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Ministry of Higher Learning and Scientific Research
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THE EVALUATION OF CREDIT RISK MANAGEMENT IN RWANDA BANKING SECTOR

A dissertation submitted to the Faculty of Administration Sciences and Computer Technique in partial fulfilment of the requirements for the award of the Master of Business Administration in Finance at Université Privée Africaine Franco-Arabe (U.P.F.A.)

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2021-2022

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CERTIFICATION

This is to certify that the thesis entitled: **"The evaluation of credit risk management in Rwanda banking sector. A case study of BRD"** Submitted by KALISA Valens to the **Université Privée Africaine Franco-Arabe (U.P.A.F.A.)** for the award of Masters of Business Administration (MBA) in Finance under my direct supervision and guidance. The work embodied in this thesis is original and has not to my knowledge been published or submitted in part or full for any other Degree of this or other University.

Dr ZONGO Jean Marie	**…………………………**
Signature and names of Supervisor	Signature and names of Head of Department

Submitted for the Project Examination held in December, 2022 at UPAFA

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DECLARATION

I, **KALISA Valens**, declare that the content of this thesis is my own work except where acknowledged. It has never been presented or submitted anywhere else for any other or similar award at any other university or institution of high learning.

KALISA Valens
Date. 11/12/2022

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DEDICATION

To Almighty God

To my parents

To my sisters and brothers

To my relatives and friends

I dedicate this work and thank you very much for your material assistance and moral as well.

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ACKNOWLEDGEMENT

I have long wanted to conduct a real research in finance, the field in which I am really interested and want to pursue my future career. This is a great opportunity for me to realize that wish. Beyond that it provides me with excellent knowledge of risks in the lending industry, operations of a bank, and particularly its credit risk management. Thanks to this research, my future direction moves closer to the special field of credit risk management. And I hope that this Dissertation will be of great help to the bank when it comes to procedure review and improvement.

I would like to send a lot of thanks to my friend, Mr. MWOROZI Francis, who is working at the investigated bank. He recommended the research idea to me and helped me a great deal in collecting secondary data for the research. But the project would never be complete without the enthusiasm and kindness of Staffs of BRD especially in Credit risk management department. I wish to give my deepest gratitude to Dr ZONGO Jean Marie, my supervisor, for his great support, constructive feedback and thorough understanding to keep me diligent and speed up my progress on the work. I also thank Mr. RUSAGARA and Ms. SIBOSIKO Consolee for their valuable contribution in improving the final written version of this thesis. And finally, I am very grateful of my family and my friends for their mental encouragement and practical suggestions during the research process.

I would like to acknowledge the contribution of my employer Rwanda Revenue Authority (RRA) for giving me moral support, At the same time I can’t forget to express my thanks to the UPAFA administration and lecturers’ effort for providing me important knowledge, skills and other various services.

May the Lord bless you all!!!

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LIST OF ABBREVIATIONS

BRD: Rwanda Development Bank

BNR: National Bank of Rwanda

UPAFA: Université Privée Africaine Franco-Arabe

IDI: In depth Interview

NPL: Non performing Loans

E.U: European Union

IMF: International Monetary Funds

MIS: Management Information System

GDP: Gross Domestic Product

MINECOFIN: Ministry of Economic Planning and Finance

SMEs: Small and Medium Enterprises

ICT: Information, Communication and Technology

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ABSTRACT

The biggest objective of this research is to provide the investigated bank with an insight into its credit risk management framework and the effectiveness of the credit risk management practices at the development bank. In addition, the readers will also get familiar with the risks inherent in banking business, realize the importance of credit risk management in banks, and understand the facts about the Rwanda credit conditions The purpose of this work is to find out the evaluation of credit risk management in Rwanda banking sector a case study of BRD. The existing literature was reviewed to come up with the full idea of the study and with both primary and secondary data was obtained through BRD documentation and Reports, BNR guidelines and other relates documents. The collected data were analyzed and interpreted in line with objectives to have meaningful information. Purposive sampling techniques were used to select credit manager and operational credit risk manager from targeted department. We come up on the Introduction theories; however, is not the final aim of this thesis. In order to give out an evaluation of credit risk management practices, this thesis has tried to build a list of assessment criteria deriving from the literature that has been revised during the study. The criteria are grouped into four categories: credit culture, credit policies, credit organization & personnel and credit practices & performance.

