Ahmed and Ahmed, carried out a study to examine the factors affecting credit risk in Islamic banks in Malaysia. An econometric model was used to employ the selected variables through data collected from both Islamic and conventional banks. Findings showed that management efficiency, risk weighted assets and size of total assets


\(^{(67)}\) See: Nor Hayati Ahmed, Abmalek F. Abubakar and Mohamad Yazid Isa. Managing Credit Risk: Best Practice of a Malaysian Islamic Bank.
had significant influence on credit risk of Islamic banks. On the other hand, credit risk of conventional banks was significantly affected by loan exposure to risky sectors, regulatory capital, loan-loss provisions, and risk-weighted assets\(^{(68)}\).

As for non-performing loans, Mokhtar and Zakaria (2009), study the differences in the classification and management of non-performing loans among Malaysia, the United Kingdom (UK), and Japan. Specifically, the study investigated whether or not the existence of investment Account Deposits (IADs) had resulted in a stricter approach to the classification and management of non-performing loans in Islamic banks in Malaysia. Despite having the common objectives of controlling non-performing loans, there were significant differences in the policy of the classification and management of non-performing loans among the above-mentioned countries. For example, even though Basel regulation suggested that loans over 90 days are considered to be in default, the Central Bank of Malaysia (BNM) defined a loan as non-performing when that loan had been in default for over 180 days. In Japan the definition had been expanded from loans past due in arrears by 180 days or more and loans to bankrupt customers, to include loans where interest had been reduced, loans in arrears by three months or more and restructured loans. On the other hand, in UK a loan was defined as non-performing when that loan had been in default for over 90 days. With regard to the loan loss provision, the study provided that in Malaysia the loss provision made was based on the percentage specified by the Malaysian Central Bank (BNM) in accordance with the period of default and classification. A loan that had been in default for a period of 6 months but less than 9 months was classified as substandard and was given a 20% provision after deducting its security value. A loan that had been in default for 9 months but less than 12 months was classified as doubtful and the amount of specific provision was 50% after deducting the security value. However, for a loan that had been in default for more than 12 months such loan was classified as a bad loan and was given a 100% provision. General provision was fixed at 1.5% after deducting the amount of specific provision for the purpose of unidentified losses.

\(^{(68)}\) See: Nor Hayati Ahmed and Sharul Nizam Ahmad "Key Factors Influencing credit Risk of Islamic Banks: A Malaysian Case.

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As for the UK, the decision on how much to provide for specific provision was left to the discretion of the banking institution based on several conditions like the financial condition of the borrower, guarantor and security plus guidance from the Statement of Recommended Accounting Practice (SORP), and for general provision, it must be enough to cover the losses not yet identified. In Japan, the situation was almost similar to that of the UK, i.e., banks carried out their own self-assessment methods on assets to arrive at the provisions needed for possible losses\(^{(69)}\).

The study elaborated numerous differences in the treatment of non-performing loans among three countries; Malaysia, Japan, and the UK. Given the fact that the financial sectors and markets of both the UK and Japan can be considered as developed, such kind of a comparative study would help evaluate the performance of Islamic banks based on the state of the art requirements governing conventional banks. Accordingly, the Islamic banking industry would further be strengthened and aligned for more competitiveness.

Abdebola, Yusof, and Dahlan (2011), studied the determinants of non-performing loans in Malaysia using an econometric model. The study employed monthly time series data for the period 2007:1 to 2009:12. The dependent variable (average of NPLs in Islamic banks and Islamic Banking Scheme of commercial banks in Malaysia) was measured by the ratio of 3-months net non-performing financing/impaired financing to 3-months net total financing of Islamic banks. The independent variables represented the macroeconomic environment and included: The industrial production index, the interest rate, and the producer price index. The findings indicated two long-run relationships among the variables, with the interest rate having a significant positive long-run impact on non-performing loans. The industrial price index turned out to have a positive, but insignificant relationship. Meanwhile, the producer price index appeared to have negative and significant impact on non-performing loans\(^{(70)}\).


For more focus on the case of the study, the remainder of this sub-section will be devoted to the literature on risk management in the Sudanese banks. Bashir (1999), used a tow-Sudanese bank case to examine the effect of scale (defined in terms of total assets) on the performance of such banks; on basis of both profitability and risk. To accomplish the objective of the study (Bashir) employed an econometric model (the ordinary least squares method). As for the relationship between bank size and risk, the results indicated that there was a negative and statically significant relationship between the bank size and risk. The statistical significance indicated in turn, that large size induces diversification and, hence, reduces risk. That is, as Islamic banks grow, their risk profiles improve(71).

The above-mentioned study is perhaps the first of its kind dealing with the risk issue in the Sudanese banks. This pioneering role creates its significance in the field. However despite the findings mentioned-above, the two-bank-sample makes it difficult for any generalization, on Islamic Banks, to be accepted(72).

Meanwhile Abd Alla, Yousif, and Ali (2000), carried out a study about the problem of non-performing loans in the Sudanese banking system from a perspective of unwillingness to pay (mumatala). They used a descriptive analytical approach to accomplish the study. Their analyses encompass indicators related to non-performing loans/credit taken from the perspectives of: their size, geographical distribution, sectoral distribution, and mode of finance. Accordingly, the findings are as follows(73) :

(a) Size of non-performing loans: As of 31/2/1998, the Central Bank of Sudan statistics showed that the total volume of non-performing loans in the Sudanese Banks mounted to 12.7 Billion SD (Sudanese Dinar), which was equivalent to 44% of outstanding finance during that period. That percentage is extremely high compared to the, then, 5% ceiling of non-performing loans as a ratio of total finance extended, which was stipulated by the central bank of Sudan, for each

(72) The author himself acknowledged that fact
bank. Then, eighteen banks experienced the problem of non-performing loans, i.e., 64% out of total number of banks operating in Sudan experienced the problem.

(b) Geographical distribution: statistics indicated that the majority of total volume of non-performing loans was concentrated in Khartoum state recording 79% of the banking system total finance compared to 5%, 4%, 3%, and 2% recorded by the cities of Madani, Gedarif, Port Sudan, and Damazin, respectively.

(c) Sectoral distribution: analysis showed that the foreign sector (exports) recorded the highest percentage of non-performing loans compared to other sectors of the economy in 1998, where 38% out of total loans outstanding was non-performing. The agricultural sector came next with 28%. Third, was the industrial sector with 15.2% non-performing loans, whereas, the other sectors recorded little percentages.

(d) Modes of finance distribution: as for the distribution of non-performing credit/loan vis-à-vis the Islamic mode of finance used, statistics indicated that the Murabaha mode recorded the highest percentage (47%) compared to 22%, 12%, and 2.8% recorded by Musharakah, Salam, and Mudarabah, respectively, in the banking system.

However, taking the problem from a perspective of unwillingness to pay, the study found that the amount of non-performing loans recorded SD 4.2 billion, i.e., 33.6% out of total non-performing loans in the banking system at the time of the study. When the SD 4.2 billion is classified on the basis of various collaterals, provided by the borrowers, the classification showed that 75%, 18%, and 7% went to the real state, vehicles and machinery, and letters of credit, respectively. In general, the ratio of non-performing loans to total loans extended in the banking system recorded 14.5% during the period.
Finally, the study raised a number of recommendations as follows\(^{(74)}\):

(1) Prohibiting unwillingness to pay, on the part of wealthy agents, by rejuvenating the articles of 1983 act.

(2) Imposing a fine of deferment on the unwilling-to-pay agent\(^{(75)}\).

(3) Exerting efforts to reduce the financing activities based on the *Murabah* mode to the minimum, and at the same time enhancing the use of other modes of finance such as the *Musharaka*, the *Mudarabah*, … , etc.

(4) Banks should not depend on the condition of collaterals provision only when extending credit, they should carry out accurate studies about the activities financed and investigating the client's reputation both at the market level and among other banks.

(5) Enhancing bank investment departments through a qualified and well-experienced staff.

(6) Enhancing the internal audit role in the banking system to examine accurate endorsement of investment operations.

(7) Revising the 1925 company act, the 1929 bankruptcy act, and the 1991 criminal act, to make due amendments that force unwilling-to-pay clients to make payments.

(8) Orienting evaluators of collaterals, provided by borrowers, to scrutinize about the information regarding these collaterals.

The above-mentioned study is, indeed, interesting; it is one of the first studies tackling the problem of non-performing loans in Sudan. In addition, the study looked to the problem of non-performing credit/loan from a perspective of unwillingness to pay, which represents the reality of the banking culture in the Sudan. Moreover, the study

\(^{(74)}\) Op cit
\(^{(75)}\) According to some Malikite scholars, the amount of the fine should not be less than the benefit achieved the period of delay.
raised a number of policy recommendations that if were seriously taken into consideration, by decision-makers at banks and government related institutions, would have changed the present gloomy scenario of non-performing loans in the banking system.

The problem has, also, been the subject of study conducted by Mohammed (2001). Using a descriptive analytical approach the author examined the problem of non-performing loans in the Sudanese banking system in the period 1987-1997\(^{(76)}\). The study findings, almost replicated those mentioned in the review of the previous study.

On the other hand, Yousif (2008) delved to study the impact of non-performing loans on the stability of the banking system. The major objective of the study was to try to test the ability of some analytical models to predict the Sudanese banks financial failure, and to discriminate the failure banks\(^{(77)}\). A sample of four banks, of which two were failure banks that came to be liquidated, while the other two banks were not, was taken to obtain indicators on financial failure using two models: Altman and McGough Model, and Kida model. Results indicated that both models had potential to predict the financial failure (distress) in the Sudanese banks. Yet, the Altman and McGough model was considered better because it predicted financial distress four years before it happened, while kid's predicted financial distress three years before it happened.

No doubt, the study highlighted the problem of non-performing loans in the Sudanese banks. It significance come from the fact that if banks use some quantization techniques they can predict financial distress in advance. Therefore, corrective policies and adequate procedure can be taken.

Meanwhile, Matar (2009), studies the impact of risk management on the performance of the Sudanese Banks during the period 2004-2009. Using a descriptive-analytical approach, the study aimed at:


- Defining the major risks facing the Sudanese Banks.

- Defining the sources of risks and methods to manage them.

- Contributing to bank soundness and enhancing the trust of the public in the Sudanese banks.

- Supporting the role of the Central Bank of Sudan in developing the means and instrument used in risk management.

- Defining the effective control methods to mitigate risk.

- Measuring, evaluating, and managing the probability of default and the relation of the outcome of that with the realized bank returns.

- Reviewing the methods of putting the control procedure in place(78).

The study concluded that:

a. There was inadequate risk management on the part of the responsible unit/department in the Sudanese banks despite the control guidelines and directives issued by the Central Bank of Sudan (CBOS).

b. Weak returns and deteriorating profitability in the Sudanese banks.

c. Weak return to assets ratio during the period of study indicating the state of deteriorating profitability.

d. Vacillating non-performing loans, which exceeded the maximum limits according to the standard requirements.

e. Inappropriate legal frameworks governing electronic banking operations and activities.

In fact, the objectives of the study were far beyond the scope limited by its nature. Therefore, despite the results reflecting the reality of bank management in the Sudanese banking system, it would have been much better to narrow down the objectives of the study.

Before some light is thrown on the issues of risk management and non-performing credit in the Sudanese banking system, some observations need to be raised with regard to the above-mentioned literature on credit risk management and non-performing loans in Islamic Banks:

(1) It is apparent that Islamic Bank practitioners, national monetary and regulatory authorities, and academicians are aware of the special nature and characteristics of Islamic banks and related risk issues.

(2) The majority of published research handles the issues of risk in Islamic banks as a whole body, i.e., few writings are oriented towards individual risks. This is why the available literature on credit risk management in Islamic banks can be described as scarce\(^{(79)}\).

(3) Most of the available literature on credit risk management and non-performing credit in Islamic Banks takes banks in Malaysia as study cases. This reflects the state of development of the Islamic banking industry in Malaysia, which is augmented by due efforts done by the government authorities to develop the country's financial markets and to turn the country into an international hub for Islamic banking.

(4) Almost all of the available applied research on credit risk management and non-performing credit agree on the fact that credit risk and non-performing credit are determined by some macroeconomic, bank-specific, and bank client variables though with some minor differences. However, few studies conducted surveys on the triad aspects influencing credit risk and non-

\(^{(79)}\) However, the scarcity of the literature is induced in Sudan by the fact that scholarly research journals are almost lacked in academic (and nonacademic) institutions in the country due to the little budgets available for scientific research.
performing loans. This is why the present study can add value to previous and ongoing research on risk management in Islamic banking, and of course, highlighting the experience in the Sudan.

For deeper insights into the main theme of the study, the next chapter goes through the experience of some countries with the issue of non-performing loans, including the experience of Sudan.
CHAPTER FOUR

NON-PERFORMING LOANS

4.1 Introduction

The phenomenon of non-performing loans is as old as human existence in societies. As such it is inevitable in the banking business, where banks are involved in the process of financial intermediation channeling financial resources from the surplus units in the economy to the deficit ones. Hence, for real or unreal reasons the debtor parties may default payments due to the creditor parties. However, the depth and stretch of the problem depend on the socio-economic and institutional setup of every society. In the Western capitalist society, for example, the rate of interest, which governs the process of fund allocations in the economy, makes the financial system prone to frequent tolls of non-performing loans crises.

Generally, a loan (credit facility) is defined as non-performing when a debtor does not abide by the repayment schedule as agreed upon, for a period exceeding six months\(^{(80)}\). Also, it is defined as "a loan that is more than 90 days past due"\(^{(81)}\). It is clear that both definitions state cases of contract breach in the light of specific time periods. The time periods stated above are the due limits to settle the credit facility. Thus, the time periods are central to the definition, and are determined by the monetary authorities and financial institutions of each country in accordance with the state of development of the financial markets in that country. Generally, a host of socio-economic factors influence the decision-making regarding the time period beyond which the credit facility is considered past due, and therefore non-performing\(^{(82)}\).

Whatever a definition of non-performing loans appeals to the practitioners and academicians, some of their dimensions need to be described. Such dimensions have to do with the bank client (obligor), the object of the finance provided, i.e., the business

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\(^{(82)}\) A separate chapter will be devoted to the development of the problem of non-performing loans in some countries around the world to establish a comparison with the scenario in Sudan.
project; the bank providing the credit that comes to be non-performing as a result of loose control and follow up; and the prevailing macroeconomic conditions.

Firstly, as far as the obligor is concerned, it is to be emphasized that incompetent management may stand behind the poor financial position that lead to difficulties in payments of financial obligations including financial dues to banks offering credit facilities. However, some changes in the business, marketplace, economy, or industry may exacerbate the situation. Such changes need not take place suddenly, they may take months or even years prior to have their effects been materialized into financial distress. In addition, the changes may be systematic due to the foundational economic and/or industry setup; or they may be company specific such as: loss of major contracts, shifts in consumer purchases, expansion into consumer-adverse markets, accelerated growth without support of adequate capital, loss of key employees and customers, or an acquisition gone sour.

In all cases and whatever the underpinning reason, there are numerous warning signs that bank credit officials in charge can detect early enough in order to initiate an adequate course of action before things get out of control and repercussions ensue. The early warning signs of financial distress may include the following:\(^{(83)}\):

1. Slow in-house orders in comparison to corresponding periods in previous years.
2. In case of manufacturing business, factory operating well below capacity.
3. Changes in the manner payables are paid.
4. Owners no longer take pride in their business.
5. Frequent visits to the customer’s place of business reveal deteriorating general appearance of premises. For example, rolling stock and equipment have not been properly maintained.
6. Unusual items in the financial statements.

\(^{(83)}\) See: Morton Glantz and Johnathan Mun. 2011 Credit Engineering for Bankers: A Practical Guide for Bank Lending (2nd ed.). Amsterdam: ELSEVIER. P. 270
(7) Negative trends such as losses or lower gross and net profits.
(8) Slowness in account receivables.
(9) Decrease in sales volume.
(10) Intercompany payables/receivables are not adequately explained.
(11) Cash balances reduce substantially or are overdrawn and uncontrolled during normally liquid periods.
(12) Management fails to take trade discounts because of poor inventory turnover.
(13) Withholding tax liability builds as taxes are used to pay other debt.

However, it is to be emphasized that the above-mentioned warning signs would be of no avail, if the risk management process is not carried out properly. For example, lack or poor risk management department/unit in terms of improper structure of organization, lack of risk management strategy, poor risk culture in the bank, and low quality of skills and experience on the part of staff; would definitely lead to poor credit risk management. And, no matter how many signs and how often they take place, they may not be detected. Thus, the risks would materialize and non-performing loans would start building up.

Moreover, the buildup of non-performing loans in cases of individual loans (personal or corporate) and/or portfolio loans would not emerge all of a sudden but develops through certain stages depending on the quality of risk management in the banking institution. Such stages may include:

The first stage starts with an occasional or accidental incidence of repayment delay whether the due amount is small or big. However, the accidental delay represents a true test for the risk management department in general, and the staff in charge of credit risk management, in particular. That is, the problem starts when such accidental incidences of repayment delay on the part of the obligor are overlooked by the staff in charge of the credit risk management function. The second stage starts when the accidental delay turns into a factual delay and the problem comes to surface without the credit risk management

Please see appendix (c) for the rest of these warning signs of financial distress.
staff doing any action. Yet, when actions are taken, for example, through reporting to an upper level management without having a corrective decision been made, it can be said that a full stage of “do nothing” has crystallized and will, definitely, contribute to another even serious stage.

The third stage starts when the delay of repayment is prolonged and the management still belittles its seriousness and unfavorable repercussions. This situation indicates that the risk management department/unit is malfunctioning, and that the relationship between the bank and the obligor is very poor. Of course, if the relationship between the two is normal, there would be a close follow-up with the obligor; and the financial performance of the project, accordingly, timely decisions to correct the situation can be made. The fourth stage starts when the risk management department/unit or the bank management, as a whole, gets adapted to the situation of nonperforming credit/loan. That is, the amounts due have truly turned into being non-performing. Of course, this stage is one of the most serious of its kind because it becomes very evident that the bank is very close to lose some of its financial resources.\(^{(85)}\)

However, the banking institution itself may contribute to the development of nonperforming loans. The reasons contributed by the bank are mostly mistakes and personal bias made by the staff in charge of the credit study and decision-making. That is to say, the reasons have to do with the collaterals, the credit study, and the acceptance of some risks that should not be accepted.

**4.2 Collaterals**

A collateral is any tangible or intangible asset that can easily be liquidated into cash to recover the amount of the finance provided to the obligor. The market value of collaterals often behave erratically, therefore, caution must be exercised. However, no matter how deliberately collaterals are treated, usually errors are made when evaluations are carried out. These errors include:

\(^{(85)}\) In cases where the amount of non-performing loans reaches certain level, the bank financial position may become illiquid to meet the due liabilities. This situation might even be worsened when the panic of its customers leads to withdrawals of their deposits.
(1) Excessive values of the collaterals that are presented by the obligor to obtain the credit facility/loan from the bank.

(2) Failure to meet the conditions and specifications that need to be present with the collaterals, for example, in terms of ownership, keeping, and governing regulations in case of selling, … etc.

(3) Lack of conducting accurate periodic investigative information collection about the kinds and quality of the goods presented as collaterals, and whose prices are, generally, erratic.

(4) Lack of experience of the bank’s store keeping staff, and their inability to differentiate between the various grade qualities of the goods presented as collaterals, in addition to their inability to discern whether such goods fulfill the stipulated conditions of the credit provided by the bank.

(5) Lack of insurance coverage for the goods (collaterals) against the risks that they face during their keeping in the stores.

(6) Lack of follow up of the goods turnover ratio, which may lead to big losses due to damage and defects.

(7) Lack of conducting periodic inspection visits to the obligors’ stores to make sure that the collaterals pledged to the bank are kept there, and in excellent conditions.

(8) Approving to the obligor to withdraw part or all of collaterals without repaying back the sum value of the credit facility extended by the bank.

(9) In cases of credit portfolio, it may happen that the bank management fails to weigh the risks of the collaterals provided and, therefore, its inability to determine the ceilings of the credit facilities. In addition, a concentration of certain collaterals may lead to a wide range of non-performing loans and financial losses.
(10) In cases when the bank clients exchange the same kinds of collaterals among themselves, drastic builds up of non-performing loans would take place when some of those clients experience financial stress.

(11) Inability of the bank to obtain collaterals that have special influence on the client, for example, collaterals that have psychological and social dimensions imposing more pressures on the client not to delay due payments or default on them.

Therefore, it has become apparent that collaterals play a pivotal role in the financial process to the extent that it may determine the success or failure of the credit risk management in the bank. As such, the experience and quality of the staff is prerequisite for a good handling of the collateral issues.

4.3 The Credit Study

Although the credit study is a requirement for the decision-making on credit extension, sometimes it turns into a basic catalyst to the emergence of the problem of non-performing loans. This is, actually, the case when the credit study is not carried out properly. Some of the basic reasons behind poor credit studies that may lead to poor decision-making that leads to the extension of credit facilities, which should not be extended, may include:

Firstly, the staff in charge of the credit department may show a reckless disregard to the importance of the credit study, and may tend to depend on their experience only. Instead, the credit study should be carried out with the purpose of drawing a conclusion about the creditworthiness of the bank client. This task will not be easy if the study does not include two dimensions: Firstly, the study should be comprehensive in such a way as to enable the staff in charge to pass a judgment about the past and the present of the client. Accordingly, it needs to include five elements:

(A) The character of the client: The character of the client represents the foundation for a good decision about the client as it encompasses three dimensions:
• Being legally qualified to get engaged in contractual relations with banks, and/or have a power of attorney to legally represent others before banks.

• A social character telling the behavior of the client.

• And, the professional and competitive qualification to show that the client will pay back the amount of finance due to the bank in accordance with the schedule; and that the client is keen on the quality of their products.

(B) The client’s capital: The bank credit policy, if not the monetary authority’s, should stipulate that part of the project’s finance is to be provided by the client as a proof of seriousness in developing that project and make it a success.

(C) Client’s capacity: The study should show that the client is capable of managing his/her project successfully. Two factors can determine that capability;

• The extent to which the client is experienced in the kind of the activity financed.

• The extent to which the client applies the principles of management in managing his/her business project.

(D) Collaterals: The nature of the real estate collaterals pledged to the bank for the required finance, the extent to which they are liquid, and of a value enough to cover the value of the credit facility provided; represent an important dimension in the evaluation of the client’s credit worthiness.

(E) Surrounding conditions: Before the credit extension decision is made, two important factors need to be taken into consideration:

• The position of the activity financed in the life cycle of the project, and the timing of the products in the market.
The position of the industry, in which the activity of the project is included, in the macroeconomic business cycle.

Secondly, the study should adopt an all-encompassing strategy for the future with a vision supporting the following dimensions:

- The production in the future and the competitive position in the market, in relation to the substitute and complementary goods.

- The future marketing of the products and the related distribution outlets, transportation and storing.

- The attainable finance in the future and whether it can meet the required amounts needed for growth.

- The influence of other related activities that come into play through the networking and interrelationships with other industries.

1. Lack of basing the credit studies on accurate and realistic data about the clients and the conditions influencing their capacity to pay back the amounts of the credit facilities provided to them. Also, lack of using the scientific methods as tools to carry out the studies properly.

2. Lack of making sure that the documents, attached by the client to the credit application, are correct.

3. Over estimation of the financial needs of the client. Accordingly, the client may be granted credit facilities beyond the actual needs of the project being financed. Therefore, the excess amounts may be used in other activities that bring with them more and more facets of risks.

4. Lack of supporting the credit studies with the decisions of the various levels of the credit management department and often depending on the decisions of one level only.
(5) Lack of determining the financial obligations that the client owes to other parties (financial and/or non-financial institutions).

(6) Approving the extension of new credit facilities to the client before fully paying back the outstanding ones as per the described terms.

(7) Lack of structuring the credit facilities in accordance with the client’s financial capacity.

(8) Lack of following up the use of the credit facilities provided and the status of the related collaterals.

Thirdly, incorrect calculations of risks may turn out to be the basic reason for the problem of non-performing loans. The incorrect calculation of risks takes place when banks follow a profit-oriented approach that may lead them to accept just the projects that earn more returns. Thus, some of the decisions may include:

- Extending credit facilities that cover the full finance of projects.
- Financing the projects without having sufficient collaterals.
- Allowing the client to enjoy using the credit extended before fully meeting the terms and before providing the required documents.

The ultimate outcome of the above-mentioned conducts would be the concentrations of credit, which may appear through the allocation of huge credit facilities to one or few clients; specific geographical area; and to specific economic sector or activity without diversifying the credit facilities across the various sectors and industries.

Fourthly, weak credit management is considered the most significant factor in the build-up of the non-performing credit facilities. Of course, the weak credit management would mean that there is a shortcoming in one, or more than one, function of the management process, and can be classified into the following:

(1) Weak technical credit management: This kind of credit management has to do with poor credit policies, poor portfolio management and poor
internal control and audit. In addition, there would be no consideration to the proportional relationship between the bank’s assets and liabilities concerning the payback period, the return, and the capital flows of the project financed. The most salient features of weak technical credit management may include:

a. Lack of a guide explaining the step and procedure of the credit management approach adopted by the bank.

b. Lack of the appropriate credit analysis tools that are agreed-upon and can be more developed to meet the requirements of credit studies.

c. Depending on commonsense and discretion on only as means to take credit extension decision.

(2) Domination of managerial disappointment: When bank management fails to conceal the bank losses, it opts for creating an environment of disappointment through which the worst kinds of staff would be selected for the mid-level management responsibilities.

Taking the above-mentioned issues into consideration, bank authorities, regulators, and regional and international institutions for standards of practice exert numerous efforts to create and design organizational structures, regulations, corporate cultures, and policies to deal with the various kinds of risks including credit risk and its ultimate dimension of non-performing loans. Yet, the reality of the banking services industry indicates that countries, no matter at which stage of development they are, do suffer credit problems and crises that end up in mounting non-performing loans. Therefore, some experiences of NPLs in countries at different stages of development could be presented in the following paragraphs.

4.4 Non-Performing Loans: International Scenarios

As mentioned earlier the problem of non-performing loans cannot be avoided; no matter how severe it is. Sometimes it is just at the reasonable levels but at times it bursts
up into credit crunches and financial crises. In an attempt to deal with the problem, many countries around the world created special mechanisms to deal with the problem of non-performing loans. Accordingly, a huge market for non-performing loans has been developed. Taking a sample of some countries, the non-performing loans market developments can be highlighted from table (4.1) below showing estimates of non-performing loans in some European countries during the period 2008-2010.
### Table (4.1):

**NPLs in Some European Countries 2008/2010 (Euro bn)**

<table>
<thead>
<tr>
<th>Country</th>
<th>2008</th>
<th>2009</th>
<th>% Change in NPLs 2008-2009</th>
<th>2010</th>
<th>% Change in NPLs 2009-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>142</td>
<td>210</td>
<td>48</td>
<td>225</td>
<td>7</td>
</tr>
<tr>
<td>UK</td>
<td>107</td>
<td>155</td>
<td>45</td>
<td>175</td>
<td>13</td>
</tr>
<tr>
<td>Spain</td>
<td>75</td>
<td>93</td>
<td>24</td>
<td>103</td>
<td>115</td>
</tr>
<tr>
<td>Italy</td>
<td>42</td>
<td>59</td>
<td>40</td>
<td>76</td>
<td>29</td>
</tr>
<tr>
<td>Ireland</td>
<td>15</td>
<td>88</td>
<td>48</td>
<td>109</td>
<td>24</td>
</tr>
<tr>
<td>Sub-total</td>
<td>381</td>
<td>605</td>
<td>59</td>
<td>688</td>
<td>14</td>
</tr>
<tr>
<td>Greece</td>
<td>12</td>
<td>20</td>
<td>67</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Russia</td>
<td>1</td>
<td>17</td>
<td>160</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td>Poland</td>
<td>6</td>
<td>12</td>
<td>100</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>Ukraine</td>
<td>2</td>
<td>6</td>
<td>20</td>
<td>8</td>
<td>33</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>3</td>
<td>4</td>
<td>33</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Romania</td>
<td>1</td>
<td>3</td>
<td>200</td>
<td>5</td>
<td>67</td>
</tr>
<tr>
<td>Hungary</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>67</td>
</tr>
<tr>
<td>Turkey</td>
<td>8</td>
<td>11</td>
<td>38</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>416</td>
<td>681</td>
<td>64</td>
<td>781</td>
<td>15</td>
</tr>
</tbody>
</table>

**Source:** PWC: European Outlook for non-core and NPLs portfolios, April 2011

Looking at the above table, it is clear that there is a rising trend, though in lower percentage terms between 2008 and 2010, of NPLs between 2008 and 2009, which was higher than the increase in the period 2009-2010. The reason could either be attributed to the greater momentum of the financial crisis during the year 2008, and its negative effect on the macro economy of those countries; or due to the fact that the NPLs figures in 2010 were not final. Moreover, taking into consideration the fact the European economy is recovering at a very slow pace\(^{(86)}\), it is not likely that the general trend of the increase in NPLs would take an acceptable and reasonable form.

Such situation forces the European banks to suffer liquidity shortfalls, which means that bank operations are constrained. The ultimate result would end up in diminution of profitability, which is exacerbated by the fact that a broad range of regulatory reform initiatives are currently under way at both the European and global level\(^{(87)}\).

\(^{(86)}\) The NPLs figures for the year 2010 are less than the actual because the balances include NPLs information as at the second or the third quarter only.

\(^{(87)}\) Ibid.
Annoyed by the above-mentioned scenario, governments have intervened with various kinds of rescue packages for both the economies and the financial sectors, preserving both financial stability and the functioning of the internal markets. Globally, governments have adopted a variety of measures to achieve this, ranging from full-scale nationalization of financial institutions to providing insurance for impaired assets. Across the European Union more than Euro 2, 800 billion in capital was deployed by national governments to stabilize and support the financial institutions. Out of the support measures deployed, around Euro 2, 100 billion was provided in state guarantees, i.e. 76% of the total measures, 16% were deployed to assume risk positions, and 8% were deployed to recapitalize financial institutions\(^{(88)}\).

Moreover, in the European Union, a total of 94 financial institutions received some sort of government assistance. Generally, the intervention of governments to deal with the problem of NPLs and to support the stability of the banking and financial systems, take the following forms:

1. **State guarantees**, which are provided to selected financial instruments issued by the financial institutions, for example, senior unsecured medium-term (three to five) instruments. Most countries provided state guarantees but Ireland stands a head with Euro 440 billion provided to its major banks as state guarantees.

2. **Assumption of risk positions**: The assumption of risk positions scheme involve the acquisition of risk positions through purchase or guarantee of legacy assets. The asset purchases involve acquisition of assets, securities, rights, and obligations arising out of credit commitments and/or holdings. Also, asset guarantees are also deployed to provide protection from potential losses. Such schemes are generally customized according to the beneficiary.

Recapitalization: the capital injection scheme is used in selected financial institutions to strengthen their capital base. Yet, most of the government recapitalization during the financial crisis occurred through non-dilutive instruments such as preferred shares, non-voting securities, and mandatory convertible instruments or subordinated debt securities.

Nationalization: Nationalization is a special case of recapitalization under which the government becomes sole or majority owner of the financial institution. Such a step is generally undertaken for severely distressed financial institutions to enable smooth restructuring and eventual re-entry into the market. Some examples of the nationalization scheme include the nationalization of Northern Rock in UK, Allied Irish Ban, Hypo Real Estate in Germany, and Parex Bank in Latvia.

Deposit guarantee: the deposit guarantee scheme primarily involve increasing the limit for protection of retail and small and medium enterprise deposits in financial institutions. As a matter of fact, the majority of the European Union countries increased the level of protection provided by the depositor protection schemes.

On the other hand, in the Asian region, the biggest market for NPLs is found in China with around U. S. $ 240 billion outstanding amount\(^{(89)}\). More insights can be learned from table (4.2) below, which shows total outstanding non-performing loans at the Chinese commercial banks.

\(^{(89)}\) This amount does not reflect the actual figure because NPLs held by some AMCs, that are severely affected, and/or rural credit unions are not included. The amount is estimated as total for the year 2008.
Table (4.2):

Total Outstanding NPLs at Chinese Commercial Banks
(2005-June 2008) RMB Billions

<table>
<thead>
<tr>
<th>Item</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>All commercial banks</td>
<td>1254.9</td>
<td>1268.4</td>
<td>1242.5</td>
</tr>
<tr>
<td>State-owned commercial B.</td>
<td>1053.5</td>
<td>1115.0</td>
<td>1103.2</td>
</tr>
<tr>
<td>Other commercial banks</td>
<td>116.8</td>
<td>86.0</td>
<td>73.1</td>
</tr>
<tr>
<td>Joint-stock banks</td>
<td>65.5</td>
<td>52.2</td>
<td>50.2</td>
</tr>
<tr>
<td>City banks</td>
<td>15.4</td>
<td>13.1</td>
<td>12.2</td>
</tr>
<tr>
<td>Foreign banks</td>
<td>3.8</td>
<td>3.2</td>
<td>3.8</td>
</tr>
</tbody>
</table>


Despite the fact that by the end of 2007 and June 2008 NPLs accounted for 6.17 percent and 5.58 percent of total loans, respectively, the amounts in absolute terms are huge as reflected by the figures in the table above. By December 2007 the percentage distribution of a total of RMB 1.3 trillion among the various sectors of the economy shows that the manufacturing sector holds 36% of the outstanding non-performing loans in the Chinese commercial banks’ portfolios. Meanwhile, the whole sale and retail sector, the personal loan sector, the agricultural sector, the real estate sector, and other sectors hold 18%, 9%, 8%, 7%, and 22%, respectively(90).

A host of factors stand behind the buildup and persistence of NPLs in China. Of course, the transformation of the economy from a centrally planned to a market oriented one has a lot to do with that. In an attempt to add some details to the factors causing the Chinese commercial banks’ NPLs, Ning-ning (2007)(91) argues that national policies, behavior of local governments, and the social credit environment, formed an unfavorable circumstance for such banks. In addition, Ning-ning points to the underdeveloped bank operational management, weak monitoring systems and incomplete decision-making processes, and rigid human resource management as other factors behind NPLs in the Chinese commercial banking sector. As for the schemes adopted to solve the problem, it can be argued that China uses the same packages used in the European Union(92).

(90) See Tong Li, 2008. China’s Non-performing Loans: A 540 billion problem?
(92) For an active market of NPLs, the government of China is extensively deregulating the financial market.
However, the situation in Africa is different. For, it mostly consists of Less Developed Countries (LDCs), especially in the Sub-Saharan Africa (SSA) region. The banking sector in most of these LDCs remains highly underdeveloped. For instance, no less than 80 percent of households and 80 percent of small and medium-sized enterprises (SMEs) in Africa have never had access to banking services. Moreover, banks in African (LDCs) provided only 14 per cent of their loans to agriculture, even though agriculture in these countries accounted for more than 36 per cent of total value added, and employed, on average, 86 percent of the total labor force\(^{(93)}\).

Therefore, it is not uncommon to find that over the decade spanning most of the 1990s, the scope of non-performing loans increased significantly to reach over 30% of total loans in sub-Saharan Africa, which is the highest in the developing world then\(^{(94)}\). In some countries such as Nigeria, Kenya, and Ghana the average ratio of non-performing loans to total loans in the 2004-2007 period, stands over 22%, 27%, and 16%, respectively\(^{(95)}\).

As earlier mentioned, the financial system in the Sub-Saharan region is underdeveloped, of course, with exception of South Africa, therefore it is too early to use such mechanisms and schemes used in the European Union to deal with the problem of NPLs. In fact the nature of the financial system has a direct impact on NPLs, i.e., the more developed a financial system, the less percentage of NPLs, and vice-versa. Accordingly, the governments’ efforts to deal with the problem focus mainly on reforming and restricting the financial systems.

However, the final part of this section throws light on the NPLs issue in some countries in the Middle East and North Africa, as well as Pakistan. By doing so, the situation of NPLs in Sudan can be more understood when compared with the situation in those countries where Islamic banks, and other financial institutions, are part of the

\(^{(93)}\) UNCTAD Trade and Development Report 2008
\(^{(95)}\) See: IMF. 2009. World Economic and Financial surveys, Regional Economic Outlook, Sub-Saharan Africa.
banking system. Table (4.3) below shows the distribution of NPLs in some Islamic countries operating Islamic banks.

**Table (4.3):**

**Nonperforming Loans in The Middle East, North Africa, and Pakistan**

(\% of total loans): 2006-2014

<table>
<thead>
<tr>
<th>Oil exporters</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>34.2</td>
<td>35.5</td>
<td>28.2</td>
<td>21.8</td>
<td>19.1</td>
<td>14.4</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Bahrain</td>
<td>4.8</td>
<td>6.0</td>
<td>2.3</td>
<td>3.9</td>
<td>-5.1</td>
<td>4.9</td>
<td>5.8</td>
<td>5.6</td>
<td>NA</td>
</tr>
<tr>
<td>Iran</td>
<td>15.7</td>
<td>16.9</td>
<td>19.1</td>
<td>18.1</td>
<td>13.7</td>
<td>NA</td>
<td>17.6</td>
<td>15.4</td>
<td>NA</td>
</tr>
<tr>
<td>Kuwait</td>
<td>4.6</td>
<td>3.8</td>
<td>6.8</td>
<td>11.5</td>
<td>8.9</td>
<td>7.3</td>
<td>5.2</td>
<td>3.6</td>
<td>3.8</td>
</tr>
<tr>
<td>Libya</td>
<td>25.4</td>
<td>27.2</td>
<td>19.2</td>
<td>16.9</td>
<td>20.2</td>
<td>20.6</td>
<td>21.0</td>
<td>21.0</td>
<td>NA</td>
</tr>
<tr>
<td>Oman</td>
<td>4.9</td>
<td>3.2</td>
<td>2.1</td>
<td>3.5</td>
<td>3.3</td>
<td>2.2</td>
<td>2.1</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Qatar</td>
<td>2.2</td>
<td>1.5</td>
<td>1.2</td>
<td>1.7</td>
<td>2.0</td>
<td>1.7</td>
<td>1.7</td>
<td>1.9</td>
<td>NA</td>
</tr>
<tr>
<td>Saudi A.</td>
<td>2.0</td>
<td>2.1</td>
<td>1.4</td>
<td>3.3</td>
<td>3.0</td>
<td>2.2</td>
<td>1.7</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>United Arab E.</td>
<td>6.4</td>
<td>2.9</td>
<td>2.3</td>
<td>4.3</td>
<td>5.6</td>
<td>7.2</td>
<td>8.4</td>
<td>8.2</td>
<td>7.1</td>
</tr>
<tr>
<td>Yemen</td>
<td>23.0</td>
<td>19.5</td>
<td>18.0</td>
<td>13.9</td>
<td>17.7</td>
<td>21.2</td>
<td>25.5</td>
<td>21.7</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oil importers</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>18.2</td>
<td>19.3</td>
<td>14.8</td>
<td>13.4</td>
<td>11.0</td>
<td>10.9</td>
<td>10.0</td>
<td>9.1</td>
<td>8.6</td>
</tr>
<tr>
<td>Jordan(^{96})</td>
<td>4.3</td>
<td>4.1</td>
<td>4.2</td>
<td>6.7</td>
<td>8.2</td>
<td>8.5</td>
<td>7.7</td>
<td>7.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Lebanon</td>
<td>13.5</td>
<td>18.1</td>
<td>7.5</td>
<td>6.0</td>
<td>4.3</td>
<td>3.7</td>
<td>3.8</td>
<td>4.0</td>
<td>NA</td>
</tr>
<tr>
<td>Mauritania</td>
<td>-</td>
<td>32.4</td>
<td>26.4</td>
<td>27.7</td>
<td>45.3</td>
<td>39.2</td>
<td>25.7</td>
<td>20.4</td>
<td>NA</td>
</tr>
<tr>
<td>Morocco</td>
<td>10.9</td>
<td>7.9</td>
<td>6.0</td>
<td>5.5</td>
<td>4.8</td>
<td>4.8</td>
<td>5.0</td>
<td>5.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Pakistan</td>
<td>6.9</td>
<td>7.6</td>
<td>10.5</td>
<td>12.6</td>
<td>14.7</td>
<td>15.7</td>
<td>14.5</td>
<td>13.0</td>
<td>12.3</td>
</tr>
<tr>
<td>Syrian Arab R.</td>
<td>4.7</td>
<td>5.3</td>
<td>5.1</td>
<td>4.8</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Tunisia(^{97})</td>
<td>19.3</td>
<td>17.6</td>
<td>15.5</td>
<td>13.2</td>
<td>13.0</td>
<td>13.3</td>
<td>14.9</td>
<td>15.2</td>
<td>16.0</td>
</tr>
<tr>
<td>Sudan</td>
<td>19.4</td>
<td>26.0</td>
<td>22.4</td>
<td>20.5</td>
<td>20.5</td>
<td>14.4</td>
<td>12.6</td>
<td>11.8</td>
<td>8.4</td>
</tr>
</tbody>
</table>

**Source:** IMF. 2011 World Economic and Financial Surveys, Regional Economic Outlook (Middle East and Central Asia) & Statistical Update, 2015.

Generally, NPLs in the oil exporting countries category is much better than in the oil importers ones, of course, with the exception of Algeria, Iran, and Libya, which hold high NPLs of 21.8\%, 16.2\% and 21.4\%, respectively, as an average for the period of the years in the table. Moreover Yemen records an average of 20.2\% of the total NPLs in the region. Other countries in this category record much lower percentages of NPLs. No doubt the banking systems in these countries are more developed and well supported by the rich countries. Meanwhile, the category of oil importers countries shows wide

\(^{96}\) National banks only.

\(^{97}\) Data refer to all banks except the Housing Bank and CAC Bank, 2006 includes CAC Bank data.
variations in the distribution of NPLs ratios. For example, Egypt, Mauritania, and Tunisia recorded NPLs of 12.8%, 30%, and 15.3%, respectively. In contrast, some countries such as Jordan and the Syrian Arab Republic recorded less averages of NPLs during the period, i.e., 6.3% and 4.9%, respectively. Meanwhile, in comparison to the countries in the region, Sudan recorded an average of 15.8% of NPLs during the period from 2006 to 2014. Therefore, it can be said that banking systems in the region share the same features of the problem, especially in the oil-importing group of countries.