What the research truly cares about is to use those theories as the foundation for the evaluation the credit risk management actual implementation based on the established benchmarks.

This dissertation has gone through those theoretical concepts to lead the readers to a much more practical section of the factual practices in the bank. We conclude that credit risk management has continuously been studied about and improved. Banks usually handle credit risk with a well-established credit culture showing their attitudes towards credit risk, a structured credit organization and firm personnel base, and a comprehensive set of policies governing credit activities in the whole group. As recommendations of this work the staff training quality must be critically revised. The bank should dig out whether the little effectiveness is due to the employees' own perception or due to the bank's implementation. If it is the latter case, it must be improved on the bank's accord. When the credit staffs state that they do not believe the training sessions are of great support in their career, they must think if it is owing to their lack of enthusiasm. If the answer is yes, they must definitely change their attitudes, because the training indeed will help them gain knowledge and experience.

KEY WORD: Credit risk management, Bank, Effectiveness

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RESUME

Le principal objectif de cette recherche est de fournir à la banque étudiée un aperçu de son cadre de gestion du risque de crédit et de l'efficacité des pratiques de gestion du risque de crédit au sein de la banque de développement. En outre, les lecteurs se familiariseront également avec les risques inhérents aux activités bancaires, réaliseront l'importance de la gestion des risques de crédit dans les banques et comprendront les faits sur les conditions de crédit au Rwanda. Le but de ce travail est de découvrir l'évaluation de la gestion du risque de crédit dans le secteur bancaire rwandais, une étude de cas de la BRD. La littérature existante a été examinée pour donner l'idée complète de l'étude et les données primaires et secondaires ont été obtenues grâce à la documentation et aux rapports de la BRD, aux directives de la BNR et à d'autres documents connexes. Les données collectées ont été analysées et interprétées conformément aux objectifs visant à disposer d'informations significatives. Des techniques d'échantillonnage raisonné ont été utilisées pour sélectionner le gestionnaire de crédit et le gestionnaire du risque de crédit opérationnel du département ciblé. Nous arrivons aux théories d'introduction ; cependant, ce n'est pas l'objectif final de cette thèse. Afin de proposer une évaluation des pratiques de gestion du risque de crédit, cette thèse a tenté de construire une liste de critères d'évaluation issus de la littérature révisée au cours de l'étude. Les critères sont regroupés en quatre catégories : culture de crédit, politiques de crédit, organisation et personnel de crédit et pratiques et performances de crédit. Ce qui importe vraiment à la recherche, c'est d'utiliser ces théories comme base pour évaluer la mise en œuvre réelle de la gestion du risque de crédit sur la base des références établies. Cette mémoire a parcouru ces concepts théoriques pour conduire les lecteurs vers une section beaucoup plus pratique des pratiques factuelles de la banque. Nous concluons que la gestion du risque de crédit a été continuellement étudiée et améliorée. Les banques gèrent généralement le risque de crédit avec une culture de crédit bien établie démontrant leur attitude à l'égard du risque de crédit, une organisation de crédit structurée et une base de personnel ferme, ainsi qu'un ensemble complet de politiques régissant les activités de crédit dans l'ensemble du groupe. Comme recommandation de ce travail, la qualité de la formation du personnel doit être révisée de manière critique. La banque devrait déterminer si le manque d'efficacité est dû à la propre perception des collaborateurs ou à la mise en œuvre de la banque. Si tel est le dernier cas, il doit être amélioré avec l'accord de la banque. Lorsque les équipes de crédit déclarent qu'elles ne croient pas que les sessions de formation soient d'un grand soutien dans leur carrière, elles doivent se demander si cela est dû à leur manque d'enthousiasme. Si la réponse est oui, ils doivent absolument changer d'attitude, car la formation les aidera effectivement à acquérir des connaissances et de l'expérience.

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MOT CLÉ : Gestion du risque de crédit, Banque, Efficacité

CHAPTER ONE: GENERAL INTRODUCTION

A country's financial system including its banking institutions, are the engines of its economic growth. Banks play a vital role of mobilizing savings from those who have it and allocating such savings to those who wish to borrow to invest in economic development. When these two cardinal functions are not effectively provided by a country's banking institutions, then its economic performance is seriously blocked. Poor credit risk management manifests itself into poor lending policy, lack of internal controls, poor credit analysis and documentation, high risk concentration, high level of insider lending and fraud.

The major problem facing development bank in developing countries originates from poor management of loan portfolios. The most dominant factors in the failure of development bank have been poor quality of assets and inadequate credit risk management. Failure to apply credit risk management process effectively by Rwanda development banks could be the major source of the high loan default. Credit risk management practices Include market definition and targets, credit initiation, credit documentation, and credit culture. Risk management lies at the centre of the banking industry. The fortunes of the banking industry over the past decades have provided beyond doubt that there is need for improved credit risk management.

In order to enhance the Bank mission of development, in 2005 the Government of Rwanda mandated BRD with a mission to become the "Financier" of Rwanda's development. Since then BRD has been transforming itself in order to be able to play its crucial role in Rwanda's development. BRD 2005-2009 Strategic Operating Plan translates BRD mission and vision to become the most profitable bank at the service of poverty reduction. This big and important role involves a more aggressive approach in the research for the profitable projects and in the creation of new instruments of financing which can serve large number of Rwandese. To do that, the Bank created two additional instruments to diversify its activities and generate products necessary to balance the level of its profitability.

These new products concern:

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The banking sector in Rwanda is a reflection of an industry in a severe financial distress and the major cause of this is failure to manage their credit risks. The failure of these banks to minimize risk is summarized in Rwanda economic indicators (2002) as follows:

Our banks continue to perform inadequately. As a result as much as 50% of their loans assets are non- performing or bad debts.

Other official reports reveal that there is a heavy concentration of lending.

According to the ministry of finance report (2002) over 50% of banks loans are received by the commerce and housing sectors while the agriculture sector, which employs over 90% of the labor force, receives 1.6% of the loans. This is not consistent with the government policy of poverty alleviation.

It should also be noted that the non- performing asset ratio of over 50% in Rwandan bank is far above the recommended ratio of 10%.

The non- performing asset ratio much higher than 10% is an indicator that the bank's potentiality to manage loan defaults is running out of control.

It is also reported by BNR 2001 that the highest proportion of loan default are in the commerce sector 32% and housing sector 24%. The failure of these banks to spread their credit risk across all their market segments is yet another indicator of poor credit risk management practices.

1.1BACKGROUND OF THE STUDY

The global economic depression that knocked almost all big economies throughout the world down in the past 2 years is still kept in many people's minds. It was triggered by the United States financial sector. One key reason for the collapse or nearly-collapse of the financial institutions is the badly-functioned subprime mortgage lending to companies/people with bad and unreliable credit. When the prices of houses used as securities for the loans slumped, those loans became non-performing loans or bad debts. (OECD 2008 and the Renegade Economist 2009)

As soon as the world begins to see the signs of a recovery period, the financial sector, this time in the Euro-zone, suffers another great distress at the serious debt crisis in Greece that poses risk to the European Central Bank (ECB) and many other institutions in the industry. A number of European banks have made investments in Greek government bonds and other securities and use them as collaterals to obtain loans from ECB. And now when Greece defaults, the collateral subsequently loses its value and the ECB's balance sheet is put at risk as it fails to recollect the

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loans. Greek banks are not the only ones in danger. French and German banking business are on the same boat with respectively $80 billion and $45 billion exposure to the troubled country. Recently, the Basel Committee on Bank Supervision demands a jump in both tier 1 and tier 2 capital levels as a response to the crises these days. (Wall Street Journal 2010)

These incidents raise a question for all financial institutions in general and banks in particular: **What could they have done in order to prevent or at least lessen the bad impact of this happening?**

It urges the significance of a sound credit risk management in lending organizations. Credit risk is a popular type of risk that both non-financial and financial institutions must deal with. Credit risk occurs when a debtor/borrower fails to fulfill his obligations to pay back the loans to the principal/lender. In banking business, it happens when "payments can either be delayed or not made at all, which can cause cash flow problems and affect a bank's liquidity" (Greuning & Bratanovic 2009, 161). Hence, credit risk management in a bank basically involves its practices to "manage", or in other words, to minimize the risk exposure and occurrence. For a commercial bank, lending activities form a critical part of its products and services. According to Greuning & Bratanovic (2009), "more than 70% of a bank's balance sheet generally relates to this aspect of risk management". Therefore, credit risk management is crucial to any bank's success.