However, to have a full grasp of the problem of NPLs in the Sudanese banking sector, the study needs, first, to throw some light on the economic and financial environment in which these banks operate; then the structure of the banking system in Sudan will be presented. Such task will be handled in the sections to follow.

4.5 The Economic and Financial Environment

The Sudan with a total area of 728,215\textsuperscript{(98)} square miles after the secession of Southern Sudan (the sixteenth largest country in the world) and a total population of 31.5\textsuperscript{(99)} million people has an economy with huge potential output because it is endowed with a vast cultivable land, minerals, and oil and gaz. However, the breakup of the country which has ended up in the secession of Southern Sudan has deprived the country of 25% of its total area, 24% of population, over 80% of its oil income, 75% of its vegetation cover, and 30% of its potential arable land\textsuperscript{(100)}. Since the Sudan independence and even earlier during the colonial era, agriculture has dominated the economic structure. During the 1970s, 1980s, and most of the 1990s, the agricultural sector comprising of irrigated and rain-fed mechanized agriculture, traditional rain-fed agriculture, forestry, livestock and fishery, contributed more than 40% of GDP. In 2010, its contribution was more than 30% of GDP\textsuperscript{(101)} down from 45.6% in 2003\textsuperscript{(102)}.

\textsuperscript{(98)} http://www.wolframalpha.com
\textsuperscript{(99)} See: IMF. 2011. Regional Economic Outlook, Middle East and Central Asia, October.
\textsuperscript{(100)} See: Issam A. W. Mohamed. 2012. Assessment of the Role of Agriculture in Sudan Economy, MPRA (a worldwide website).
\textsuperscript{(101)} See: Central Bank of Sudan. 2012. 50\textsuperscript{th} Annual Report.
\textsuperscript{(102)} See: Central Bank of Sudan. 2003. 40\textsuperscript{th} Annual Report.
The second largest contributor to the GDP is the industrial sector comprising of the oil, mining, manufacturing, and electricity and water sub-sectors. Its contribution to GDP was 23.1% in 2002 as a whole, however, in 2010 its share in GDP dropped to 21.1%. Such decrease is largely due to the decrease in the production of oil that decreased by 3% in 2010. Yet, the high increase in the production of minerals points to great potential gains from this sector. Gold production, for example, increased by 128.2% in 2010; from 14.9 tons in 2009 to 34 tons in 2010. Likewise, chromium production has increased by more than 300% during the same period. Moreover, the year 2010 witnessed the production of new metals such as iron (1,700 Tons) and marble. Also, there was an increase in the production of hydraulic power by more than 91.0% between the years 2009 and 2010 as a result of the addition made by operating Merowe dam.

As for the service sector, which consists of the health, education, transport, roads and bridges, communications, financial services, and tourism sub-sectors, contributed 30.2% to the GDP in 2003. However, the sector flourished in 2010 to raise its contribution to GDP by 47.5%. Thus the sector has taken the lead from the agricultural sector. However, the bulk of the contribution within the sector comes from the transport and bridges sub-sectors.

In general the performance of the economy, which has largely been influenced by the internal economic and political conditions such as the various fiscal and monetary policies as well as the eruptions of armed conflicts on different locations in the country, and the cession of Southern Sudan, lately; in addition, to the external conditions of rising world prices of imported goods and the economic boycott exercised by some countries, under the leadership of the United States of America, has crystallized in an outcome that can be savored from table (4.4) below.
Table (4.4):

Sudan Basic Economic Indicators: 2000-2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth Annual Change (%)</td>
<td>5.6</td>
<td>5.9</td>
<td>6.8</td>
<td>4.0</td>
<td>1.8</td>
<td>4.4</td>
<td>4.9</td>
<td>-3.5</td>
<td>3.7</td>
<td>3.4</td>
</tr>
<tr>
<td>Consumer Price Inflation (Yearly % Average)</td>
<td>7.6</td>
<td>7.2</td>
<td>8.0</td>
<td>14.3</td>
<td>11.3</td>
<td>13.0</td>
<td>18.1</td>
<td>35.5</td>
<td>36.5</td>
<td>36.9</td>
</tr>
<tr>
<td>General Government Fiscal Balance (% of GDP)</td>
<td>-0.6</td>
<td>-4.3</td>
<td>-5.5</td>
<td>-1.5</td>
<td>-4.8</td>
<td>-3.2</td>
<td>0.2</td>
<td>-3.3</td>
<td>-2.3</td>
<td>-1.0</td>
</tr>
<tr>
<td>Current Account Balance (% of GDP)</td>
<td>-9.5</td>
<td>-15.5</td>
<td>-12.7</td>
<td>-9.4</td>
<td>-13.9</td>
<td>-6.7</td>
<td>-0.4</td>
<td>-2.1</td>
<td>-1.1</td>
<td>-1.2</td>
</tr>
<tr>
<td>Total Government Gross Debt (% of GDP)</td>
<td>146.8</td>
<td>90.9</td>
<td>83.7</td>
<td>72.8</td>
<td>83.6</td>
<td>71.6</td>
<td>64.0</td>
<td>94.7</td>
<td>90.5</td>
<td>74.2</td>
</tr>
<tr>
<td>Gross Official Reserves</td>
<td>0.6</td>
<td>1.7</td>
<td>1.4</td>
<td>1.0</td>
<td>0.7</td>
<td>0.8</td>
<td>1.5</td>
<td>1.7</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Total Gross External Deb. (% of GDP)</td>
<td>134.8</td>
<td>79.6</td>
<td>69.7</td>
<td>60.6</td>
<td>67.8</td>
<td>56.3</td>
<td>62.0</td>
<td>68.9</td>
<td>67.7</td>
<td>63.1</td>
</tr>
</tbody>
</table>

*Source: IMF. 2015 & 2011 World Economic and Financial Survey, Regional Economic Outlook (Middle East and Central Asia).
Note: The figures for 2014 are projected (IMF)*
The real GDP growth, in terms of the annual percentage change, has shown unsystematic pattern during the period 2005-2014. It showed an up rising trend between 2005 -2007 (5.6%, 5.9%, and 6.8%, respectively). However, in 2008 it dropped to 4.0% and even worse to 1.8% in 2009. Again, it was up in 2010 (4.4%) and more slightly in 2011 (4.9%). The decrease in the real GDP growth rate in the years 2008 and 2009 could be attributed to the distortions made by the world financial crisis during the period though the Sudan financial sector is not well linked with the international financial markets. Yet, the country has received inflows of foreign direct investments that were also affected by the crisis. But the bulk of the negative effect came from the decreasing world oil prices during the two-year period.

With regard to inflation, it can be argued that it has been escalating since 2006 (7.2%) to reach a two-digit high of 36.5% in 2013. The trend of a rising inflation will most likely continue in the near future due to the loss of the oil income as a result of the cession of Southern Sudan into an independent state. In addition the poor productivity of the agricultural sector cannot be improved without serious reform, serious restructuring, and heavy investment in human and non-human inputs in the sector itself. Only, then, can the agricultural sector be geared towards a productivity whose income would compensate for the lost income of the oil sector.

On the other hand, the negative vacillating general government fiscal balance all over the years shown on the table would mean that there are a lot of controllable and uncontrollable variables that make the government unable to control the general budget. For example, external shocks such as lower world oil prices and financial crises can be best representatives for the uncontrollable variables. Meanwhile, poor quality of public management may stand as a good example for the controllable variables influencing the process of fiscal imbalances.

Moreover, the negative current account balance throughout the years concerned, and the depleting gross official reserves indicate that there are huge pressures exercised

\[\text{(103) The base year has been changed from 1990 to 2007.}\]
on the exchange rate of the Sudanese pound against other currencies. Such pressures have now been translated into a £ SUD 12.3 per one dollar in the black market. If such scenario lasts for long there would be serious repercussions on the whole input-output matrices of the economy including the import content of the various productive entities across the various sectors forming the structure of the economy and the related output prices, as two examples. Lastly, the high percentages of total external debts to GDP indicate that the economy is burdened with huge costs both financial and non-financial.

Generally, what have been mentioned above represents the economic reality in which banks, in Sudan, operate. Such reality of environment would, definitely, feedback into numerous hardships that in turn, lead to poor business performance, which sometimes ends up in defaults of repayments to banks, and other institutions; and ultimately, in NPLs. Finally, and to elucidate more on this issue, the banking structure and regulatory infrastructure, will be discussed. For, such dimensions, together with the quality of bank management, determine the nature of bank performance including the situation of NPLs.

4.6 The Banking Structure in Sudan

The banking structure in Sudan is headed by the Central Bank of Sudan (CBOS), which has commenced operations in February 1960. In so far as the domain of operations is concerned, banks fall into two groups; commercial banks and specialized banks. However, taking the nature of ownership into consideration, the former can be subsumed under three categories: Government-owned banks, foreign-owned banks, and joint ownership banks. On the other hand, the latter can be subsumed under two categories: government-owned banks, and jointly-owned banks. The population of these banks is distributed all over the Sudan through their branches. Table (4.5) below shows the geographic coverage of banks in Sudan in the period 2013-2014.
Table (4.5):

Geographic Distribution of Banks in Sudan: 2013-2014

<table>
<thead>
<tr>
<th>States</th>
<th>CBOS</th>
<th>Specialized Banks</th>
<th>Commercial Banks</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>National</td>
<td>J. Venture</td>
</tr>
<tr>
<td>Khartoum</td>
<td>1</td>
<td>1</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Al-Gazira, Sennar, Blue Nile &amp; White Nile</td>
<td>4</td>
<td>4</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Qadarif, Kasala &amp; Red Sea</td>
<td>3</td>
<td>3</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>Northern &amp; River Nile</td>
<td>2</td>
<td>2</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>North, South &amp; Western Kordofan</td>
<td>2</td>
<td>2</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>North, South, Eastern &amp; Western Darfur</td>
<td>4</td>
<td>5</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>17</td>
<td>183</td>
<td>181</td>
</tr>
</tbody>
</table>

Source: Annual Report (various issues), The Central Bank of Sudan.
It can be well discerned from the table that, as a whole, there are only seventeen branches for the (CBOS) in all the states of the country. These seventeen are responsible for a total of 655 branches of the various banks in 2013, and 650 bank branches, in 2014, i.e., at a ratio of more than 41 bank branches (in 2013), and more than 38 bank branches (in 2014) per one branch of the (CBOS). In such a case of a developing country like Sudan, which is striving to build a resilient economy through the deployment of its huge natural resources, it can be argued that the number of the (CBOS) branches is far less than the required number that would help the bank to carry out its regulatory and supervisory roles. By December 2014 one branch of the (CBOS) in Khartoum State was responsible for 260 bank branches. This may, indeed baffle the development of a sound and efficient banking system. In fact, the situation may entail the emergence and perpetuation of a host of banking problems including (NPLs).

Also, and despite the wide distribution of banks over the country, they are mainly concentrated in Khartoum State (260 branches in 2014) followed by the central states (Al-Gezira, Sinnar, the Blue Nile, and the White Nile) - 126 branches in 2014. This situation of the geographical distribution of banks needs to be evaluated if the banking sector role in the development process is to be enhanced.

The Central Bank of Sudan uses the power conferred to it by the “Bank of Sudan Act 2002 – amended up to the year 2006” to exercise its authorities over all banks, and other financial institutions, working in Sudan. Article (6) of the aforementioned act defines the bank’s responsibilities as follows.

1. Safeguarding stability of prices; stability of exchange rate; efficiency of the banking sector; and issuance of currency, in its various denominations, its regulation, and control.

2. Designing and implementing the monetary policy depending, in the first place, on market mechanisms in such a way as to realize the objectives of the national macro-economy, in consultation with the minister of finance and national economy.
3. Controlling, regulating, and supervising the banking sector, improving it, and increasing its efficiency in such a way as to help realize a balanced socio-economic development.

4. Working as a bank of the government, a consultant, and an agent in the monetary and financial matters.

5. Abiding by the principles of Islamic *sharia* and conventional banking traditions in carrying out its duties, working towards realizing its objectives, and exercising its regulatory and supervisory authorities over the banking system.

The first four responsibilities make the (CBOS) like any other conventional central bank in other countries. However, responsibility number five creates the difference by making the bank abide by the principles of Islamic *sharia*. This means that the banking system, which comes under the umbrella of (CBOS) should abide by the principles of Islamic *sharia*, i.e., an Islamic Banking System. In fact, by the cession of Southern Sudan in July 9, 2011, the whole financial and banking system in Sudan has become Islamic.

Moreover, the (CBOS) uses the “Banking Business Organization Act. 2004” to take hold of the banking business in the country. This act defines the fine details of banking business starting from the establishment and registration of the bank, as well as, the description of the authorities of the (CBOS). Under the regulation and supervision article, the act states that “the bank (CBOS) undertakes the regulation and supervision of all bank and financial institutions … practicing all or part of banking businesses …” Also, and unlike conventional bank business organization acts, the act under consideration adds a separate chapter (No.3) about the “Higher Shari‘ah Supervisory Board” as a mechanism for controlling bank financial businesses within the precincts of Islamic *shari‘ah* principles. The act states the purposes of the said board as follows:

- Issuance of Islamically legal verdicts and recommendations with the intention of unifying the legal foundations and rules upon which the financial and banking business is built.
• Following up the policies and performance of the (CBOS), and bank and financial institutions with the intention of making them abide by the rules and values of the Islamic *shari’ah*.

• Purifying the laws and regulations, guides (of practice), and activities of the (CBOS) and bank and financial institutions, from interest based transactions, whether implicit or explicit, and whatever ends up in eating up the wealth of people in vain.

• Working with other concerned bodies to make use of Islamic transaction contracts and implement them through designing contracts accommodating the needs and tools of finance and developing them to cope with the preliminary and secondary market for financial stocks.

Besides, the act goes further to delineate the areas of concern for the supervisory board, including:

- Studying the issues raised by the minister of finance and national economy, governor of the (CBOS), bank managers, or dealers with banks and financial institutions; and deciding about them, in terms, of verdicts, recommendations, and directives.

- Cooperating with technical regulatory bodies in bank and financial institutions to carry out their activities in accordance with the rules of the Islamic *shari’ah*.

- Helping the (CBOS) and bank and financial institutions in designing and implementing training and qualification programs in such a way as to enable these institutions to have a working staff at a level of Islamic jurist bankers.

- Supporting research departments and divisions to improve scientific research and publication to serve the cause of the objectives and specializations.
- Considering the legal disputes that happen between the subject bodies under this act and their dealers, and deciding about such disputes by issuing verdicts (fatwas) and recommendations accordingly.

- Any other area of concern that the organizations deems necessary to realize its objectives but with the stipulation that the minister of finance and national economy endorses such an area of concern.

Taking the above-mentioned authorities conferred to the supervisory board, it can be argued that the Islamic banking and finance arena in Sudan is well furnished with Islamic regulatory infrastructure that is necessary to develop the Islamic financial industry in the future.

Moreover, in a good recent development, the (CBOS) enacted the “credit information and Rating Act -2011” endorsing the establishment of the “Credit Information and Rating Agency (CIRA), which according to the act has the following objectives:

1. Offering credit information services.

2. Collecting and organizing data.

3. Exchanging data and information with similar foreign agencies.

4. Conducting credit rating.

In addition, the act specifies the areas of concern and authorities of the (CIRA) as follows:

- Preparing credit files about clients (bank’s clientele).

- Getting credit information through collecting, processing, saving, and analyzing credit and personal information and data pertaining to the indebtedness of clientele of banks and financial institutions providing credit facilities.
• Issuing credit reports, to inquirers, without passing recommendations relating to extending, or not, of finance.

• Erecting systems to safe guard the secrecy of information and data.

• Creating a database.

• Establishing a unit for dealing with the clientele.

• Issuing credit reports in accordance with the specified models.

• Saving applications of inquiries for a period no less than two years according to controls and procedure set by regulations.

• Providing a security stem to the agency systems and data bases, together with an emergency plan to protect it against any hacking, loss, or damage operations.

• Coordinating and cooperating with similar foreign institutions in a manner that it deems suitable.

However, one of the most important authorities conferred to the agency is that despite article (55) of the banking business organization act – 2004, any issue pertaining to bank secrecy in any other act, the agency, in the cause of realizing its purposes, has the right to access information and data from the following sources:

a. Banks operating in Sudan.

b. The bank central credit registration system

c. Insurance companies.

d. Microfinance institutions.

e. Bodies in control of public records including: the civil records, the commercial records, and the lands records by consent from the finance applicant.
f. Companies dealing in financial securities.

g. Any other related bodies, which have access to information and data serving the purpose of the agency by consent from the finance applicant.

The (CBOS), also, exercises its authority on banks through the continual directives aiming at the improvement and stability of the banking system. Finally, the (CBOS) issues the monetary and financial policy every year to control the process of financial intermediation carried out by banks (and other financial institutions). The most salient tools of these policies during the 2002-2014 periods are\(^{(104)}\):

- A reduction in the reserve requirement.
- Special allocation of certain proportions of total finance extended, by banks, to priority economic sectors such as agriculture.
- Specification of maximum ceilings for \textit{Murabaha} finance, for example, not exceeding 30\% of a bank total finance extended for the year 2000.
- The determination of \textit{Musharakah} percentages and administration fees in \textit{Musharakah} as well as the percentage of the \textit{Mudharib} in \textit{Mudharabah} are left to the discretion of the banks and their clients.
- Issuance of numerous directives to reduce risks associated with letters of credit.
- More room is given for banks to provide finance to the private sector.
- More room is given to banks to determination the percentage of internal liquidity given that the minimum of 15\%, of deposits, is taken into consideration.
- Banks are given permission to finance all legal economic sectors.

\(^{(104)}\) See: Central Bank of Sudan Annual Reports: 2002-2014
• Banks are given permission to use all the kinds of Islamic contracts except for the so-called absolute *Mudharabah*.

• The instruction of banks to finance the social sector (such as the productive households) 10% of total finance in 2001.

• Banks are given permission to have additional liquid assets in forms of *SAHMA* and *SAHMA* certificates as well as the stocks of companies listed in the Khartoum Stock Exchange.

• Working towards reducing the percentage of NPLS.

• Using a 12% percentage as an index for *Murabaha* finance.

• Banks are given the permission to create finance portfolios.

• Banks should abide by the *fiqhi* guide when dealing in *Murabaha* transactions.

• *(CBOS)* windows will be used to provide medium-term finance as an encouragement to banks to provide such kind of finance. As such banks are directed to devote 50% of their investment deposits to the medium-term finance.

• Floating mortgage and certificates of storing can be accepted as collaterals for finance.

• Banks shall make their banking fees noticeboard-publicized and accessible to their clients (with a copy of such fee rates sent to the CBOS).

• The involvement of the *(CBOS)* in the foreign exchange market through its foreign reserves so as to manage the exchange rate (managed-float).

• Encouragement of banks to use the various Islamic finance contracts.

• Banks are not permitted to provide finance for the following activities:
  - to buy foreign currencies for the purpose of trading.
- to businesses dealing in foreign exchange.
- to clients dealing in buying of financial shares and certificates including SHAHMA and other government skunk.
- to clients seeking the repayment of outstanding finance.

- An increase in the minimum paid-up capital of banks (to be SUD Dinar 6 billion in 2006).
- The continuation of the privatization program in the banking sector.
- Raising up the level of the regulatory and supervisory authorities to abide by the International Accounting Standards (IAS) and the standards of the Auditing and Accounting Organization of Islamic Financial Institutions (AAOIFI).
- Implementing the recommendations of the Financial Sector Assessment Program (FASP).
- Improvement and strengthening of the risk management systems through:
  - Developing the department of clients' credit information, at the (CBOS) to become a Credit Information Bureau (CIB).
  - Expanding the activities of risk units, at banks, to become internal bank rating units.
  - Training the staff of the (CBOS) and banks to upgrade their skills in bank risk management (conventional and Islamic).
  - Evaluating the internal bank regulation and control systems.
- Improvement of bank asset quality through:
  - Raising-up bank capital adequacy ratios.
  - Preparing guidelines for managing bank electronic system risks.
  - Preparing guidelines for managing risks associated with outsourcing banking operations.
- Raising up bank administrative efficiency and capacity building.
- Using tip-top banking technology such as networking and the real time gross settlements system (RTGS).
- Evaluation and improvement of bank risk management units to help banks get prepared to abide by the Basel II standards (as of 2006).
• The (CBOS) may provide liquidity support to Islamic banks facing temporary liquidity distress through buying and selling of financial securities and discounting commercial papers issued by the private sector, and accepted by banks.
• Banks (conventional and Islamic) may form portfolios to provide finance to the various economic sectors, especially the productive ones. However, the portfolios should be formed either between Islamic banks or between conventional banks, and not together.\(^{105}\)
• Setting up of a strategy for the development of the microfinance sector.
• Enforcing daily field supervisory activities to reduce financial risks.
• In case of finance application against real estate mortgage, banks shall require the presence of the owner and not anybody with a power of attorney.
• Banks may accept SHAHAMA certificates, SARH certificates, and government Islamic bonds (Sukuk) as collaterals to get finance but only to the holder of such securities.
• Reducing the concentration ratios of finance extended to clients and members of bank managing boards.
• Setting of an overall lending limit for clients of the banking system.
• Auditing and consolidation of bank financial statements and reports to be streamlined with the Islamic and international standards.
• Extending the Umbrella of bank supervision to encompass all institutions practicing part of the banking business.
• The gradual practice of substituting the Euro or any other stable currency for the US dollar, as a main currency for foreign transactions.
• Encouraging foreign exchange companies to find other sources of foreign exchange than mostly depending on the (CBOS) to get it.
• Pegging the Sudanese pound with a basket of the main foreign currencies.
• Strengthening and supporting bank supervision through implementing the recommendations of the IMF technical mission.

\(^{105}\) This policy tool has been announced in 2007, and after the financial system had taken a dual form due to the Comprehensive Peace Agreement.
• Developing the supervisory relationships with regional and international institutions in countries having economic and financial relations with Sudan.
• The establishment of the microfinance unit at the (CBOS).
• Banks should give more consideration to project feasibility and client capacity instead of focusing on mortgages and collaterals mainly, when providing finance.
• The start of practicing the credit scoring service as a means of credit information. According to this service two categories of clients are to be warned about when providing finance: black-list clients and grey-list clients.

The above-mentioned policies and policy tools represent the efforts exerted by the (CBOS) to develop the banking and financial sector during the period 2002 – 2011. In fact, the list encompasses the general and common features of the reformatory and developmental efforts, which the (CBOS) has been doing. However, the review reveals the following:

Firstly, the NPLs problem has called the attention of the (CBOS). This has been clear from the repeated enlisting of the issue in the various (CBOS) reports and directives to the banks. Yet, the repetition of the issue could be interpreted as due to the perpetuation of the problem itself, when it mounts to the alarming rates that have been mentioned earlier. Secondly, some reformatory and development programs and efforts have taken a few years to materialize despite their significance, which entailed immediate actions, for example the establishment of a data base for credit scoring, which its use will reduce credit risks. Thirdly, there was high concentration of lending to some bank clients and, ironically, to members of bank managing boards (see: No. 37 above). Finally, the repeated directives and circulars from the (CBOS) to banks may cast doubt on the quality of the (BOS) regulatory and supervisory mandate.

Taking into consideration the above-reviewed bank regulatory and supervisory infrastructure, the rest of this section will discuss the general performance of the banking sector. Such performance can, generally, be understood from the consolidated balance sheet of banks for the period 2002-2014, as shown from table (4.6) below.
### Table (4.6):

**Consolidated Balance Sheet for the Sudanese Banks: 2002-2014 – (000 Sudanese pounds)**

<table>
<thead>
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<tr>
<td>Local currency</td>
<td>119920</td>
<td>114850</td>
<td>147910</td>
<td>22070</td>
<td>315461</td>
<td>582026</td>
<td>564578</td>
<td>766179</td>
<td>829278</td>
<td>810092</td>
<td>1118420</td>
<td>234486</td>
<td>1716978</td>
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<tr>
<td>Balances with CBOS</td>
<td>566900</td>
<td>791650</td>
<td>1036420</td>
<td>1480050</td>
<td>1781286</td>
<td>2353619</td>
<td>2888919</td>
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<td>6027415</td>
<td>12015294</td>
<td>13205260</td>
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<td>Balances with other banks</td>
<td>64960</td>
<td>92250</td>
<td>128670</td>
<td>166610</td>
<td>256989</td>
<td>298260</td>
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<td>1510667</td>
<td>2165731</td>
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<td>2719939</td>
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<td>Foreign correspondents</td>
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<td>1302730</td>
<td>1411890</td>
<td>1756870</td>
<td>1779494</td>
<td>2114382</td>
<td>2690473</td>
<td>2221219</td>
<td>3494093</td>
<td>4893611</td>
<td>4696049</td>
<td>5148873</td>
<td></td>
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<tr>
<td>Gov. Bonds &amp; other Notes</td>
<td>298770</td>
<td>350440</td>
<td>466370</td>
<td>880370</td>
<td>1392590</td>
<td>2114382</td>
<td>2690473</td>
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<td>4893611</td>
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<td></td>
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<tr>
<td>Total advances</td>
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<td>2947590</td>
<td>4363910</td>
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<td>11139565</td>
<td>1779494</td>
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<td>4893611</td>
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<td>Other assets</td>
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<td>292860</td>
<td>287980</td>
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<td>Total assets</td>
<td>6112390</td>
<td>7895970</td>
<td>10435060</td>
<td>15303100</td>
<td>23144281</td>
<td>26197425</td>
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<td>36666888</td>
<td>43107736</td>
<td>46504084</td>
<td>67049562</td>
<td>77479759</td>
<td>92317049</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<tbody>
<tr>
<td>Deposits of federal gov.</td>
<td>50878</td>
<td>64437</td>
<td>112870</td>
<td>258000</td>
<td>168861</td>
<td>166193</td>
<td>765823</td>
<td>671314</td>
<td>927143</td>
<td>88109</td>
<td>157055</td>
<td>126031</td>
<td>66711</td>
</tr>
<tr>
<td>Deposits of state govs, enterprises &amp; the public</td>
<td>3759862</td>
<td>4665083</td>
<td>6353620</td>
<td>9517950</td>
<td>12144083</td>
<td>13376282</td>
<td>15472635</td>
<td>2017625</td>
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<td>2768757</td>
<td>3938723</td>
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<td>53402658</td>
</tr>
<tr>
<td>CBOS</td>
<td>72630</td>
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<td>106460</td>
<td>66540</td>
<td>146240</td>
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<td>721016</td>
<td>1213069</td>
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<td>Other banks</td>
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<td>48070</td>
<td>60280</td>
<td>131480</td>
<td>236758</td>
<td>611783</td>
<td>824284</td>
<td>89582</td>
<td>1059401</td>
<td>802931</td>
<td>1639272</td>
<td>1818365</td>
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<tr>
<td>Foreign correspondents</td>
<td>137180</td>
<td>147920</td>
<td>181270</td>
<td>276770</td>
<td>476190</td>
<td>591173</td>
<td>614342</td>
<td>1052575</td>
<td>1251813</td>
<td>776031</td>
<td>1793468</td>
<td>1996426</td>
<td>1996986</td>
</tr>
<tr>
<td>Capital and reserves</td>
<td>736920</td>
<td>1103080</td>
<td>1437110</td>
<td>1838620</td>
<td>3890890</td>
<td>4606905</td>
<td>5248486</td>
<td>6677989</td>
<td>7477913</td>
<td>9035971</td>
<td>10830670</td>
<td>13149116</td>
<td>14739386</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>1502860</td>
<td>1744790</td>
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<td>6186537</td>
<td>6340497</td>
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<td>7136048</td>
<td>12865088</td>
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<tr>
<td>Total liabilities</td>
<td>6112390</td>
<td>7895970</td>
<td>10435060</td>
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<td>23144281</td>
<td>26197425</td>
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<td>43107736</td>
<td>46504084</td>
<td>67049562</td>
<td>77479759</td>
<td>92317049</td>
</tr>
</tbody>
</table>

Source: Central Bank of Sudan – various issues of the annual report.
The banking sector has shown a big expansion through the period 2002-2005; this is evident from the positive growth rates in total assets, which culminated to as high as 62.72% between the years 2004 and 2005 reflecting a new era of expansionary policies ensuing the signing of the so-called Comprehensive Peace Agreement. The trend of this growth continued up to the year 2013-2014, where the rate was 19.2%. Such increases in bank assets came as an outcome of the authorities’ efforts to reform and restructure the financial sector in order to meet the challenges of the stage of development in the country. For example, the expansion in total advances (finance offered) and assets with foreign correspondents show that the various activities of local and foreign sectors have enjoyed credit facilities during the period under consideration. More insights into the issue can be captured from table (4.7) below.
Table (4.7):

Summary of Commercial Banks Balance Sheet Indicators:
2002-2014 (%)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Deposits/Total Liabilities</td>
<td>59.4</td>
<td>59.9</td>
<td>61.97</td>
<td>59.41</td>
<td>53.16</td>
<td>53.2</td>
<td>53.9</td>
<td>56.9</td>
<td>60.0</td>
<td>59.7</td>
<td>59.0</td>
<td>57.0</td>
<td>57.9</td>
</tr>
<tr>
<td>Capital and Reserves/Total Liabilities</td>
<td>12.1</td>
<td>14.0</td>
<td>13.77</td>
<td>13.76</td>
<td>16.81</td>
<td>17.6</td>
<td>8.7</td>
<td>18.2</td>
<td>17.3</td>
<td>19.4</td>
<td>16.2</td>
<td>17.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Total Finance/Total Assets</td>
<td>31.6</td>
<td>37.3</td>
<td>41.8</td>
<td>45.3</td>
<td>48.1</td>
<td>49.6</td>
<td>48.8</td>
<td>49.5</td>
<td>49.1</td>
<td>49.2</td>
<td>45.5</td>
<td>48.6</td>
<td>48.0</td>
</tr>
<tr>
<td>Total Finance/Total Deposits</td>
<td>53.2</td>
<td>62.3</td>
<td>67.5</td>
<td>76.2</td>
<td>90.5</td>
<td>93.2</td>
<td>90.6</td>
<td>87.1</td>
<td>81.9</td>
<td>82.3</td>
<td>77.1</td>
<td>85.3</td>
<td>82.9</td>
</tr>
<tr>
<td>Total Liquid Assets/Total Deposits</td>
<td>24.4</td>
<td>26.7</td>
<td>25.5</td>
<td>24.4</td>
<td>30.7</td>
<td>32.1</td>
<td>34.8</td>
<td>44.8</td>
<td>41.5</td>
<td>46.7</td>
<td>51.6</td>
<td>47.6</td>
<td>51.7</td>
</tr>
</tbody>
</table>

Source: The Central Bank of Sudan, various reports
It can be argued that bank liquidity and capital management is somewhat in the reasonable accepted zones throughout the period 2002-2005. However, the ratio of total finance to total deposits has escalated since 2006 (90.54%) to become as high as 93.2% and 90.6% in 2007 and 2009, respectively; and in the average of more than 80% during the period 2009-2014. Therefore, supervisory authorities and bank senior management should consider the extreme values of this ratio as warning signs for immediate action.

4.6.1 Non-Performing Finance/Loans in Sudan

The Sudan banking system is not much different from banking systems in the North African region such as in Libya, Tunisia, and Egypt; with the exception that the Sudanese banking system is Islamized to the extent that even the Central Bank of Sudan’s operations are carried out in accordance with the Islamic sharia principles. But compared to the banking systems in the Gulf cooperation Countries (GCCs), it can be argued that there are stark differences in terms of inputs and outputs. The banks in (GCCs) are backed with oil, and gas exporting economies, i.e., economies at steady-growth states. In addition, those banks have abilities to attract the best human capital in the banking industry from around the world including all the Islamic countries. Also, the fact that banks in the (GCCs) form some sort of a financial hub, therefore, they are in better position to be endorsed by the international banking community.

However, the good aspect of Islamic banks in Sudan is that they are operating in a full-fledged Islamic financial system. Yet, they suffer vacillating rates of NPLs. For example, the average rate of NPLs, in the period from 2002 – 2011 is 14.33%, which is indeed high. During the period, in the beginning there had been a declining trend of NPLs from 12.7% in 2002 to 11.4%, 8.9%, and 7.2% in 2003, 2004, and 2005, respectively. However, in 2006 the rate jumped up to 19.4% and jumped even higher to reach 26.0% in 2007 though ever since it has shown a declining trend; its last records stood at 11.8%, 8.4%, and 7.1% in the years 2012, 2013, and 2014, respectively.

To finance their operations in the a various sectors of the economy, the Sudanese banks have used the most famous Islamic contracts used by Islamic banks in the Middle East and North Africa region, i.e., Murabaha, Muusharakah, Mudarabah, Muqawla, and Salam; of course, there are other less famous Islamic financial contracts. Accordingly,
the resultant NPL/finances are directly lined with those Islamic financial contracts. Table (4.8) below shows the percentage distribution of NPLs among the various Islamic financial contracts for the period 2005-2014.

Table (4.8):

<table>
<thead>
<tr>
<th>Year</th>
<th>Murabaha</th>
<th>Musharaka</th>
<th>Mudharaba</th>
<th>Muqawala</th>
<th>Salam</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>45.2</td>
<td>35.7</td>
<td>4</td>
<td>0.2</td>
<td>11.4</td>
<td>3.5</td>
<td>100</td>
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<tr>
<td>2006</td>
<td>71.0</td>
<td>9.3</td>
<td>3.1</td>
<td>0.3</td>
<td>6.3</td>
<td>10.0</td>
<td>100</td>
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<tr>
<td>2007</td>
<td>42.9</td>
<td>14.6</td>
<td>1.8</td>
<td>1.1</td>
<td>2.3</td>
<td>37.3</td>
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<tr>
<td>2008</td>
<td>64.3</td>
<td>17.7</td>
<td>3.6</td>
<td>8.0</td>
<td>4.0</td>
<td>2.4</td>
<td>100</td>
</tr>
<tr>
<td>2009</td>
<td>64.4</td>
<td>17.2</td>
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<td>7.7</td>
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<td>2010</td>
<td>39.1</td>
<td>9.5</td>
<td>1.8</td>
<td>3.7</td>
<td>2.5</td>
<td>43.4</td>
<td>100</td>
</tr>
<tr>
<td>2011</td>
<td>39.4</td>
<td>9.0</td>
<td>2.1</td>
<td>3.5</td>
<td>3.5</td>
<td>42.5</td>
<td>100</td>
</tr>
<tr>
<td>2012</td>
<td>40.1</td>
<td>7.9</td>
<td>4.0</td>
<td>4.0</td>
<td>3.9</td>
<td>41.1</td>
<td>100</td>
</tr>
<tr>
<td>2013</td>
<td>40.8</td>
<td>9.1</td>
<td>4.2</td>
<td>3.4</td>
<td>3.8</td>
<td>38.7</td>
<td>100</td>
</tr>
<tr>
<td>2014</td>
<td>46.6</td>
<td>10.3</td>
<td>4.1</td>
<td>5.7</td>
<td>4.1</td>
<td>29.2</td>
<td>100</td>
</tr>
<tr>
<td>2005-2014</td>
<td>49.4</td>
<td>14.0</td>
<td>3.3</td>
<td>3.8</td>
<td>4.5</td>
<td>25.0</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author’s calculations

In the period from 2005 to 2014, the Murabaha had represented the highest contribution to NPLs/finances from the total finance provided by banks. That is, on average the Murabaha share in NPLs is 49.4% during the above-mentioned period. And, it has the highest share throughout the years reaching 71% in 2006. Only in 2010 its share in NPLs/finances dropped to 39.1%, which was less than the share of other less famous financial contracts of 43.4% in the same year. Non-performing loans/finances ratio as a result of Musharaka comes second with 14% on average during the period, while the other less famous Islamic financial contracts such as Salam, Muqawala, Mudarabah, follow with 4.6%, 3.8%, and 3.3%, respectively. Meanwhile, the group of the other not mentioned modes of finance scored an average NPLs/finances of 25% during the 2005-2014 period. However, taking each Islamic financial contract individually, it can be argued that there is no consistent pattern of NPLs for all the contracts used; in fact there is high volatility for each contract, yearly. This may reflect the fact that bank management efforts in risk management are hampered, especially, in terms, of a general framework of policies and procedure.
As for the situation of NPLs (finance) with regard to total finance provided to the various sectors of the economy, which include the agricultural sector, the industrial sector, the export sector, the transport and stores sector, the commercial sector, the professional and handicraft sector, the service sector, the productive household sector, and other sectors; the commercial sector has the highest share in NPLs with 27.2% on average in the period 2005-2010. The other less famous sectors has the second highest share in NPLs with 20.9%. Then, the export sector comes third with 19.7% of NPLs followed by the agricultural, the industrial, transport and stores, the service, the professional and handicraft, and the productive households with 19.7%, 10.0%, 8.0%, 7.9%, 3.8%, 1.3%, and 1.2%, respectively. Table (4.9) below shows the distribution of NPLs (finance) among the various sectors of the economy.
Table (4.9):

Distribution of NPLs (finance) among the Economic Sectors (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Agric.</th>
<th>Indust.</th>
<th>Export</th>
<th>Trans.</th>
<th>Comm.</th>
<th>Profess.</th>
<th>Service</th>
<th>Household</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>8.1</td>
<td>12.3</td>
<td>13.4</td>
<td>5.3</td>
<td>37.0</td>
<td>2.4</td>
<td>0.2</td>
<td>0.5</td>
<td>20.8</td>
<td>100</td>
</tr>
<tr>
<td>2006</td>
<td>8.0</td>
<td>6.7</td>
<td>40.7</td>
<td>9.3</td>
<td>19.6</td>
<td>0.6</td>
<td>0.6</td>
<td>4.9</td>
<td>9.6</td>
<td>100</td>
</tr>
<tr>
<td>2007</td>
<td>10.5</td>
<td>5.3</td>
<td>15.4</td>
<td>2.9</td>
<td>27.2</td>
<td>0.9</td>
<td>5.2</td>
<td>0.4</td>
<td>32.2</td>
<td>100</td>
</tr>
<tr>
<td>2008</td>
<td>13.2</td>
<td>7.5</td>
<td>18.6</td>
<td>8.7</td>
<td>31.9</td>
<td>1.6</td>
<td>7.2</td>
<td>0.5</td>
<td>10.8</td>
<td>100</td>
</tr>
<tr>
<td>2009</td>
<td>13.2</td>
<td>9.0</td>
<td>17.3</td>
<td>13.7</td>
<td>28.2</td>
<td>1.7</td>
<td>6.4</td>
<td>0.5</td>
<td>10.0</td>
<td>100</td>
</tr>
<tr>
<td>2010</td>
<td>7.2</td>
<td>7.1</td>
<td>13.3</td>
<td>7.5</td>
<td>19.1</td>
<td>0.5</td>
<td>3.0</td>
<td>0.4</td>
<td>41.9</td>
<td>100</td>
</tr>
<tr>
<td>2005-2010</td>
<td>10.0</td>
<td>8.0</td>
<td>19.7</td>
<td>7.9</td>
<td>27.2</td>
<td>1.3</td>
<td>3.8</td>
<td>1.2</td>
<td>20.9</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Various reports; Central Bank of Sudan
Taking each sector, individually, through the years from 2005 to 2010, it can be argued that, again, there is no consistent pattern of an increase or decrease in the share of any sector in NPLs (finance) but there are very wide variation and volatility. Hence the argument for the weak risk management in the Sudanese banking sector holds here once again.

To complete the study, and after the above-mentioned chapters laid down the theoretical foundations, the remaining part of it presents an applied aspect. As such the next chapter is introduced to illuminate the methodology used to investigate the state of the credit risk management in the Sudanese Islamic banks.
CHAPTER FIVE

METHODOLOGY

5.1 Introduction

Due to the interwoven relationship among the factors influencing the problem of non-performing finance (loans), most studies follow an approach of investigation that best address the nature of the problem, which is the analytical-descriptive approach\(^{(106)}\). For example, Ahmed and Isa (2012) used an analytical-descriptive approach to study credit risk management in a Malaysian Islamic bank. Also, Abd Alla and Ali (2000) used an analytical-descriptive approach to study the problem of non-performing loans in the Sudanese banking system. However, most studies using the analytical-descriptive approach are confined to certain perspectives in investigating the cases of non-performing finance (loans), namely, the role of bank, the role of the bank clients, and the role of the macroeconomic environment. However, the perspective of bank clients is incorrectly approached. For, the samples of the bank clients are taken at the gates of banks. That is, they are not really the kind of respondents who make the samples representative.

Meanwhile, the present study opted for a different treatment of the sample by collecting data from bank clients whose finances (loans) are considered in default, prosecuted, and sued (detained in Al-Huda and Omdurman Women prisons). As such, the sample turns representative, and the data collected is deemed reliable. Moreover, the study adds another perspective of investigation, namely, the role of the legal, supervisory, and regulatory framework within which the banks under study operate. Therefore, the study uses the analytical-descriptive credit risk management framework as an approach to investigate the problem but in a different way. Hence, it is a unique study.

The framework consists of assessing a number of elements including the business environment, the role of supervisory authorities, the role and responsibility of senior management, the role of internal control, supervision, and staff in charge of risk

\(^{(106)}\) Please go back to the literature review chapter.
management, types and quality of tools\,\,instruments used to mitigate the problem, and
quality of bank debtors.

Firstly, the business environment as a whole and the business psychology, in particular,
should be given due consideration when assessing risk management processes. Country
risks, business sector risks, and industry risks determine the extent of bank exposure to
credit risks. Country risks, for example, could be influenced by political, economic,
currency, and legal factors. Dramatic changes regarding these variables or, at least,
adverse government decisions and policies relating to the variables may lead to situations
such as political unrest, economic recession, … , etc. Hence, a thorough exploration of the
business environment will be carried out to assess the resulting aspects on bank risk
exposure.