1.2 STATEMENT OF THE PROBLEM

Development bank in Rwanda faced a problem of ineffectiveness and inefficiency in loan portfolios. This has led to poor performance of the banking sector as very high proportions of funds are locked up into non-performing development projects, which also deprives the economy of a continuous flow of funds that would be used to finance investment projects.

Although the central bank and government of Rwanda have often intervened to help this development bank institution to overcome its financial distress. As result of this problem, the researcher is interested in assessing and recommend how credit risk management may lead to the improvement of such effectiveness and efficiency of loans management into financial institution performance.

In order to further understand how the objectives of this study will be achieved, four following research questions are introduced:

1. What are the types of banking risks and the position of credit risk among them?

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2. What are the difficulties in credit risk management that arise from the Rwanda banking credit market?

3. How is the subject bank coping with credit risk?

4. How effective are credit risk management practices in the bank and particularly in the investigated credit risk department?

1.3. OBJECTIVES OF THE STUDY

1.3.1 General Objective of the study

The main objective of this study is to evaluate the effectiveness of credit risk management in Rwanda banking sector. To help also the case study bank possesses a reflection on its own credit risk management framework and its effectiveness. To better cope with main objective, we may need to focus on the following specific objectives.

1.3.2 Specific Objectives

- To study the role of risk management in development bank and its importance.
- To analyze, assess and controlling loan defaults.
- Assessing the effectiveness of risk management on the overall credit policy of development bank.
- Making necessary recommendations on how to minimize risks in the credit management of the banking sector.
- Last but not least, the readers will possess some insight into the current situation of the Rwanda banking sector credit market.

1.4. SCOPE OF THE STUDY

The study will be conducted in one financial institution located in Kigali city.

This institution is Development Bank of Rwanda (B.R.D) and findings will be simulated to the Rwanda banking sector.

1.5. SIGNIFICANCE OF THE STUDY

This study is of great significance to the researcher and the Development bank of Rwanda. I.e. Recommendations as well as management, students from any university and other users of UPAFA library who may be interested to this study.

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1.5.1 To the researcher the study will help the researcher to acquire knowledge, skills of findings, and possible recommendations through research findings hence helpful in decision making and solving practical problems.

1.5.2 To the Development bank of Rwanda basing on my recommendation B.R.D will be able to solve the major problems, identified during the study hence increase the efficiency in work.

1.5.3 To the national bank of Rwanda the researcher will help to understand the challenges of Development banks in Rwanda and of how they should be solved.

1.5.4 To the MBA student's one of my research report will be submitted to EILM UNIVERSTY library, this report will help other researchers and other students to acquire knowledge of credit risk and loan management in Development bank for stance, the researcher will use this report as the reference of literature review.

1.6. STRUCTURE OF THE STUDY

This part will guide the readers on the systematic organization of this research study. Every parts and sub-parts of this thesis circles around and supports one single central theme. The central theme of the thesis lies in credit risk management and evaluation of credit risk management in Rwanda banking sector. This central theme is primarily supported by the literature review and the findings. But before the theories appear, this whole first chapter is dedicated to general introduction, the motivations behind it, the study objectives and research methodology. Chapter 2 follows with an emphasis on the theories supporting this thesis, including risks and banking risks, risk management, risk management in bank. Once the theories have been identified, it is important that the research methodology is selected. The 3rd chapter will deal with the data and the research methods employed in the study. The methodology is built with an aim to serve the main section: findings in chapter 4. It contains the research findings of the Rwanda banking credit conditions, the credit risk management practices and a very important analysis of the findings. Finally, the implications for the bank and recommendations for further studies (reflect from the literature review and findings) will conclude the thesis in the fifth chapters.

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CHAPTER TWO: LITERATURE REVIEW

This section is going to cover definitions of several key words that will certainly be repeated many times throughout this paper. First the readers will have a chance to get themselves familiar with risk concept and different kinds of credit banking risks. Some details of risk management and especially banking risk management will be introduced in part 2.2. After that, the text will focus on credit risk management and the evaluation criteria for an effective credit risk management framework.