Secondly, although the presence of regulatory authorities imposes some risks through
ongoing changes in laws with the result that associated costs tend to increase with
regulatory expectations, regulations based on Islamic Shari'ah tend to be a risk-reducing
factor because of the relatively stable nature of Islamic laws. As such, the role played by
regulatory authorities in terms of actual laws and regulations will be assessed.

Thirdly, senior management should set on an overall and comprehensive risk management
policies and tolerances. These policies and tolerances must be organization-wide and be
endorsed by the board of directors. Therefore, it becomes necessary to investigate the
presence of such risk policies and tolerances. The organization-wide consideration of risk
management also shows the extent to which senior management and board of directors
are aware and involved in the process risk management (The Financial Services
Roundtable 1999).

Fourthly, internal control processes represented in the presence of a qualified and well-
trained staff to monitor and evaluate the customers' creditworthiness, through financial
analysis using information associated with the performance of the debtor customers in the
market, in terms of both input and output factors, must be present. Generally, the process
of risk identification requires an intimate knowledge of the organization, the market in
which it operates, the legal, social, political and cultural environment in which it exists,
as well as a sound understanding of its strategic and operational objectives including factors critical to its success and the threats and opportunities related to the achievement of these objectives (IRM 2002). Hence, the staff in charge of risk management should give due consideration to the value of the credit facilities required, the proposed payment mode, and the suitable collaterals to be asked for. Such essential elements of taking credit decisions should be looked to when examining credit risks. Also, the staff is supposed to be well acquainted with credit policies pursuit by the bank. Issues such as credit ceilings; priority activities of the banks; target rates of return; and bank procedure and regulation, become a must to be taken into consideration when assessing credit risks.

Taking into consideration the above-mentioned, and the theoretical framework, a more focused view of the whole process of investigation can be summarized in the schema presented below.
Schema No. (1)

Variables Influencing Non-Performing Loans\Finance in the Sudanese Islamic Banks

- Non-performing Loans (finances)
  - Vacillating monetary and fiscal policies.
  - Poor implementation of policies and procedure of institutions in charge of NPLs (finance).
  - Deterioration of strategic and vital schemes.
  - Deterioration of security conditions.
  - Senior government executives and politicians interventions in bank finances.
  - Mismanagement of the business projects on the part of bank clients.
  - Unwillingness-to-pay back (Mumatalah), the finance provided, on the part of bank clients.
  - Vacillating monetary and fiscal policies.
  - Poor implementation of policies and procedure of institutions in charge of NPLs (finance).
  - Deterioration of strategic and vital schemes.
  - Deterioration of security conditions.
  - Senior government executives and politicians interventions in bank finances.
  - Mismanagement of the business projects on the part of bank clients.
  - Unwillingness-to-pay back (Mumatalah), the finance provided, on the part of bank clients.

- Comprehensiveness of the credit risk management guide (CBS).
  - Nature of the visits performed by the regulatory and supervisory teams.
  - Nature of legal procedure followed in dealing with NPLs (finance).
  - Nature of the visits performed by the regulatory and supervisory teams.
  - Nature of legal procedure followed in dealing with NPLs (finance).

- Nature of the credit study conducted by the bank staff.
  - Nature of the feasibility study conducted by the bank staff.
  - Sufficiency of collaterals provided by bank clients.
  - Follow up visits to bank clients.
  - Nature of the credit study conducted by the bank staff.
  - Nature of the feasibility study conducted by the bank staff.
  - Sufficiency of collaterals provided by bank clients.
  - Follow up visits to bank clients.

- Specialist training in credit risk management.
  - Bank senior management satisfaction with the job done by their subordinates in charge of credit risk management.
  - Comprehensiveness of the credit risk management guide (CBS).
  - Nature of the visits performed by the regulatory and supervisory teams.
  - Nature of legal procedure followed in dealing with NPLs (finance).
  - Nature of the credit study conducted by the bank staff.
  - Nature of the feasibility study conducted by the bank staff.
  - Sufficiency of collaterals provided by bank clients.
  - Follow up visits to bank clients.
  - Nature of the credit study conducted by the bank staff.
  - Nature of the feasibility study conducted by the bank staff.
  - Sufficiency of collaterals provided by bank clients.
  - Follow up visits to bank clients.

- Macroeconomic conditions
- Legal and regulatory framework
- Banks
- Staff in charge of credit risk management
- Nature and behavior of bank clients
5.2 The Study Data

The main sources of the primary data were: (1) the managing staff of the Islamic Sudanese banks including senior management and directors of divisions, and (2) representatives of the banks’ debtor clients who were interviewed to help with clarifications relating to their default from paying back bank loans (finance).

On the other hand, publications and documents issued by the CBOS and the commercial Islamic banks in Sudan were used as a secondary source for the required data. That is, regarding the data collection, two tools were used; the questionnaire and the interview\(^1\). The first questionnaire was used to collect primary data about the factors influencing bank NPLs (Finance). These factors have been addressed in five sections, namely the legal and regulatory framework of the control and regulatory institutions, banking institutions and risk management, the macroeconomic environment, the staff in charge of the credit risk management, and nature and behavior of bank's clients. The second questionnaire was used with bank clients who had been prosecuted and jailed for default to pay back the finance they received from banks; i.e., bank clients who are experiencing financial failure. The two questionnaires raise more than 45 questions. Both kinds of questionnaires tried to extract fine details from the surveyed participants. Accordingly, both of the questionnaires had been structured to fulfill that purpose. For example, many yes-no questions were included to get straightforward answers about basic information and/or issues. Besides, second line questions were used to obtain finer information, such as the causes of a particular phenomenon. Moreover, the main questions of the two questionnaires were structured in accordance with the famous “Likert scale” in order to obtain trend opinions from the respondents.

On the other hand, the interview was used to obtain face to face responses from the bank clients, who had been sued, prosecuted, and jailed, regarding two issues: (1) the way the respondents (business entrepreneurs) got trapped in the NPLs (finance) cases. (2) Their

\(^{1}\) Please see appendix (c) for the two questionnaires used for data collection. The two questionnaires had been reviewed by some academic staff at the Faculty of Economics and Rural Development and at the Islamic Center for Research and Studies of Sustainable Development, University of Gezira. In addition, the first questionnaire was described by a number of senior bank management officers as the best one of its kind they had ever responded to.
impression about the role played by the official institutions in resolving the matter. Given the high significance accorded to the feedback from the bank clients implicated in NPLs (finance), the researcher conducted the data collection personally by visiting the participants at the largest prisons in Sudan, i.e., Al-huda prison (for men) and the Omdurman women prison. However, what was so special about the interviews was the fact that they took place in ideal environments, where each participant was interviewed individually.

Moreover, those who participated in the survey through both the questionnaires and the interviews took the initiative voluntarily to do so. This is why they were quiet, consistent, and cooperative. This, in fact, helped obtain quality data from such respondents.

5.3 The Study Samples

The nature of the study adding a scenario of the bank clients, experiencing financial distress and failure, necessitated that two samples were to be used. The first sample was, almost, the population of the Islamic Sudanese banks. For, the questionnaire was distributed to all of them. Yet, it was only the time limit that forced the researcher to sacrifice the feedback from one or two banks. The quality of the data needed for such kind of study necessitated that only senior management officers (such as general managers; heads of risk management departments; and heads of credit departments) were to be surveyed. Accordingly, the bank sample size did not exceed 109 respondents, which was quite enough for the study. Regarding the sex distribution of the respondents, the males represented 94%, whereas the females represented 6%. As for their qualifications, the postgraduate respondents represented 54%, followed by 42% bachelor degree holders, and 4% secondary school respondents. In terms of years of experience 37% of the respondents have been working for 11-20 years, followed by those who have been working for 21-30 years, i.e., 35%; then 23% of those who have been working for 5-10 years; and 5% of those who have been working for more than 30 years. Generally, the respondents can be described as excellent, in terms of qualifications, and very good in terms of years of experience. Thus, it can be argued that they are the kind of employees to be holding their posts in the bank risk management departments/units.
On the other hand, the second sample consisted of participants representing bank clients who have been, sued, prosecuted, and jailed for default to payback overdue finance (NPLs) to the banks. However, the pursuit of quality data dictated that only voluntary respondents are included in the sample, therefore, the sample size did not exceed 46 participants. In terms of sex distribution, 96% of the respondents were males and 4% were females. Regarding the respondents occupations, it is clear that the entrepreneurs lead the distribution with 50%, followed by 9% of employees, and 8% of traders. Considering their qualifications, 42% of them hold bachelor degree, 19% of them hold a diploma, and 17% hold a higher secondary school certificate. In view of the participant’s occupations and qualifications, it can be argued that they represented the kind of educated business people who can thrust with their businesses into ways of success.

5.4 The Study Methods of Analysis

As mentioned above, the "Likeret-scale" method is used to construct the questions of the various sections of the two questionnaires. For, trend opinions have been sought from the responses. To accomplish this, the famous Statistical Package for Social Science (SPSS) was used to produce descriptive statistics output. Finally, to sharpen focus on the results, each question, together with its responses, have been tabled separately.

The analysis deals with six sections: section one to section five belong to the first questionnaire, whereas section six belongs to the second questionnaire. Each set of responses addressing specific variables in these sections, having to do with the test of certain hypothesis, has been analyzed by means of frequencies, percentages, means, and standard deviations (whether the responses are taken for each question, separately, or taken as a whole group in cases of trend opinions). Moreover, the Chi-Square statistic is used as an indicator for the existence of relationships among a number of sets of variables. Hence, a feedback is obtained on the suitability of each set of variables to the section

[108] The range for judgments are: 1-1.79, 1.80-2.59, 2.60-3.39, 3.40-4.19, and 4.20-5 for the corresponding responses: strongly disagree, disagree, neutral, agree, and strongly agree, respectively.
under investigation. Finally, the content analysis method is used to analyze texts related to the interviews.

To wrap up the scenario of NPLs in Islamic banks in Sudan, the study delves into the empirical aspects in the chapter to come for deeper insights into the causes and nature of the problem.
CHAPTER SIX

A SPECIAL REFERENCE TO NON-PERFORMING FINANCE IN THE SUDANESE ISLAMIC BANKS

6.1 Introduction

After the previous chapter have explained the methodology adopted to find answers for the questions raised earlier in the section dealing with the problem statement in chapter one, and the hypotheses stated in the same chapter, the present chapter presents the main outcome, which is summarized, in terms of results that are shown in finer details through schedules representing individual questions, before a broader view is taken through average results obtained by considering the responses of related questions.

The analysis starts with discussing the results produced by the data collected by the first questionnaire dealing with the main aspects influencing bank credit risk management, in general, and its correlate of non-performing loans, in particular. For example, the roles played by the bank management, the supervisory and regulatory institutions, and the economic conditions, in addition to the results obtained through data collected by the second questionnaire dealing with role played by the bank clients (in the problem of non-performing loans). Accordingly, and to help savor the quality of the data used, tables (6.1) and (6.2) below summarize the samples characteristics, before the analysis and discussion are started by table (6.3) in section (6.2) below.
Table (6.1): Experiencing Financial Failure

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sex</td>
<td>Male</td>
<td>46</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>Entrepreneur</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employee</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trader</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retired</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Farmer</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freelancer</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Qualification</td>
<td>Postgraduate</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bachelor</td>
<td>20</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diploma</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Higher Secondary</td>
<td>8</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Author’s Calculation
Table (6.2):

Sample Characteristics of Banks’ Employees

<table>
<thead>
<tr>
<th>Sex</th>
<th>Qualifications</th>
<th>Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Freq.</td>
<td>%</td>
<td>Freq.</td>
</tr>
<tr>
<td>102</td>
<td>94</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58%</td>
</tr>
</tbody>
</table>

Note: Years of Experience: 1 ≡ 5-10; 2 ≡ 11-20; 3 ≡ 21-30; 4 ≡ more than 30
6.2 Data Analysis and Discussion

6.2.1 Section One: The legal and regulatory framework of the regulatory and supervisory institutions.

The first item, (No.1.1) in this section shows that the central Bank of the Sudan holds training courses and workshops to develop the skills of the staff working at the banking institutions. This can be discerned from table (6.3) where the majority of respondents (72%) agree with that. In contrast, 28% of the respondents do not agree reflecting, probably, some dissatisfaction with such kind of activities.

Table (6.3):

The Respondents’ Answers about the Development of the Staff Skills

<table>
<thead>
<tr>
<th>No. 1.1</th>
<th>Does the Central Bank of Sudan arrange training courses and workshops to develop the skills of the staff working at the banking institutions?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Answer</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td>78</td>
</tr>
</tbody>
</table>

With regard to the second item (No. 1.2), as it is clear from table (6.4), the majority of the respondents (94%) affirms that the Central Bank of Sudan follows certain procedure and execute certain penalties in case there are encroachments in the banking operations by commercial banks.

Table (6.4):

The Respondents’ Answers about Enforcing the Regulatory Policies

<table>
<thead>
<tr>
<th>No. 1.2</th>
<th>Are there any procedures or penalties executed by the Central Bank of Sudan in case of encroachments in the banking operations (the risk management)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Answer</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td>101</td>
</tr>
</tbody>
</table>
Table (6.5):

The Respondents’ Answers about the Provision of a Credit Risk Management Guide

<table>
<thead>
<tr>
<th>No. 1.3</th>
<th>Does the Central Bank of Sudan provide your bank with a guide for the credit risk management?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>87</td>
</tr>
</tbody>
</table>

Also, from table (6.5), and as far as item (No. 1.3) is concerned, it can be argued that the Central Bank of Sudan does provide banks with a guide for the credit risk management, as 87% of the respondents confirms that. Meanwhile, as table (6.6) shows more than 70% (11% strongly agree and 61% agree) of the respondents do agree that the guide for the credit risk management provided by the Central Bank encompasses all basic dimensions of credit risk management. In contrast, the respondents who do not agree represent 16% only (15% strongly disagree and 2% disagree). Those who are neutral represent 2%, only.

Table (6.6):

The Respondents’ Opinion about the Quality of the Guide

<table>
<thead>
<tr>
<th>No. 1.4</th>
<th>In case there is a guide for credit risk management, do you believe the guide encompasses all basic dimensions of credit risk management?</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>St. Agree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F. %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses,

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

However, with regard to the control and supervisory role played by the Central Bank of Sudan, as shown in table (6.7), item (No. 1.5), 70% (10% strongly agree and 60% agree) of the respondents believe that the inspection visits made by the related teams realize the purposes behind them. Meanwhile, around 25% (15% strongly disagree and 10% disagree) of the respondents do not agree with that.

120
Table (6.7):

The Respondents’ Opinion about the Inspection Visits
(Control and Supervision)

<table>
<thead>
<tr>
<th>No. 1.5</th>
<th>The inspection visits of the regulation and supervision teams, from the Central Bank, realize the purposes behind them.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>St. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td>11</td>
<td>10</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

Lastly, with regard to the legal procedure followed by the law-enforcing authorities to secure the payback of the non-performing loans (finance), and as it is clear from table (6.8), item (No. 1.6), 57% (8% strongly agree and 49% agree) that such legal procedure is sufficient and crucial in doing so.

Table (6.8):

The Respondents’ Opinion about the Legal Procedure

<table>
<thead>
<tr>
<th>No. 1.6</th>
<th>The legal procedure followed by the law-enforcing authorities is sufficient and crucial in the payback of banks’ non-performing loans (finance)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>St. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses,

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

However, 42% of the respondents (32% strongly disagree and 10% disagree) do not agree that the legal procedure is sufficient and crucial in securing the payback of non-performing loans (finance) to the banks. This high percentage of disagreement could be interpreted as a sort of discontent on the part of respondents of the implementation of the
legal procedure; perhaps the respondents have had experiences of seeing some bank clients walking off with the amount of the bank finance provided to them.

A broader view about this section can be taken in a framework of a collective answer for all the three ordinal-response questions, i.e., the agree-disagree questions of items (Nos. 1.4, 1.5, 1.6) in table (6.9) where almost 67% of respondents affirm that the legal and regulatory framework of the supervisory authorities is not weak, at least in terms of procedure and comprehensiveness, in comparison, only 27% believe that the legal and regulatory framework is weak.

Table (6.9):

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Responses and Results</th>
<th>The Legal and Regulatory Framework of the Supervisory Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S. Agree</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>1.4</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>1.5</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>1.6</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Average</td>
<td>10</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

However, given the values of the mean (2.71), the standard deviation (1.31), and a Chi-square of 24.95 at 99% level of significance (table 6.10), it can be concluded that the first hypothesis stating that "the problem of NPLs in Islamic Sudanese Banks has been spurred by weak legal and regulatory" Framework of the supervisory authorities is rejected.
Table (6.10):

Chi-Square Tests (1.4, 1.5, 1.6)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>24.954</td>
<td>16</td>
<td>.071</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>26.795</td>
<td>16</td>
<td>.044</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>10.522</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.2.2 Section Two: Banking Institutions and Risk Management

Starting with the yes-no questions, item (No. 2.1) in table (6.11) shows that the majority of respondents; 92% confirms that the banking institutions have credit risk management strategies and policies vis-à-vis 8% of respondents who do not believe that their banks have such kind of strategy and policy.

Table (6.11):

The Respondents’ Answers about the Existence of Strategies and Policies

<table>
<thead>
<tr>
<th>No. 2.1</th>
<th>Does your banking institution have a credit risk management strategy and policy?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

Concerning the same issue and as table (6.12) shows, 77% of respondents insist that their bank credit risk management and policy are discussed at the level of the bank board of directors. Seventeen percent of respondents deny that situation, hence drawing doubts of lack or miscommunication in such banks’ organization structures.
Table (6.12):

The Respondents’ Answers about Role of the Bank Board

<table>
<thead>
<tr>
<th>No. 2.2</th>
<th>In case there are credit risk management strategy and policy, are they discussed at the level of the bank board?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>84</td>
<td>77</td>
<td>17</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inapplicable response.

Moreover, from table (6.13); item (No. 2.3), it is clear that the majority of respondents (85%) affirms that their banks have guides showing the steps and procedure of credit risk management vis-à-vis 12% of respondents who deny that, therefore once again, only lack or miscommunication could be the reason standing behind the latter responses.

Table (6.13):

The Respondents’ Answers about the Bank’s Own Risk Management Guide

<table>
<thead>
<tr>
<th>No. 2.3</th>
<th>Does your banking institution have a guide showing the steps and procedure of credit risk management?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>93</td>
<td>85</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inapplicable responses.

Also, taking item (No. 2.4) in table (6.14), it is clear that 95% of respondents affirm that their banking institutions have units or departments specialized in risk management or credit risk management. At the same time 3% of respondents affirm the opposite position.
Table (6.14):
The Respondents’ Answers about the Existence of a Credit Risk Management Unit/Department

<table>
<thead>
<tr>
<th>No. 2.4</th>
<th>Does your banking institution have a unit or department specialized in risk management or credit management?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Answer</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>104</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td><strong>No</strong></td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inapplicable responses.

As it can be seen from item (No. 2.5), table (6.15), 60% of the units/departments specialized in risk management have been established in the 2000-2005 period, whereas 40% of them have been established in the 2006-2011 period.

Table (6.15):
The Respondents’ Answers about the Establishment of the Risk Management Unit/Department

<table>
<thead>
<tr>
<th>No. 2.5</th>
<th>In case, there is a unit/department specialized in risk management, when has it been established?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Answer</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2000-2005</strong></td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>65</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td><strong>2006-2011</strong></td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>44</td>
<td>40</td>
</tr>
</tbody>
</table>

Thus, it can be argued that 40% of the Islamic Sudanese Banks have had started to give due consideration to risk management after the year 2006. Otherwise, it can be argued that a number of Islamic Banks have been established after the year 2006.

In addition, 90% of the respondents emphasize that there is job description for the staff in charge of risk management in their banks. This situation can be discerned from table (6.16), item (No. 2.6), where only 7% of them state the opposite. As such, it can be argued that the banks under study are serious in dealing with the issues of risk management.
Table (6.16):

The Respondents’ Answers about the Job Description

<table>
<thead>
<tr>
<th>No. 2.6</th>
<th>Is there any job description for the staff in charge of risk management (credit)?</th>
<th>Answer</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>98</td>
<td>90</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

Moreover, from item (No. 2.7) in table (6.17), it can be emphasized that the majority of the Islamic Sudanese Banks (almost 70%) use a set of tools, methods, and procedure to deal with credit risk management, thus showing more seriousness in developing credit risk management frameworks.

Table (6.17):

The Respondents’ Answers about the Methods and Procedure Used in Credit Risk Management

<table>
<thead>
<tr>
<th>No. 2.7</th>
<th>Which tools, methods, and procedure, does your banking institution use vis-à-vis credit risk management?</th>
<th>Answer</th>
<th>F.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Credit ceilings.</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial ratios for every economic sector.</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computer applications.</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Collaterals.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Early warning system for credit quality.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematical models.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Diversification policy.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A set, or a subset, of all the tools and methods mentioned-above</td>
<td>73</td>
<td>69</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) F. ≡ Frequency

Coming to the ordinal–response questions in this section and starting with item (No. 2.8), table (6.18); it can be argued that almost 90% of the respondents do agree that the staff in charge of the credit affairs conducts comprehensive credit studies about the bank clients, compared to 9% only of the respondents who do not agree.
Table (6.18):

The Respondents’ Opinion about the Quality of Credit Studies

<table>
<thead>
<tr>
<th>No. 2.8</th>
<th>The staff in charge of the credit affairs conducts comprehensive credit studies about the bank clients.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td></td>
<td>St. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td></td>
<td>39</td>
</tr>
</tbody>
</table>

Notes:

(1)The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

Likewise, item (No. 2.9), table (6.19), suggests that 75% of the respondents agree that the staff in charge of the credit affairs conducts feasibility studies at all levels of the economic sectors, and use them as bench marks for feasibility studies submitted by bank clients to get finance. Meanwhile, around 20% of the respondents do not agree, and only 2% are neutral.