2.1. Risk and Banking Risks

This part plays a role as the foundation that supports the main theories of credit risk management. The readers must first acquire some knowledge of risk and banking risks in general so that they understand the position of credit risk among the banking risks and hence, see the significance of good credit risk management.

2.1.1. Risk in general

Risks in banking business, risks in trading activities, risks in our normal life or whatever kind of risks are what potentially happen sometime in the future and will have unexpected impacts on risk recipients.

Risk actually has been defined in multiple ways but there are two distinguishable styles of explanation. The dictionary people are traditionally cruel towards risk when they see that risk is always bad. In fact risk should be viewed in a more open way.

Risk is typically defined in terms of the possibility of danger, loss, injury or other adverse consequences. The distinction between risk and uncertainty is typically made in accounting and finance texts and dates back to Knight's classic work *Risk, uncertainty and profit*, published in 1921 (Knight, 1921). According to Knight, risk was a state of not knowing what future events will happen, but having the ability to estimate the odds, while uncertainty was a state of not knowing the odds. While the first was calculable, the second was not and any estimates were subjective. The *Risk Management Standard* (Institute of Risk Management, 2002) defined risk as the combination of the probability of an event and its consequences, with risk management being

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concerned with both positive and negative aspects of risk. Similarly, the Turnbull Report (Institute of Chartered Accountants in England & Wales, 1999), now part of the Combined Code on Corporate Governance, defined risk as any event that might affect a listed company's performance, including environmental, ethical and social risks. Risks can be classified in a number of ways. One common distinction is:

◆ Business or operational risk: relating to the activities carried out within an organization

◆ Financial risk: relating to the financial operation of a business

◆ Environmental risk: relating to changes in the political, economic, social and financial environment.

◆ Reputation risk: caused by failing to address some other risk.

2.1.2. Banking Risks

The banking business, compared to other types of business, is substantially exposed to risks, especially in this ever-changing competitive environment. Banks no longer simply receive deposits and make loans. Instead, they are operating in a rapidly innovative industry with a lot of profit pressure that urges them to create more and more value-added services to offer to and better satisfy the customers. Risks are much more complex now since one single activity can involve several risks. Risks are inside risks. Risks overlap risks. Risks contain risks.

Scholars and analysts in recent decades have been trying to group banking risks into categories. The Basel Accords issued by the Basel Committee on Bank Supervision mention three broadest risk types in the first pillar: credit, market and operational risks. Then the second pillar deals with all other risks. Mr. Anthony M. Santomero of the Wharton Financial Institutions Center, The Wharton School, University of Pennsylvania divides risks into six generic kinds: *systematic* or *market risk (interest rate risk), credit risk, counterparty risk, liquidity risk, operational risk,* and *legal risks*. This categorization is based on types of services offered by banks. (The Wharton Financial Institutions Center 1997, 11) But the risks seem to be insufficient and some overlapping can be found. Counterparty risk and credit risk are quite alike or the list lacks country risks, for example.

Another classification that is quite comprehensive though not particularly aims at banks only is introduced in "The Essentials of Risk Management" (2006) by Michel Crouhy, Dan Galai and Robert Mark.

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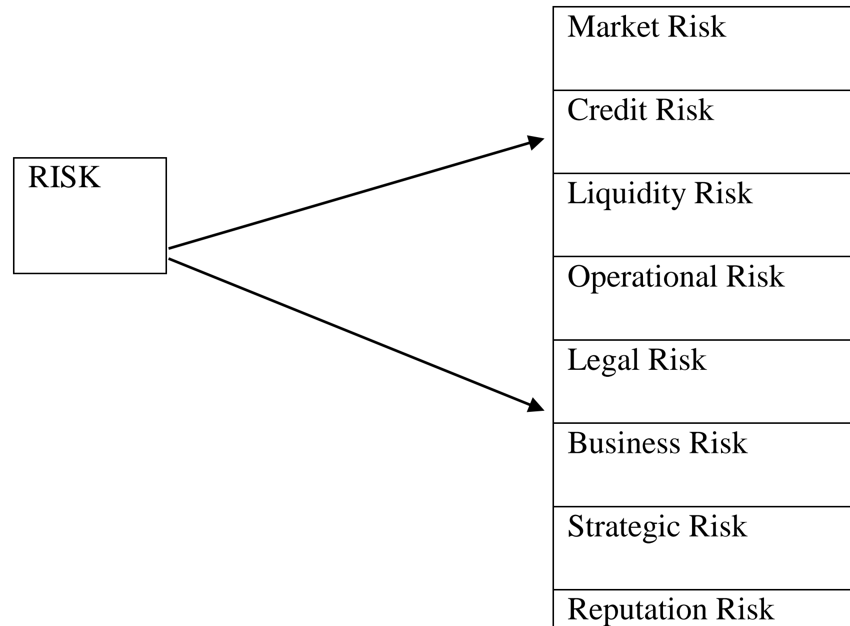