Table (6.19):

The Respondents’ Opinion about the Quality of Feasibility Studies

<table>
<thead>
<tr>
<th>No. 2.9</th>
<th>The staff in charge of the credit affairs conducts all-encompassing feasibility studies (at all levels of the economic sectors the banking institution is involved in), and update them every time and then, so that they may be used as a guide when taking decisions about the feasibility of projects for which clients seek finance.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

Notes:

(1)The remaining balance of the 100% represents unanswered questions, or inappropriate responses,

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency
As for the kind of collaterals, which the banking institutions require from their clients seeking finance, from item (No. 2.10) in table (6.20), 38% of the respondents emphasize that their banks require physical collaterals, meanwhile 2% of them believe that there are collaterals provided through third parties (other persons). However, the majority (47%) asserts that there are other kinds of collaterals provided to their banks.

**Table (6.20):**

The Respondents’ Answers about the Kind of Collaterals

<table>
<thead>
<tr>
<th>No. 2.10</th>
<th>What kind of collaterals does your banking institution require from its clients seeking credit facilities (finance)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical collaterals</td>
</tr>
<tr>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>41</td>
<td>38</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

For their opinions about whether the collaterals, provided by clients, are sufficient to cover the amount of finance offered by banks item (No. 2.11), table (6.21), 87% of the respondents answered positively to that in comparison to 12% of them who do not agree, and nil of them are neutrals.

**Table (6.21):**

The Respondents’ Opinion about the Value of Collaterals

<table>
<thead>
<tr>
<th>No. 2.11</th>
<th>Collaterals provided by clients to the banking institution are sufficient, in terms of value, to cover the amount of finance supplied.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>St. Agree</td>
</tr>
<tr>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>33</td>
<td>30</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency
The percentage (12%) of respondents who negatively expressed their opinions stated specific reasons for their belief of the insufficiency of collaterals as explained by item (No. 2.12) in table (6.22), where 29% believe that the evaluation done by the rating companies does not reflect the true value (which, in reality, is often far less than what is stated) of the collaterals. In addition, 21% believe that the deterioration of the exchange of the Sudanese pound vis-à-vis other foreign currencies reduces the value of the collaterals, meanwhile, 14% believe that the reason behind the insufficiency of collaterals lies in the interference of powerful bodies to facilitate financing projects of certain people.

Table (6.22):

<table>
<thead>
<tr>
<th>No. 2.12</th>
<th>What reasons make the collaterals provided by the bank's clients not sufficient to cover the amount of the given finance?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The evaluation done by the rating companies does not reflect the true value of the collaterals</td>
</tr>
<tr>
<td></td>
<td>The deterioration of the exchange of the Sudanese pound vis-à-vis other foreign currencies reduces the value of collaterals</td>
</tr>
<tr>
<td></td>
<td>The interference of powerful bodies to facilitate financing projects of certain people</td>
</tr>
<tr>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>4</td>
<td>29</td>
</tr>
</tbody>
</table>

Notes:

(1) The percentage calculation is based on the responses (fourteen only) that do agree with the insufficiency of collaterals in covering the amount of the finance provided.
(2) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.
(3) F. ≡ Frequency

By looking at table (6.23), more emphasis is added to the results relating to items (Nos. 2.11 and 2.12). For, the value of chi square statistic of (1.2) is significant even at a level of 95% level of significance.
Table (6.23):

Chi-Square Tests (2.11, 2.12)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.170</td>
<td>12</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>67.734</td>
<td>12</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>19.867</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>105</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regarding follow-up reports to ensure the payback of finance, and as it can be seen from item (No. 2.13) in table (6.24), 93% of respondents affirm that there are reports, where 8% of them denies the existence of such reports.

Table (6.24):

The Respondents’ Answers about the Periodic Credit Risk Reports

<table>
<thead>
<tr>
<th>No. 2.13</th>
<th>Are there periodic reports about the credit position of the clients (to follow up the payback process).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Answer</strong></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>101</td>
<td>93</td>
</tr>
</tbody>
</table>

As the kind of the reports determine the quality of data sought, item (No. 2.14) in table (6.25) shows the feedback of respondents about the form of the reports used, where 38% of them believe that such reports take a predesigned standard format; 38% of them state that such reports take formats that are designed by the staff member in charge of the follow up process; and 21% believe that the reporting of the follow up is made in other ways.
Table (6.25):

**The Respondents’ Answers about the Form of the Risk Reports**

<table>
<thead>
<tr>
<th>No. 2.14</th>
<th>In case there are follow up reports, what form do they take?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A predesigned standard format</td>
<td>A format designed by the staff member in charge</td>
</tr>
<tr>
<td>F.</td>
<td>%</td>
<td>F.</td>
</tr>
<tr>
<td>41</td>
<td>38</td>
<td>41</td>
</tr>
</tbody>
</table>

Notes: (1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) F. = Frequency

More emphasis is made on the relationship between items (2.13 and 2.14) by looking at table (6.26). Feedback on the field follow-up visits is also important as a means of payback process. Thus, item (No. 2.15) in table (6.27) sheds light on the respondents' opinion about that issue, where 80% of them agree that there are field follow-up visits, 12% disagree, and 4% are neutral.

Table (6.26):

**Chi-Square Tests (2.13, 2.14)**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>27.047</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>23.305</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>18.197</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>106</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (6.27):

**The Respondents’ Opinion about the Follow-up Visits to the Banks’ Clients**

<table>
<thead>
<tr>
<th>No. 2.15</th>
<th>There are field follow up visits to the bank’s clients who receive credit facilities (finance).</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S. Agree</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>24</td>
<td>22</td>
<td>63</td>
</tr>
</tbody>
</table>

Notes: (1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D = Standard Deviation, S. = Strongly, F. = Frequency
Moreover, for the nature of such field follow-up visits, as it can be seen from item (No. 2.16) in table (6.28), the majority of respondents (80%) affirms that the visits are performed before and during the finance utilization, whereas 12% of them state that such visits are performed periodically during the finance utilization; and 6% emphasize that the visits are performed before the approval of the finance only.

Table (6.28):

The Respondents’ Answers about the Way the Field Visits Take Place

<table>
<thead>
<tr>
<th>No. 2.16</th>
<th>In case there are field follow up visits, how do they take place?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before the approval of finance only</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td>2.16</td>
<td>7</td>
</tr>
</tbody>
</table>

Notes: (1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) F. = Frequency

In addition to the above-mentioned discussion in this section, a wider view is taken through the collective answer provided through the integration of the ordinal-response questions of the section. Therefore, table (6.29), where items (Nos. 2.8, 2.9, 2.11, and 2.15) are summarized, provides the trend opinion of the respondents about the efforts exerted by the banking institutions to manage credit risk.

Table (6.29):

Aggregate Result (Items Nos. 2.8, 2.9, 2.11, 2.15)

<table>
<thead>
<tr>
<th>Items Nos.</th>
<th>Responses and Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td>2.8</td>
<td>39</td>
</tr>
<tr>
<td>2.9</td>
<td>25</td>
</tr>
<tr>
<td>2.11</td>
<td>33</td>
</tr>
<tr>
<td>2.15</td>
<td>24</td>
</tr>
<tr>
<td>Average</td>
<td>30</td>
</tr>
</tbody>
</table>

Notes: (1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D = Standard Deviation, S. = Strongly, F. = Frequency

Thus, the majority of the respondents (83%) agree that their Islamic Banking Institutions contribute very well to the development and management of credit risk vis-à-vis a 12% of respondents that disagree, and less than 2% of natural responses.
Accordingly, and in the light of the mean (2.15), the standard deviation, as well as the significant value of chi-square shown on table (6.30) it can be argued that the credit risk management frameworks in the Islamic Sudanese Banks are not weak.

**Table (6.30):**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>51.203</td>
<td>16</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>49.791</td>
<td>16</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>14.440</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>109</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hence, it can be concluded that the second hypothesis of the study, which state that "the problem of NPLs (finance) in the Islamic Sudanese Banks has been spurred by lack of (or weak) credit risk management frameworks in the banks concerned" is rejected.

**6.2.3 Section Three: The Macroeconomic environment**

The first dimension in this section, item (No. 3.1) in table (6.31) seeks feedback from the respondents regarding the negative impact caused by the vacillating fiscal and monetary policies approached by the government. Out of the sample drawn, 95% of the respondents agree that there is a negative impact on businesses of bank clients, whereas 4% disagree with that, and nil neutrals.

**Table (6.31):**

<table>
<thead>
<tr>
<th>No. 3.1</th>
<th>The monetary and fiscal policies approached by the government are often vacillating, therefore, resulting in negative impact on businesses of the bank's clients.</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The monetary and fiscal policies approached by the government are often vacillating, therefore, resulting in negative impact on businesses of the bank's clients.</td>
<td>S. Agree</td>
</tr>
<tr>
<td>F. %</td>
<td>F. %</td>
<td>F. %</td>
</tr>
<tr>
<td>66</td>
<td>61</td>
<td>37</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency
As for the seriousness of institutions, in charge of NPLs (finance) treatment, in implementing certain policies and procedure, as item (No. 3.2) in table (6.32) shows, more than 60% of the respondents agree that there are policies and procedure sanctioned and approached by related government institutions responsible for the treatment of NPLs (finance), however, such policies and procedure are not seriously implemented in practice. In comparison, 36% of them disagree, and 2% are neutral.

Table (6.32):

The Respondents’ Opinion about the Policies and Procedures of Institutions in Charge of NPLs (finance)

<table>
<thead>
<tr>
<th>No. 3.2</th>
<th>Policies and procedure approached by institutions in charge of NPLs treatment are sanctioned and announced, however, they are often not seriously implemented in practice.</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Agree</td>
<td>Agree</td>
<td>Neutral</td>
</tr>
<tr>
<td>F. %</td>
<td>F. %</td>
<td>F. %</td>
</tr>
<tr>
<td>28</td>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses,

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

The relationship between the deterioration of strategic and vital schemes in the economy such as the Gezira Scheme and the buildup of NPLs (finance) in the Islamic banking sector, is investigated through item (No. 3.3) in table (6.33), where 64% affirm their agreement that the deterioration of such schemes has contributed to the rise and buildup of NPLs (finance). In comparison 26% disagree with that, and 9% are neutral.
No doubt, the security conditions affect the business environment, therefore, directly or indirectly affecting the NPLs (finance). As such item (No. 3.4) in table (6.34) seeks feedback from respondents through their opinions on the relationship between the deterioration of the security conditions in some areas of the Sudan and the performance of businesses enjoying financial facilities provided by the Islamic Sudanese banks. As it can be seen from the table, almost, 90-% of the respondents agree with the existence of the relationship, meanwhile 9% of them disagree, and nil of them are natural.

Table (6.33):
The Respondents’ Opinion about Impact of the Deterioration Strategic Schemes on NPLs

<table>
<thead>
<tr>
<th>No. 3.3</th>
<th>The deterioration of some strategic and vital schemes, such as the Gezira Scheme, has contributed to the rise and buildup of NPLs in the banking sector.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td></td>
<td><strong>S. Agree</strong></td>
</tr>
<tr>
<td></td>
<td>F. %</td>
</tr>
<tr>
<td></td>
<td>31</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

Table (6.34):
The Respondents’ Opinion about Impact of the Deterioration the Security Conditions on NPLs

<table>
<thead>
<tr>
<th>No. 3.4</th>
<th>The deterioration of the security conditions in some areas, and at some borders, has contributed to the exacerbation of a state of uncertainty in the economy, hence negatively affecting the performance of businesses enjoying financial facilities provided by banks.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td></td>
<td><strong>S. Agree</strong></td>
</tr>
<tr>
<td></td>
<td>F. %</td>
</tr>
<tr>
<td></td>
<td>55</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency
Regarding the financial modes mostly suffering NPLs (finance) and as item (No. 3.5) in table (6.35) shows, 80% of the respondents believe that Murabah suffers most, followed by Musharakah, and then Mudharaba and Istisnaa.

**Table (6.35):**

The Respondents’ Answers about the Financial Mode most Suffering NPLs (finance)

<table>
<thead>
<tr>
<th>3.5</th>
<th>Which one of the financial modes is mostly suffering NPLs?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Answer</td>
</tr>
<tr>
<td></td>
<td>Murabah</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, missing data, or inappropriate responses.

Moreover, item (No. 3.6) in table (6.36) enumerates the opinions of the respondents on the causes of NPLs (finance), where 12% of them believe that the deterioration of the macro-economy is responsible for the buildup of NPLs (finance), 8% are of the view that there is insufficient follow up on the part of the banking institutions, and 5% believe that the problem lies in the less valuable collaterals provided by clients to their banks. However, 48% of the respondents believe that the problem of NPLs is a contribution of a myriad of factors.

**Table (6.36):**

The Respondents’ Answers about the Causes of NPLs (finance)

<table>
<thead>
<tr>
<th>No. 3.6</th>
<th>In your opinion, what causes NPLs (finance)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Answer</td>
</tr>
<tr>
<td></td>
<td>Less valuable collaterals</td>
</tr>
<tr>
<td></td>
<td>Insufficient follow-up</td>
</tr>
<tr>
<td></td>
<td>Weak credit study</td>
</tr>
<tr>
<td></td>
<td>Use of the finance for purposes other than what specified in the client’s application</td>
</tr>
<tr>
<td></td>
<td>Unfair financial policies</td>
</tr>
<tr>
<td></td>
<td>Deterioration of the macro-economy</td>
</tr>
<tr>
<td></td>
<td>Unwilling-to-pay client</td>
</tr>
<tr>
<td></td>
<td>Unwilling-to-pay government institutions</td>
</tr>
<tr>
<td></td>
<td>A set, or a subset, of all the causes mentioned-above</td>
</tr>
</tbody>
</table>

Notes: (1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2)F. ≡ Frequency
Looking at the aggregate result of the ordinal response questions approached in the above mentioned discussion, a collective answer will be of much more benefit. Accordingly, items (Nos. 3.1, 3.2, 3.3, and 3.4) in table (6.37) furnish that collective answer, where it is clear that 77% of the respondents agree that the macroeconomic environment in Sudan have negatively impacted the businesses run by their bank clients and contributes to the rise and buildup of NPLs (finance). In comparison, less than 20% disagree with that, and 2% only are neutral.

Table (6.37):

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Responses and Results</th>
<th>The Macroeconomic Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S. Agree</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>3.1</td>
<td>66</td>
<td>61</td>
</tr>
<tr>
<td>3.2</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>3.3</td>
<td>31</td>
<td>28</td>
</tr>
<tr>
<td>3.4</td>
<td>55</td>
<td>50</td>
</tr>
<tr>
<td>Average</td>
<td>45</td>
<td>41</td>
</tr>
</tbody>
</table>

Notes: (1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

Taking into consideration, what has been mentioned above about the various dimensions in this section, and table (6.38) below, it can be argued that the third hypothesis of the study stating that "the problem of NPLs (finance), in the Islamic Sudanese banks has been spurred by adverse macroeconomic conditions surrounding the various economic sectors in Sudan" is accepted.

Table (6.38):

<table>
<thead>
<tr>
<th>Chi-Square Tests (3.1, 3.2, 3.3, 3.4)</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>29.565</td>
<td>16</td>
<td>.020</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>31.203</td>
<td>16</td>
<td>.013</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>9.054</td>
<td>1</td>
<td>.003</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>109</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2.4 Section Four: The Staff in Charge of the Credit Risk management

With regard to the general quality of the staff in charge of credit risk management, by looking at item (No. 4.1) in table (6.39), it is clear that 90% of the respondents do affirm that their banking institutions hold specialist training courses in credit risk management and related activities to develop the skills and know-how of the staff. However, 9% of them affirm the opposite.

Table (6.39):

The Respondents’ Answers about the Banks ‘Efforts in Developing the Skills of the Risk Management Staff

<table>
<thead>
<tr>
<th>No. 4.1</th>
<th>Does the bank hold specialist training courses, in credit risk management, and related activities, to develop the skills and know-how of the staff in charge of risk management?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, missing data, or inappropriate responses.

In addition, the respondents’ opinions about their satisfaction with the job done by the staff in credit risk management, and in view of item (No. 4.2) in table (6.40), it can be emphasized that around 84% of the respondents express their agreement with the satisfaction they feel with the job done by their subordinates in charge of credit risk management. In contrast, 12% disagree, whereas 2% are neutral.

Table (6.40):

The Respondents’ Opinion about the Job Done by the Credit Risk Management Staff

<table>
<thead>
<tr>
<th>No. 4.2</th>
<th>You are satisfied with the job done by the staff in charge of credit risk management.</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td>Frequency</td>
<td>F.</td>
<td>F.</td>
</tr>
<tr>
<td>32</td>
<td>30</td>
<td>59</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D = Standard Deviation, S. = Strongly, F. = Frequency
Those who are not satisfied with the job done by their subordinates in charge of credit risk management justify their answer (item No. 4.3 in table (6.41) below in terms of little or no training (29%). In addition, 21% of them emphasize that their dissatisfaction with the job done by their subordinates at the risk management unit/department is due the senior management being inconvincible on establishing a special unit for risk management.

Table (6.41):

The Respondents’ Answers about their Dissatisfaction with the Job Done by their Subordinates

<table>
<thead>
<tr>
<th>No. 4.3</th>
<th>In case you are not satisfied with the job done by the staff in charge of credit risk management, then why?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Due to little or no training</td>
</tr>
<tr>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>4</td>
<td>29</td>
</tr>
</tbody>
</table>

Notes:

(1) The percentage calculation is based on the responses (fourteen only) of those who are not satisfied with the job done by the staff in charge of credit risk management. (2) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (3) F ≡ Frequency

Further evidence on the general quality of the staff in charge of the credit risk management, can be grasped from the relationship between the above mentioned items (No. 4.2 and 4.3) depicted through the accepted chi-square statistic in table (6.42) below.

Table (6.42):

Chi-Square Tests (4.3, 4.4)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.301</td>
<td>16</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>83.103</td>
<td>16</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>16.045</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As such and in view of the above-mentioned discussion concerning items (Nos. 4.1 and 4.2), it can be concluded that the fourth hypothesis, which states that “the problem of NPLs (finance) in Islamic Sudanese banks has been spurred by poor trained human resource in charge of the risk management processes” is rejected.

### 6.2.5 Section five: Nature and Behavior of Bank's Clients

It is, also, not uncommon, in such kind of studies, to contemplate the nature of bank clients in terms of their behavior, and its implications on their commitment with the terms of finance. Thus, item (No. 5.1) in table (6.43) summarizes the opinion of the participants on the relationship between the recommendations and directions made by senior government officers and politicians to banking institutions regarding the provision of finance (credit) to some clients, and the bank NPLs (finance). Out of the total respondents, 89% agree with the existence of the stated relationship, compared to 8% of those who disagree, and 1% of neutrals.

<table>
<thead>
<tr>
<th>No. 5.1</th>
<th>Recommendations and directions made by senior politicians to banking institutions, regarding the provision of finance (credit) to some clients, contribute to the bank’s NPLs (finance).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td>F. %</td>
<td>F. %</td>
</tr>
<tr>
<td>73</td>
<td>67</td>
</tr>
</tbody>
</table>

**Table (6.43):**

**The Respondents’ Opinion about the Senior Politicians Influence**

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D = Standard Deviation, S = Strongly, F = Frequency

Also, mismanagement on the part of the clients, and its negative impact on their businesses can lead to financial distress and failure to payback due balances of finance to banking institutions. Such claim is investigated through the opinions elucidated by the participants in item (No. 5.2), table (6.44), where 95% of the respondents affirm their agreement with that claim, 3% of them disagree, and nil of them are naturals.
Table (6.44):

The Respondents’ Opinion about the Banks’ Clients
Mismanagement of Business Projects

<table>
<thead>
<tr>
<th>No. 5.2</th>
<th>Mismanagement on the part of the bank clients contributes to the deterioration and collapse of their business projects, hence, their financial failure to pay back the due balances of finance owed to the banking institutions.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td></td>
<td>68</td>
</tr>
</tbody>
</table>

Notes:
(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

Regarding the nature of the clients’ behavior vis-à-vis the willingness to payback overdue balances of finance to their banks, item (No. 5.3) in table (6.45) shows that 81% of the respondents emphasize that bank clients experiencing financial distress and failure are much more unwilling to pay (Mumatiloun) than they just face financial difficulties. In comparison, 25% of them disagree, and 3% are neutral.