Figure 1: Typology of Risks (Crouhy, Galai & Mark 2006, 26).

Among the literature that has been worked through, I would much prefer the way Greuning & Bratanovic break risks faced by the banking business into three groups: financial, operational and environmental risks.

Financial risks, as their name indicate, are risks related to a bank's financial position (the first three risks under financial risks or any form of financing (the other five risks in the financial risks column). Greuning & Bratanovic separate market risk from interest rate and currency risk but it would be more relevant if market risk covers the latter two because interest rate and currency exchange are important elements of the financial market.

Operational risks are risks associated with "in adequate systems, management failure, faulty controls, fraud and human errors" (Crouhy, et al. 2006, 30). Operational risks are attracting growing attention in the financial sector. We should not forget Société Générale‟s huge loss of USD7.2 billion by unauthorized trading activity conducted by the bank's employee in the futures market in 2008. This is an example of dangerous frauds that the bank failed to control. The incident not only brought a loss to Société Générale but also downgrade the bank's long-term debt ratings.

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Table1. Different Types of Banking Risks (Greuning & Bratanovic 2009, 3-4)

Financial Risks	Operational Risks	Environmental Risks
Balance sheet structure	Internal fraud	Country and political risks
Earnings and income statement structure	External fraud	Macroeconomic policy
Capital adequacy	Employment practices and workplace safety	Financial infrastructure
Credit	Clients, products, and business services	Legal infrastructure
Liquidity	Damage to physical assets	Banking crisis and contagion
Market	Business disruption and system failures (technology risks)	
Interest rate	Execution, delivery, and process management	
Currency		

While financial and operation risks can occur due to the organization's subjective reasons, environmental risks mainly deal with objective factors in the bank's business environment that somehow are out of its control. For instance, a bank enters an agreement to endorse a Letter of Credit in the transaction between A (seller) and B (buyer). After 30 days, the bank already pays A the money and waits for B to repay the amount. Suddenly the buyer's government prohibits overseas transfer of foreign currency and B couldn't make the payment. The bank loses. This is totally unpredictable and uncontrollable "Adams J.(1995)".

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2.2. Risk and Banking Risk Management

Understanding risk alone is not sufficient to gain full insight of credit risk management because risk management concepts are missing. This section will fill in the gap by identifying risk management in general and in banking to best prepare the readers for the next important parts.

2.2.1. Risk management

As mentioned above, risk is always bad is a false assumption and can mislead the way people deal with risks. Eliminating each and every risk definitely is not the way because risk is an unavoidable element of life. Moreover there is a special relationship between risk and reward. If you want a higher rate of return, be willing to take risks and be tolerant of risks is a must.

"The greater the risk, the greater the gain." (Spanish Proverb).

"He, who doesn't risk, never gets to drink champagne." (Russian Proverb) (Book Rags 2010)

The point is people know how to cope with, or in other words how to control risks properly, responsibly, and in a business context, profitably, beneficially and sustainably. That is the question risk management must answer. Ordinary people also manage risks in different ways. Nevertheless, risk management in organizations is more concerned. Like risk, risk management has been attempted to define in various ways. It may take pages to list all the definitions from the literature. But there is one definition from the International Organization for Standardization (ISO) that is typical and covers most of general issues: "Risk management is a **central part of any organization's strategic management.** It is **the process** whereby organizations methodically address the risks attaching to their activities with **the goal of achieving sustained benefit** within each activity and across the portfolio of all activities." (IRM, 2002: 4) The three key phrases in the sentences above are in bold. First, risk management's primary mission is to bring benefits to the companies and makes them sustainable. Second, risk management is at the heart of any firm's strategy. The significance of risk management in an organization's activities was surprisingly ignored for a long time. It used to be regarded as no more than insurance. It only started to catch attention from business top executives in the 1990s after the enormous derivatives disasters triggered in the United States that shook Barings Bank, Procter & Gamble, Gibson Greetings, government of Orange County - California, BankAmerica Corp. and many other giants with loss of billions of dollars. Buck U.(Culp, 2001: ix; Markham, 2002: 198-201). Third, risk management is an ongoing and continuously developing process.

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Risk management has been defined as the process of understanding and managing the risks that the organization is inevitably subject to in attempting to achieve its corporate objectives (CIMA *Official Terminology*).

The Institute of Risk Management provided a more detailed definition of risk management as: the process by which organizations methodically address the risks attaching to their activities with the goal of achieving sustained benefit within each activity and across the portfolio of all activities. The focus of good risk management is the identification and treatment of these risks. Its objective is to add maximum sustainable value to all the activities of the organization. It marshalls the understanding of the potential upside and downside of all those factors which could affect the institution. It increases the probability of success, and reduces both the probability of failure and the uncertainty of achieving the organization's overall objectives.

The Institute of Risk Management (2002) developed a Risk Management Standard, which contains several elements:

◆ Risk assessment

◆ Risk evaluation

◆ Risk treatment

◆ Risk reporting

Risk assessment comprises the analysis and evaluation of risk through processes of identification, description and estimation.

The purpose of risk assessment is to undertake risk evaluation. Risk evaluation is used to make decisions about the significance of risks to the institution and whether each specific risk should be accepted or treated.

Although many of these methods provide a formal structure for estimating risk, they assume simple linear cause – effect relationships rather than holistic or whole system relationships. On the other hand, many methods are subjective and rely on individual Risk and Management Accounting At the organizational level, Douglas and Wildavsky (1983) explained risk perception as a cultural process, commenting that each culture, each set of shared values and supporting social institutions, was biased toward highlighting certain risks and downplaying others.

Adams (1995) also adopted a 'cultural theory perspective and differentiated the formal sector of risk management, with its concern with risk reduction, from the informal sector of individuals

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seeking to balance risks with rewards. Adams, like others, also contrasted the distinction between objective, measurable risk and subjective, perceived risk.

Weber and Milliman (1997) described risk preference as a personal trait on a continuum from risk avoiding to risk taking, with risk factors being based on the magnitude of potential losses and their chance of occurring. They found that risk preference may be a stable personality trait, but the effect of situational variables on choice may be the result of changes in risk perception. These situational variables may exist at both national and organizational levels. A survey of managers and accountants by Helliar et al. (2002) took a psychological approach to risk and found that loss aversion was dominant in decision-makers' minds. Probabilistic measures were not used as managers preferred to rely on instinct and experience which was then tested against corporate procedures to minimize risk.

Helliar et al. (2001) found that, in some circumstances, managers were unable to distinguish between the risks that they were taking in their personal capacity and the risks they were taking on behalf of organizations. The managers in failing firms often focused on only one or two issues and were sometimes unable to separate their personal risks from business risks. They were willing to take gambles that might save their business from insolvency although, when threatened, their risk attitudes became more risk averse. Managers in turnaround activities were willing to ask for help sooner and recognized the need for action, demonstrating a more secure personal position.

Harris (1999, 2000) also drew on psychological theories in developing a project risk assessment framework to study risk assessment in capital investment decision-making, in which managers used a range of analytical tools to assess the likely risks and returns. Managers also drew upon their intuition and influenced others involved in the decision process. This suggested a link between human capabilities and procedures. In their study of risk in budgeting, Collier and Berry (2002) argued that by excluding some risks and considering others, the process of Risk and Management Accounting constructing a budget was seen to be different to, and needed to be interpreted separately from, the content of the budget document in which there was little evidence of risk modeling or the use of probabilities.

Following Douglas and Wildavsky, Adams identified four distinctive world views that have important implication for risk. Adams' 'four rationalities' were: fatalists, hierarchists, individualists, and egalitarians.