Table (6.45):

The Respondents’ Opinion about Banks’ Clients Behavior
Regarding the Payback of Finance

<table>
<thead>
<tr>
<th>No. 5.3</th>
<th>Bank clients experiencing financial distress and failure are much more unwilling to pay (Mumatiloun) than they just face real financial difficulties.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

Notes:
(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency
Linking the recommendations made by senior government officers and politicians, and the unwillingness to payback (Mumatala) overdue finance on the part of bank clients, a possibility of some sort of provocation towards not paying back, is detected through table (6.46), where a value of 28.69 chi-square statistic is significant at 99% level of significance, hence emphasizing the existence of a relationship.

Table (6.46):  
Chi-Square Tests (5.1, 5.3)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>28.686</td>
<td>16</td>
<td>.026</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>21.812</td>
<td>16</td>
<td>.149</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>3.676</td>
<td>1</td>
<td>.055</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

However, those who believe the claim of unwillingness to payback (Mumatala) furnish reasons for that. Hence, item (No. 5.4) in table (6.47) shows that 45%\(^{(109)}\) believe that the regulatory arrangements are weak; 3% of them believe that there is resort to close and/or mediating people, and 3% of them have the belief that those who are unwilling to payback (Mumatiloun) believe that the bank money is money that could be walked off with, and 10% believe in other reasons behind such king of client behavior. As a matter of fact, the belief of a 45% of respondents that the unwillingness to payback (Mumatala) behavior of bank clients is owed to weak regulatory arrangements does not refute the earlier result of the existence of good regulatory arrangements but indicates that such regulatory set up and arrangements are often relaxed overlooked.

\(^{(109)}\) Out of those who believe that bank clients are unwilling to payback (Mumatiloun) overdue finance balances.
Table (6.47):

The Respondents’ Answers about Reasons behind the Unwillingness (*Mumatala*) to Pay on the Part of Banks’ Clients

<table>
<thead>
<tr>
<th>No. 5.4</th>
<th>In case you believe that the bank’s clients are unwilling to pay (<em>Mumatiloun</em>), then why?</th>
<th>F.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer: due to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak regulatory arrangements.</td>
<td></td>
<td>34</td>
<td>45</td>
</tr>
<tr>
<td>Resort to close people of authority and/or mediating people.</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>The belief that the bank money is money that could be walked off with.</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other reasons</td>
<td></td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

Notes:

(1) The percentage calculation is based on the responses (thirty four only) that do agree that the bank’s clients are unwilling to pay (*Mumatiloun*). (2) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (3) F. ≡ Frequency

In addition, more insights into the relationship between items (No. 5.1 and 5.3) unfold through table (6.48), where a chi-square statistic of 76.91 is significant at 99% level of significance.

Table (6.48):

Chi-Square Tests (5.3, 5.4)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>76.905</td>
<td>40</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>89.826</td>
<td>40</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear...</td>
<td>10.288</td>
<td>1</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Taking a broader view through the collective answer grasped by means of aggregating the three ordinal-response questions; item (5.1, 5.2, and 5.3) discussed above, table (6.49) highlights the trend opinion of respondents about the stance they take vis-à-vis the nature and behavior of bank’s clients.
Table (6.49):

**Aggregate Result (Items Nos. 5.1, 5.2, 5.3)**

<table>
<thead>
<tr>
<th>Nature and Behavior of Banks’ Clients</th>
<th>Responses and Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item No.</td>
<td>S. Agree (F. %)</td>
</tr>
<tr>
<td>5.1</td>
<td>73</td>
</tr>
<tr>
<td>5.2</td>
<td>68</td>
</tr>
<tr>
<td>5.3</td>
<td>25</td>
</tr>
<tr>
<td>Average</td>
<td>55</td>
</tr>
</tbody>
</table>

Notes: (1) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

As such, 85% of the respondents agree bank's clients experiencing financial distress and failure have not shown proper behavior in terms of interaction with their banks. Meanwhile, 12% of the respondents disagree with a claim of misbehavior, and 1% of them are neutral. Taking into consideration, the discussion mentioned above, for both individual and collective answers, it can concluded that the fifth hypothesis stating that "the problem of NPLs (finance), in Islamic Sudanese Banks, has been spurred by cunning bank clients who just wanted to walk off with the amount of the finance they obtained from banks" is accepted.

**6.2.6 Section Six: Bank's Clients Experiencing Financial Failure**

This section is considered pivotal to the study. For, it reverses the scenario of NPLs (finance) through a perspective of bank clients experiencing financial failure and finally prosecuted and jailed. Starting with the yes-no questions, item (No. 6.1) in table (6.50), almost 70% of the respondents affirm that the finance provided by the bank was sufficient enough to cover the actual needs (as demanded) of their business project, however, 31% of them negatively responded.
Table (6.50):

The Respondents’ Answers about the Sufficiency of Finance Provided by Banks

<table>
<thead>
<tr>
<th>No. 6.1</th>
<th>Was the finance (credit facility) provided by the bank sufficient to cover the actual needs (as demanded) of your business project?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Answer</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>33</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

Regarding the suitability of the time when receiving the finance asked for; item (No. 6.2) in table (6.51), 50% of the respondents agree that they received the finance from the bank at a suitable time just enough to start the business project for which they sought finance, whereas 35% of them disagree, and 6% are neutral.

Table (6.51):

The Respondents’ Opinion about the Time They Received the Finance for their Projects

<table>
<thead>
<tr>
<th>No. 6.2</th>
<th>You received the finance (credit facility) at a suitable time just enough to start the business project for which you sought finance.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response</td>
</tr>
<tr>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td></td>
<td>F.</td>
</tr>
<tr>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

Notes:
(1)The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

As for the control of their projects accounts; item (No. 6.3) in table (6.52), 79% of the respondents affirm their agreement that the person in charge of the business project had sufficient background (study, experience, ..., etc) about the accounts. In comparison, 8% disagree, and 13% are neutral. Regarding the purpose of the finance received from the bank, 83% of the respondents emphasize that the finance they received was for use in the specific business projects they, of which they submitted related proposals and studies together with their applications. In contrast, 17% of them used the finance for other purposes.
Table (6.52):
The Respondents’ Opinion about the Qualifications of the Project’s Accountant

<table>
<thead>
<tr>
<th>No. 6.3</th>
<th>Response</th>
<th>St. Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>S. disagree</th>
<th>Mean</th>
<th>St. D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F.</td>
<td>%</td>
<td>F.</td>
<td>%</td>
<td>F.</td>
<td>%</td>
<td>F.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23</td>
<td>50</td>
<td>14</td>
<td>29</td>
<td>6</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Notes:</td>
<td>(1)The remaining balance of the 100% represents unanswered questions, or inappropriate responses.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The real purpose behind the application for finance determines, to some extent, the payback of the finance itself. As such, item (No. 6.4) in table (6.53), shed light on this issue, where 83% of the respondents emphasized that the real purpose behind their application for finance was for use to implement the project explained in application. In comparison, 17% of the respondents did not intend to use finance they received for the project they explained in the application for the finance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (6.53):
The Respondents’ Answers about the Purpose behind the Finance Received

<table>
<thead>
<tr>
<th>No. 6.4</th>
<th>Was the finance (credit facility) you received from the bank for specific project (that you submitted to the bank) or for other purposes?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To use for the project</td>
<td>To use for other purposes</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>40</td>
<td>83</td>
<td>8</td>
</tr>
</tbody>
</table>

No doubt, the accuracy of the recommendations made by the feasibility studies depend on the body conducted them. Thus, item (No. 6.5) in table (6.54) shows that 58% of the respondents confirm that a specialist enterprise conducted the feasibility study of the project financed by the bank, whereas 42% emphasize that the feasibility of the study was conducted by a sole individual. Such kinds of responses indicate that more caution
needs to be exercised, on the part of banking institution but also regulatory bodies, when evaluating credit worthiness.

Table (6.54):  

<table>
<thead>
<tr>
<th>No. 6.5</th>
<th>Who conducted the feasibility study of the project financed by the bank (a specialist enterprise or an individual)?</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A specialist enterprise</td>
</tr>
<tr>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>28</td>
<td>58</td>
<td>20</td>
</tr>
</tbody>
</table>

Considering the experience of these clients (entrepreneurs), item (No. 6.6) in table (6.55) shows that 69% of the respondents have had experience in business and investment management, 19% of them have had no experience, and 10% have had experience to some extent. Once again banking institutions and regulatory bodies need to be cautious about the standards of credit worthiness.

Table (6.55):  

<table>
<thead>
<tr>
<th>No. 6.6</th>
<th>Have you got any experience in Business and investment management?</th>
<th>Yes</th>
<th>No</th>
<th>To some extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. %</td>
<td>F. %</td>
<td>F. %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>69</td>
<td>9</td>
<td>19</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: (1) The remaining balance of the 100% represents unanswered questions, or inapplicable responses. (2) F ≡ Frequency

In responding to the question of commitment to the terms of finance, and as item (No. 6.7) in table (6.56) shows, 69% of the respondents affirm that they did abide by the payback terms set by the bank, whereas 21% did not abide, and 10% abided to some extent.
Table (6.56):
The Respondents’ Answers about Bank’s Clients Commitment

<table>
<thead>
<tr>
<th>No. 6.7</th>
<th>Did you abide by the payback terms that the bank set for your finance?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>F.</td>
<td>%</td>
</tr>
<tr>
<td>33</td>
<td>69</td>
</tr>
</tbody>
</table>

As for the future intention of the participants to payback the overdue finance in cases of improvements in their financial positions, item (No. 6.8) in table (6.57), 85% of the respondents confirm their intention to pay, whereas 13% are not intending to payback.

Table (6.57):
The Respondents’ Answers about the Bank’s Clients Intension to Pay

<table>
<thead>
<tr>
<th>No. 6.8</th>
<th>Will you payback the financial amount owed to the bank in case your financial position improves?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Answer</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>41</td>
<td>85</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inapplicable responses.

The reasons for the payback intention; item (No. 6.9) in table (6.58), are expressed in terms of the belief that the overdue finance is a debt that should be settled (42%); and as a means for being set free (17%).

Table (6.58):
The Respondents’ Answers about the Payback

<table>
<thead>
<tr>
<th>No. 6.10</th>
<th>In case you are intending to payback the amount due to the bank, then why?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Answer</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>20</td>
<td>42</td>
</tr>
</tbody>
</table>

Note: The remaining balance of the 100% represents unanswered questions, or inapplicable responses.
Table (6.59); however, add more emphasis on the relationship between items (Nos. 6.8 and 6.9) discussed above; where that relationship is confirmed. Regarding the use of the finance received from the bank, 83% of the respondents affirm that they had used the finance received in the business project only (the proposal of which was earlier submitted as an attachment to the application for finance), meanwhile, 16% disagree, and 4% are neutral.

Table (6.59):

Chi-Square Tests (6.8, 6.9)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>34.000</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>31.688</td>
<td>2</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>23.681</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>34</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With regard to the real use of the finance provided by the bank; item (No. 6.10) in table (6.60) shows that 83% of the respondents agreed that they used the finance for the business project, explained earlier in the application, whereas 16% did not agree, and 4% are neutral. Considering this result in view of the result obtained from table (6.59), it can be argued that the majority of respondents were serious and interested in developing the business project for which the application for finance had been made.

Table (6.60):

The Respondents’ Opinion about the Use of the Finance Received

<table>
<thead>
<tr>
<th>No. 6.11</th>
<th>The finance (credit facility) received from the bank was used for the project only.</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>S. Agree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F. %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses.

(2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency
Finally, taking into consideration the collective answer by aggregating the ordinal response questions (item Nos. 6.2, 6.3, and 6.10) in table (6.61), 70% of the respondents agree that they received the finance and used it in accordance with the business management style.

**Table (6.61):**

<table>
<thead>
<tr>
<th>Bank Clients Experiencing Financial Failure</th>
<th>Responses and Results</th>
<th>S. Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>S. disagree</th>
<th>Mean</th>
<th>St. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item No.</td>
<td></td>
<td>F.</td>
<td>%</td>
<td>F.</td>
<td>%</td>
<td>F.</td>
<td>%</td>
<td>F.</td>
</tr>
<tr>
<td>6.2</td>
<td></td>
<td>14</td>
<td>29</td>
<td>10</td>
<td>21</td>
<td>3</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>6.3</td>
<td></td>
<td>23</td>
<td>50</td>
<td>14</td>
<td>29</td>
<td>6</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>6.11</td>
<td></td>
<td>20</td>
<td>48</td>
<td>17</td>
<td>35</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>19</td>
<td>42.3</td>
<td>13.7</td>
<td>28</td>
<td>3.7</td>
<td>7.7</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Notes:

(1) The remaining balance of the 100% represents unanswered questions, or inappropriate responses. (2) St. D ≡ Standard Deviation, S. ≡ Strongly, F. ≡ Frequency

More emphasis is added by looking at table below (6.62), where chi-square statistic is significant at 95% level of significance.

**Table (6.62):**

<table>
<thead>
<tr>
<th>Chi-Square Tests (6.2, 6.3, 6.11)</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>22.587a</td>
<td>16</td>
<td>.125</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>19.147</td>
<td>16</td>
<td>.261</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>2.631</td>
<td>1</td>
<td>.105</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Taking into consideration the above-mentioned discussion, it can be concluded that the sixth hypothesis, which states that “the problem of NPLs (finance) in Islamic Sudanese banks has been spurred by bank clients being not real business entrepreneurs” is rejected.
6.2.6.1 Interview Discussion

On the basis of the interviews conducted with the participants (bank clients jailed due to failure to payback overdue bank finances), the following results have been distinguished:

1. Almost, 80% of the participants interviewed emphasized that they had been prosecuted and jailed because of their having no chance to deal with, and improve the, performance of their businesses despite the fact that there is room for resolution through a chance to be given for the prosecuted person, in terms of being set free to be able to payback, for example, according to articles (Nos. 243 and 244) of the Sudanese Civil Procedure Act for the year 1983, a heavily indebted (*Mu'o sir*; from *I'sar*) person may be set free on basis of an evidence showing the indebtedness (*I'sar*).

As a matter of fact, the objectives of *Shari’a* usually weigh the benefits (*Masalih*) against the harms (*Mafasid*). As such, Islamic *Sharia* aims at providing mercy (*Rahma*) to humans. Therefore, in such situations of bankruptcy it teaches Muslims to delay the demand for the payback from those who are bankrupt.

2. More than 90% of the participants interviewed believe that the authorities concerned, such as the Central Bank of Sudan, are to blame because they have not taken any initiative to meet with them for possible resolutions.

The participants interviewed, and so many like them in the different prisons around Sudan, represent a special class, which is vital to the economy, i.e., business entrepreneurs. Some of them run companies with various branches in the country. That means, so many people are employed with them, hence, any act that threatens the sustainability of these entrepreneurs’ businesses may lead to the release of their employees let alone the negative social repercussions. Moreover, those entrepreneurs indebtedness is valued at billions of Sudanese pounds. That is, the Sudan economy has been deprived of a huge wealth. Therefore, corrective actions of official institutions like the Central Bank of Sudan is deemed necessary.
6.3 Conclusion

The Islamic financial industry, in general, and the Islamic banking, in particular, has recently come to attract worldwide attention of academics, professionals, and policy makers. Accordingly, it is not uncommon nowadays to find Islamic financial institutions been established in the biggest financial centers around the world. In Sudan the experience with the Islamic banking industry is considered unique in the Islamic world. For, the industry has grown in a full-fledged financial system including an Islamic central bank; the Central Bank of Sudan. Therefore, and despite the fact that it is suffering a lot of problems, the Sudan experience in Islamic banking is considered pioneering and revealing. One of the main problems haunting the industry in the country is the problem of NPLs (finance), which is, directly or indirectly, related to the issue of risk management, in particular credit risk management.

Thus, the study tried to shed light on the problem through discussing and investigating the nature of the interrelationship between NPLs (finance) and credit risk management. Accordingly, some questions were raised including: How big is the NPLs (finance) problem of Islamic banks in Sudan, and what reasons stand behind it? What is the role of the supervisory institutions as well as the banking institutions in the buildup of the NPLs (finance), and how do they deal with the problem?

To find answers to these questions, the study concentrated on the pursuit of two objectives. Firstly, to elaborate on the extent of the NPLs (finance) problem in the Sudanese Islamic banks and the main reasons behind it. Secondly, to explore the risk management approaches in the Sudanese Islamic banks. Moreover, to sharpen the course of the research, the study set down a number of hypotheses dealing with factors influencing the rise and buildup of NPLs (finance).

Following fashion of similar studies, the study approached the various variables responsible for NPLs (finance). In addition, the study surveyed a sample of prosecuted and jailed individuals implicated in the NPLs (finance) issue, therefore, adding great value to the tradition guiding research in this area of empirical studies. The processing and analysis of the collected data have ended up in a number of accepted and rejected decisions.
(results) regarding the hypotheses set by the study. The main results can be summarized as follows:

(1) That the legal and regulatory framework of the supervisory authorities is reasonable and did not spur the problem of NPLs (finance). In fact, this result goes in line with a well-engineered regulatory infrastructure developed by the institutions concerned. For example, the Central Bank of Sudan (2009) has always issued regulatory policies and procedures including directive (No. 3\2003), which entails commercial banks to establish information units for purposes of credit management. That was followed by directive (No. 1\2005), which entails commercial banks to establish independent risk management department. However, whether the enforcement of such policies and procedure takes place is an issue of skepticism. Moreover, Abdul Majid (2012) has pointed that Sudan is one of few countries that have made significant efforts to regulate Islamic banks.

(2) That the credit risk management framework in the Islamic Sudanese banks is not weak, and therefore, did not spur the problem of NPLs (finance). This result does not agree with the one found by Matar (2009), where he concluded that the risks management frameworks used in the Sudanese banks are incapable of addressing the risks associated with bank operations in Sudan and hence lessening these banks’ profits.

(3) That adverse macroeconomic conditions surrounding the various economic sectors in Sudan have spurred the problem of NPLs (finance). According to the IMF (2012), the period from 1998 to 2011 witnessed nine years of double-digit inflation rate (around 16%). That is, the period witnessed price volatility, which according to the IMF appeared to be systematic indicating an unstable economic environment. Moreover, the overall macroeconomic conditions may well be assessed by "doing business" indicators. The IMF (2012) showed that Sudan ranked (No. 135) in the upper lowest third of countries assessed, therefore, indicating cost-increasing production factors that adversely affect productivity and, thus, the overall economic activity.
That the problem of NPLs (finance) in Islamic Sudanese banks has not been spurred by the human resources in charge of the risk management processes. This contrary to what Ahmed (2011) concluded regarding the same issue, where he owed the problem of NPLs (finance) to the Bank’s staff not doing a good job due to less experience, and lack of market information. However, his conclusion is subject to investigation because the study he carried out was confined to Faisal Islamic Sudanese Bank only.

That the problem of NPLs (finance) has been spurred by cunning bank clients who just wanted to walk off with the finance they received from the banks. This result, from the point view of bank employees, seems contradictory to the result stated in (No. 6) below. However, that contradiction may vanish when we bear in mind that the clients who walk off with the finance received are most likely the kind of clients who had been recommended by senior government officials and politicians. And, the same political influence may be exercised to prevent their prosecution.

That the problem of NPLs (finance) in Islamic Sudanese banks has not been spurred by bank clients who are not real business entrepreneurs. In fact, the majority of them have qualifications, experience, and they run businesses for quite long periods of time.

That official institutions in charge of NPLs (finance) do not take initiatives with the banks’ clients implicated in NPLs (finance). Some efforts and initiatives might have been taken but on paper, and at office levels only.

For purposes of remedial interventions, the above-stated results can be ranked relative to their importance, i.e., starting with the most important, as follows: the adverse macroeconomic conditions stands as the most important factor behind the problem of non-performing finance in the Sudanese Islamic banks; then the lack of initiatives on the part of supervisory and regulatory authorities in charge of the problem of non-performing loans/finances; the cunning bank clients who just wanted to misappropriate the banks from the financial facilities these clients received; and then other factors with equal importance.
Eventually, the study raised a number of recommendations in an attempt to contribute to the resolution of the problem.

6.4 Recommendations

In the light of the aforementioned discussion and the results obtained, the following recommendations are deemed necessary to align the process of risk management, in general, and credit risk management, in particular, to the possible minimum related arrangements and requirements that facilitate the development of the Islamic banking industry in Sudan, therefore, enhancing the sustainability and competitiveness that, in turn, facilitate the regional and international endorsement of Islamic banks.

- Recommendations at the level of government institutions having to do with public polices:
  - Serious consideration of integration among financial, monetary, and fiscal policies set by the institutions in charge.
  - The serious process of studying the bankruptcy law with a view of amending it in the light of the soul of the Islamic shari’a, which calls for due consideration of the conditions surrounding the debt-inflicted entities, and making possible for them the extension of the payback period of the due financial credits.
  - The serious consideration of prompt actions to be taken towards resolutions that facilitate the minimization of the harms (Mafasid) that inflict the country’s economy at large as a result of jailing a wide portion of business entrepreneurs.
  - Disentanglement of bank management from political influences at the levels of both the central bank and other banks in the country. For, political influences on banks force them to disregard or relax the rules and procedure of credit risk management.

- Recommendations at the level of the regulatory and supervisory authorities:
  - Intensification of efforts to make sure that there is commitment to the policies, measures, and tools set by the regulatory and supervisory
authorities in charge of risk management, in general, and credit risk management, in particular.

- Designing of a strategic development plan for the financial industry in Sudan including the insurance sector, and taking into consideration the related standards set by international organizations in order to obtain regional and international endorsement.

- Intensification of efforts aiming at innovating and developing new Islamic financial products that fit the various sectors’ needs, hence enhancing the process of financial diversification, which reduces risk, in turn.

- Making sure that the staff in charge of bank supervision is always well-trained to carry out its duties, especially those concerned with credit risk management.

- Designing of suitable policies integrating and activating the interrelationship between insurance and Islamic banking institutions.

- Taking serious initiatives to solve the problems of non-performing loans/finances with all the parties involved.

- **Recommendations at the level of the commercial banks:**
  - Intensification of efforts to make sure that there is commitment to the policies, measures, and tools set by both the regulatory and supervisory authorities in charge of risk management, in general, and credit risk management, in particular; and internally by the commercial banks.
  - Making sure that the staff in charge of bank risk management, in general, and credit risk management, in particular, is always well-trained to carry out its duties.

- **Recommendations for further studies:**
  - Further studies need to be carried out at all levels of the factors responsible for the problem of NPLs (Finance) including the institutions and the people in both the internal and external environments of the banking institutions.
  - Further studies about the problem of non-performing loans/finances in Islamic banks need to be taken in other contexts of countries to make sure that such problem and influencing factors are not inherent to Islamic banks.
CHAPTER IV
METHODOLOGY

Introduction

Due to the interwoven relationship among the factors influencing the problem of non-performing finance (loans), most studies follow an approach of investigation that best address the nature of the problem, which is the analytical-descriptive approach( ). For example, Ahmed and Isa (2012) used an analytical-descriptive approach to study credit risk management in a Malaysian Islamic bank. Also, Abd Alla and Ali (2000) used an analytical-descriptive approach to study the problem of non-performing loans in the Sudanese banking system. However, most studies using the analytical-descriptive approach are confined to certain perspectives in investigating the cases of non-performing finance (loans), namely, the role of bank, the role of the bank clients, and the role of the macroeconomic environment. However, the perspective of bank clients is incorrectly approached. For the samples of the bank clients are taken at the gates of banks. That is, they are not really the kind of respondents who make the samples representative.

Meanwhile, the present study opts for a different treatment of the sample by collecting data from bank clients whose finances (loans) are considered in default, prosecuted, and sued (detained in Al-Huda prison). As such, the sample turns representative, and the data collected is deemed reliable. Moreover, the study adds another perspective of investigation, namely, the role of the legal, supervisory, and regulatory framework within which the banks under study operate. Therefore, the study uses the analytical-descriptive credit risk management framework as an approach to investigate the problem but in a different way. Hence, it is a unique study.

The framework consists of assessing a number of elements including the business environment, the role of supervisory authorities, the role and responsibility of senior management, the role of internal control, supervision, and staff in charge of risk management, types and quality of tools\instruments used to mitigate the problem, and quality of bank debtors.

Firstly, the business environment as a whole and the business psychology, in particular, should be given due consideration when assessing risk management processes. Country risks, business sector risks, and industry risks determine the extent of bank exposure to credit risks. Country risks, for example, could be influenced by political, economic, currency, and legal factors. Dramatic changes regarding these variables or, at least, adverse government decisions and policies relating to the variables may lead to situations such as political unrest, economic recession, …, etc. Hence, a thorough exploration of the business environment will be carried out to assess the resulting aspects on bank risk exposure.
Secondly, although the presence of regulatory authorities imposes some risks through ongoing changes in laws with the result that associated costs tend to increase with regulatory expectations, regulations based on Islamic Shari’ah tend to be a risk-reducing factor because of the relatively stable nature of Islamic laws. As such, the role played by regulatory authorities in terms of actual laws and regulations will be assessed.

Thirdly, senior management should set on an overall and comprehensive risk management policies and tolerances. These policies and tolerances must be organization-wide and be endorsed by the board of directors. Therefore, it becomes necessary to investigate the presence of such risk policies and tolerances. The organization-wide consideration of risk management also shows the extent to which senior management and board of directors are aware and involved in the process risk management (The Financial Services Roundtable 1999).

Fourthly, internal control processes represented in the presence of a qualified and well-trained staff to monitor and evaluate the customers' creditworthiness through financial analysis using information associated with the performance of the debtor customers in the market, in terms of both input and output factors. Generally, the process of risk identification requires an intimate knowledge of the organization, the market in which it operates, the legal, social, political and cultural environment in which it exists, as well as a sound understanding of its strategic and operational objectives including factors critical to its success and the threats and opportunities related to the achievement of these objectives (IRM 2002). Hence, the staff in charge of risk management should give due consideration to the value of the credit facilities required, the proposed payment mode, and the suitable collaterals to be asked for. Such essential elements of taking credit decisions should be looked to when examining credit risks. Also, the staff is supposed to be well acquainted with credit policies pursued by the bank. Issues such as credit ceilings; priority activities of the banks; target rates of return; and bank procedure and regulation, become a must to be taken into consideration when assessing credit risks.

Taking into consideration the above-mentioned, and the theoretical framework, a more focused view of the whole process of investigation can be summarized in the schema presented below.

(Schema No. 1)

Variables Influencing Non-Performing Loans

Finance in the Sudanese Islamic Banks

The Study Data

The main sources of the primary data were: (1) the managing staff of the Islamic Sudanese banks including senior management and directors of divisions, and (2) representatives of the banks’ debtor clients who were interviewed to help with clarifications relating to their default from paying back bank loans (finance).

On the other hand, publications and documents issued by the CBOS and the commercial Islamic banks in Sudan were used as a secondary source for the required data. That is,
regarding the data collection, two tools were used; the questionnaire and the interview. The first questionnaire was used to collect primary data about the factors influencing bank NPLs (Finance). These factors have been addressed in five sections, namely the legal and regulatory framework of the control and regulatory institutions, banking institutions and risk management, the macroeconomic environment, the staff in charge of the credit risk management, and nature and behavior of bank’s clients. The second questionnaire was used with bank clients who had been prosecuted and jailed for default to pay back the finance they received from banks; i.e, bank clients who are experiencing financial failure. The two questionnaires raise more than 45 questions. Both kinds of questionnaires tried to extract fine details from the surveyed participants. Accordingly, both of the questionnaires had been structured to fulfill that purpose. For example, many yes-no questions were included to get straightforward answers about basic information and/or issues. Besides, second line questions were used to obtain finer information, such as the causes of a particular phenomenon. Moreover, the main questions of the two questionnaires were structured in accordance with the famous “Likert scale” in order to obtain trend opinions from the respondents.

On the other hand, the interview was used to obtain face to face responses from the bank clients, who had been sued, prosecuted, and jailed, regarding two issues: (1) the way the respondents (business entrepreneurs) got trapped in the NPLs (finance) cases. (2) Their impression about the role played by the official institutions in resolving the matter.

Given the high significance accorded to the feedback from the bank clients implicated in NPLs (finance), the researcher conducted the data collection personally by visiting the participants at the greatest prisons in Sudan, i.e, Al-huda prison (for men) and the Omdurman women prison. However, what was so special about the interviews was the fact that they took place in ideal environments, where each participant was interviewed individually.

Moreover, those who participated in the survey through both the questionnaires and the interviews took the initiative voluntarily to do so. This is why they were quiet, consistent, and cooperative. This, in fact, helped obtain quality data from such respondents.

The Study Samples

The nature of the study adding a scenario of the bank clients, experiencing financial distress and failure, necessitated that two samples were to be used. The first sample was, almost, the population of the Islamic Sudanese banks. For, the questionnaire was distributed to all of them. Yet, it was only the time limit that forced the researcher to sacrifice the feedback from one or two banks. The quality of the data needed for such kind of study necessitated that only senior management officers (such as general managers; heads of risk management departments; and heads of credit departments) were to be surveyed. Accordingly, the bank sample size did not exceed 109 respondents, which was quite enough for the study. Regarding the sex distribution of the respondents; the males represented 94%, whereas the females represented 6%. As for their
qualifications, the postgraduate respondents represented 54%, followed by 42% bachelor degree holders, and 4% secondary school respondents. In terms of years of experience 37% of the respondents have been working for 11-20 years, followed by those who have been working for 21-30 years, i.e., 35%; then 23% of those who have been working for 5-10 years; and 5% of those who have been working for more than 30 years. Generally, the respondents can be described as excellent, in terms of qualifications, and very good in terms of years of experience. Thus, it can be argued that they are the kind of employees to be holding their posts in the banks risk management departments/units.

On the other hand, the second sample consisted of participants representing bank clients who have been, sued, prosecuted, and jailed for default to payback overdue finance (NPLs) to the banks. However, the pursuit of quality data dictated that only voluntary respondents are included in the sample, therefore, the sample size did not exceed 46 participants. In terms of sex distribution, 96% of the respondents were males and 4% were females. Regarding the respondents' occupations, it is clear that the entrepreneurs lead the distribution with 50%, followed by 9% of employees, and 8% of traders. Considering their qualifications, 42% of them hold bachelor degree, 19% of them hold a diploma, and 17% hold a higher secondary school certificate. In view of the participant’s occupations and qualifications, it can be argued that they represented the kind of educated business people who can thrust with their businesses into ways of success.

The Study Methods of Analysis

As mentioned-above, the "Likert-scale" method is used to construct the questions of the various sections of the two questionnaires(). For, trend opinions have been thought from the responses. To accomplish this, the famous Statistical Package for Social Science (SPSS) was used to produce descriptive statistics output. Finally, to sharpen focus on the results, each question, together with its responses, have been tabled separately.

The analysis deals with six sections: section one to section five belong to the first questionnaire, whereas section six belongs to the second questionnaire. Each set of responses addressing specific variables in these sections, having to do with the test of certain hypothesis, has been analyzed by means of frequencies, percentages, means, and standard deviations (whether the responses are taken for each question, separately, or taken as a whole group in cases of trend opinions). Moreover, the Chi-Square statistic is used as an indicator for the existence of relationships among a number of sets of variables. Hence, a feed-back is obtained on the suitability of each set of variables to the section under investigation. Finally, the content analysis method is used to analyze texts related to the interviews.
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In the Name of Allah Most Beneficent Most Merciful

Bank Clients Experiencing Financial Distress

The objective behind this questionnaire is to obtain real data from its primary sources for the purpose of scientific research only, i.e., a survey research study entitled 'credit risk management in Islamic banks with special reference to non-performing loans in the Sudanese banks'. The study is carried out to fulfil the requirements for obtaining the degree of Doctor of Philosophy in Islamic Banking and Finance at the Institute for Islamization of Knowledge, University of Gezira. We assure you that the study is not going to analyze or present the data provided in an individual manner (for each person) but in a general manner representing average results for all the persons taken together; hence we request you to answer all questions in this questionnaire.

Thank you, and May Allah (S. W. T) reward you with all the best

Basic Information

A. Sex: Male ☐ Female ☐

B. Job:

........................................................................................................................................................................

......

C. Qualifications and specializations:

........................................................................................................................................................................

...........

........................................................................................................................................................................

...........

1. Was the finance (credit facility) provided by the bank sufficient to cover the actual needs (as demanded) of your business project?
a. Yes

b. No

2. You received the finance (credit facility) at a suitable time just enough to start the business project for which you sought finance.

   a. Strongly disagree.
   b. Disagree.
   c. Neutral.
   d. Agree.
   e. Strongly agree.

3. The person in charge of the business project has sufficient background (study, experience, . . ., etc) about the accounts.

   a. Strongly disagree.
   b. Disagree.
   c. Neutral.
   d. Agree.
   e. Strongly agree.

4. Was the finance (credit facility) you received from the bank for specific project (that you submitted to the bank) or for other purposes?

   a. Yes
   b. No

5. Who conducted the feasibility study of the project financed by the bank (a specialist enterprise or an individual)?

   a. A specialist enterprise.
   b. An individual.
6. Have you got any experience in Business and investment management?
   a. Yes
   b. No
   c. To some extent.

7. Did you abide by the payback terms that the bank set for your finance?
   a. Yes
   b. No
   c. To some extent.

8. Will you payback the financial amount owed to the bank in case your financial position improves?
   a. Yes
   b. No

9. In case you are intending to payback the amount due to the bank, then why?
   a. A debt that should be settled.
   b. To be set free.

10. The finance (credit facility) received from the bank was used for the project only.
    a. Strongly disagree.
    b. Disagree.
    c. Neutral.
    d. Agree.
    e. Strongly agree.

   “finished with the help of Allah The Almighty”
Appendix (A)

In the Name of Allah Most Beneficent Most Merciful

The objective behind this questionnaire is to obtain real data from its primary sources for the purpose of scientific research only, i.e., a survey research study entitled 'credit risk management in Islamic banks with special reference to non-performing loans in the Sudanese banks'. The study is carried out to fulfil the requirements for obtaining the degree of Doctor of Philosophy in Islamic Banking and Finance at the Institute for Islamization of Knowledge, University of Gezira. We assure you that the study is not going to analyze or present the data provided in an individual manner (for each bank) but in a general manner representing average results for all the banks taken together. Therefore, being one of the senior management staff at the bank, and given your rich experience, we believe you represent a credible source of data for this study; hence we request you to answer all questions in this questionnaire.

Thank you, and May Allah (S. W. T) reward you with all the best

Basic Information

D. Sex: Male ○ Female ○

E. Job:

...........................................................................................................................................................................

......

F. Qualifications and specializations:

...........................................................................................................................................................................

...........

G. Years of Experience: ................. years.

Section One: Legal and Organizational Framework of the Regulatory and Supervisory Authorities.
1. Does the Central Bank of Sudan arrange training courses and workshops to develop the skills of the staff working at the banking institutions?
   c. Yes
   d. No

2. Are there any procedures or penalties executed by the Central Bank of Sudan in case of encroachments in the banking operations (the risk management)?
   a. Yes
   b. No

3. Does the Central Bank of Sudan provide your bank with a guide for the credit risk management?
   a. Yes
   b. No

4. In case there is a guide for credit risk management, do you believe the guide encompasses all basic dimensions of credit risk management?
   f. Strongly disagree.
   g. Disagree.
   h. Neutral.
   i. Agree.
   j. Strongly agree.

5. The inspection visits of the regulation and supervision teams, from the Central Bank, realize the purposes behind them?
   a. Strongly disagree.
   b. Disagree.
   c. Neutral.
   d. Agree.
   e. Strongly agree.
6. The legal procedure followed by the law-enforcing authorities is sufficient and crucial in the payback of banks’ non-performing loans (finance)?

   a. Strongly disagree.
   b. Disagree.
   c. Neutral.
   d. Agree.
   e. Strongly agree.

**Section Two: Bank Risk Management**

1. Does your banking institution have a credit risk management strategy and policy?
   a. Yes
   b. No

2. In case there are credit risk management strategy and policy, are they discussed at the level of the bank board?
   a. Yes
   b. No

3. Does your banking institution have a guide showing the steps and procedure of credit risk management?
   a. Yes
   b. No

4. Does your banking institution have a unit or department specialized in risk management or credit management?
   a. Yes
   b. No

5. In case, there is a unit/department specialized in risk management, when has it been established?
   a. Yes

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b. No

6. Is there any job description for the staff in charge of risk management (credit)?
   a. Yes
   b. No

7. Which tools, methods, and procedure, does your banking institution use vis-à-vis credit risk management?
   a. Credit ceilings. .................................................................
   b. Financial ratios for every economic sector. .........................
   c. Computer applications. .....................................................
   d. Collaterals. .................................................................
   e. Early warning system for credit quality. ............................
   f. Mathematical models. .....................................................
   g. Diversification policy .....................................................
   h. A set, or a subset, of all the tools and methods mentioned-above.

8. The staff in charge of the credit affairs conducts comprehensive credit studies about the bank clients.
   a. Strongly disagree. ...................................................
   b. Disagree. ............................................................
   c. Neutral. .............................................................
9. The staff in charge of the credit affairs conducts all-encompassing feasibility studies (at all levels of the economic sectors the banking institution is involved in), and update them every time and then, so that they may be used as a guide when taking decisions about the feasibility of projects for which clients seek finance.

a. Strongly disagree.  

b. Disagree.

c. Neutral.

d. Agree.

e. Strongly agree.

10. What kind of collaterals does your banking institution require from its clients seeking credit facilities (finance)?

a. Physical collaterals. ............................

b. Collaterals provided through other persons...

c. Other kind of collaterals ........................

11. Collaterals provided by clients to the banking institution are sufficient, in terms of value, to cover the amount of finance supplied.

a. Strongly disagree.  

b. Disagree.

c. Neutral.

d. Agree.

e. Strongly agree

12. What reasons make the collaterals provided by the bank's clients not sufficient to cover the amount of the given finance?

a. The evaluation done by the rating companies does not reflect the true value of the collaterals................


b. The deterioration of the exchange of the Sudanese pound vis-à-vis other foreign currencies reduces the value of collaterals...

c. The intervention made by powerful bodies (politicians and senior government officials).

13. Are there periodic reports about the credit position of the clients (to follow up the payback process).
   a. Yes
   b. No

14. In case there are follow up reports, what form do they take?
   a. A predesigned standard format
   b. A format designed by the staff member in charge
   c. Other ways of Reporting

15. There are field follow up visits to the bank’s clients who receive credit facilities (finance).
   a. Strongly disagree.
   b. Disagree.
   c. Neutral.
   d. Agree.
   e. Strongly agree

16. In case there are field follow up visits, how do they take place?
   a. Before the approval of finance only.
   b. Periodically, during finance utilization.
   c. Before and during finance utilization.

Section Three: The Macroeconomic environment

1. The monetary and fiscal policies approached by the government are often vacillating, therefore, resulting in negative impact on businesses of the bank’s clients.
   a. Strongly disagree.
b. Disagree. 
  c. Neutral. 
  d. Agree. 
  e. Strongly agree 

2. Policies and procedure approached by institutions in charge of NPLs treatment are sanctioned and announced, however, they are often not seriously implemented in practice.

a. Strongly disagree. 
  b. Disagree. 
  c. Neutral. 
  d. Agree. 
  e. Strongly agree 

3. The deterioration of some strategic and vital schemes, such as the Gezira Scheme, has contributed to the rise and buildup of NPLs in the banking sector.

a. Strongly disagree. 
  b. Disagree. 
  c. Neutral. 
  d. Agree. 
  e. Strongly agree 

4. The deterioration of the security conditions in some areas, and at some borders, has contributed to the exacerbation of a state of uncertainty in the economy, hence negatively affecting the performance of businesses enjoying financial facilities provided by banks.

a. Strongly disagree. 
  b. Disagree. 
  c. Neutral. 
  d. Agree. 
  e. Strongly agree
5. Which one of the financial modes is mostly suffering NPLs?
   a. Murabaha. ○
   b. Mudharaba. ○
   c. Musharaka. ○
   d. Istisnaa. ○

6. In your opinion, what causes NPLs (finance)?
   a. Less valuable collaterals. ○
   b. Insufficient follow-up. ○
   c. Weak credit study. ○
   d. Use of the finance for purposes other than what specified in the client’s application. ○
   e. Unfair financial policies. ○
   f. Deterioration of the macro-economy. ○
   g. Unwilling-to-pay client. ○
   h. Unwilling-to-pay government institutions. ○
   i. A set, or a subset, of all the causes mentioned-above. ○

Section Four: The Staff in Charge of the Credit Risk management

1. Does the bank hold specialist training courses, in credit risk management, and related activities, to develop the skills and know-how of the staff in charge of risk management?
   a. Yes ○
   b. No ○

2. You are satisfied with the job done by the staff in charge of credit risk management.
   a. Strongly disagree. ○
   b. Disagree. ○
   c. Neutral. ○
3. In case you are not satisfied with the job done by the staff in charge of credit risk management, then why?

a. Due to little or no training.

b. Due to the management being unconvinced of establishing a special unit for risk

Section five: Nature and Behavior of Bank’s Clients

1. Recommendations and directions made by senior politicians to banking institutions, regarding the provision of finance (credit) to some clients, contribute to the bank’s NPLs (finance).

a. Strongly disagree.

b. Disagree.

c. Neutral.

d. Agree.

e. Strongly agree

2. Mismanagement on the part of the bank clients contributes to the deterioration and collapse of their business projects, hence, their financial failure to pay back the due balances of finance owed to the banking institutions.

a. Strongly disagree.

b. Disagree.

c. Neutral.

d. Agree.

e. Strongly agree

3. Bank clients experiencing financial distress and failure are much more unwilling to pay (Mumatiloun) than they just face real financial difficulties.

a. Strongly disagree.

b. Disagree.

c. Neutral.

d. Agree.
e. Strongly agree

4. In case you believe that the bank’s clients are unwilling to pay (Mumatiiloun), then why? Because of:
   a. Weak regulatory arrangements.
   b. Resort to close people of authority and/or mediating people.
   c. The belief that the bank money is money that could be walked off with.
   d. Other reasons.

"finished with the help of Allah The Almighty"