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◆ Fatalists have minimal control over their own lives and belong to no groups that are responsible for the decisions that rule their lives. They are resigned to their fate and see no point in trying to change it. Managing risks is irrelevant to fatalists.

◆ Hierarchists inhabit a world with strong group boundaries with social relationships being hierarchical. Hierarchists are always evident in large organizations with strong structures, procedures and systems. Hierarchists are most comfortable with a bureaucratic risk management style using various risk management techniques.

◆ Individualists are enterprising, self-made people, relatively free from control by others, but who strive to exert control over their environment. Entrepreneurs in small-medium enterprises fit into this category. Risk management to individualists is typically intuitive rather than systematic.

◆ Egalitarians have strong group loyalties but little respect for externally imposed rules and group decisions are arrived at democratically. Egalitarians are more commonly found in public sector and not-for-profit organizations whose values are oriented to social concerns. Egalitarians are most comfortable in situations of risk sharing through insurance, hedging or transfer to other organizations.

Risk management involves identifying, analyzing, and taking steps to reduce or eliminate the exposures to loss faced by an organization or individual. The practice of risk management utilizes many tools and techniques, including insurance, to manage a wide variety of risks. Every business encounters risks, some of which are predictable and under management's control, and others which are unpredictable and uncontrollable. Risk management is particularly vital for small businesses, since some common types of losses—such as theft, fire, flood, legal liability, injury, or disability—can destroy in a few minutes what may have taken an entrepreneur year to build. Such losses and liabilities can affect day-to-day operations, reduce profits, and cause financial hardship severe enough to cripple or bankrupt a small business. But while many large companies employ a full-time risk manager to identify risks and take the necessary steps to protect the firm against them, small companies rarely have that luxury. Instead, the responsibility for risk management is likely to fall on the small business owner.

The term risk management is a relatively recent (within the last 20 years) evolution of the term "insurance management." The concept of risk management encompasses a much broader scope of activities and responsibilities than do insurance management. Risk management is now a widely

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accepted description of a discipline within most large organizations. Basic risks such as fire, windstorm, employee injuries, and automobile accidents, as well as more sophisticated exposures such as product liability, environmental impairment, and employment practices, are the province of the risk management department in a typical corporation. Although risk management has usually pertained to property and casualty exposures to loss, it has recently been expanded to include financial risk management such as interest rates, foreign exchange rates, and derivatives as well as the unique threats to businesses engaged in E-commerce. As the role of risk management has increased, some large companies have begun implementing large-scale, organization-wide programs known as enterprise risk management.

Steps in the Risk Management Process according to C. Arthur Williams Jr. and Richard M. Heins in their book *Risk Management and Insurance,* the risk management process typically includes six steps. These steps are 1) determining the objectives of the organization, 2) identifying exposures to loss, 3) measuring those same exposures, 4) selecting alternatives, 5) implementing a solution, and 6) monitoring the results. The primary objective of an organization—growth, for example—will determine its strategy for managing various risks. Identification and measurement of risks are relatively straightforward concepts. Earthquake may be identified as a potential exposure to loss, for example, but if the exposed facility is in New York the probability of earthquake is slight and it will have a low priority as a risk to be managed.

Businesses have several alternatives for the management of risk, including avoiding, assuming, reducing, or transferring the risks. Avoiding risks, or loss prevention, involves taking steps to prevent a loss from occurring, via such methods as employee safety training. As another example, a pharmaceutical company may decide not to market a drug because of the potential liability. Assuming risks simply means accepting the possibility that a loss may occur and being prepared to pay the consequences. Reducing risks, or loss reduction, involves taking steps to reduce the probability or the severity of a loss, for example by installing fire sprinklers.

Transferring risk refers to the practice of placing responsibility for a loss on another party via a contract. The most common example of risk transference is insurance, which allows a company to pay a small monthly premium in exchange for protection against automobile accidents, theft or destruction of property, employee disability, or a variety of other risks. Because of its costs, the insurance option is usually chosen when the other options for managing risk do not provide

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sufficient protection. Awareness of, and familiarity with, various types of insurance policies is a necessary part of the risk management process. A final risk management tool is self-retention of risks sometimes referred to as "self-insurance." Companies that choose this option set up a special account or fund to be used in the event of a loss.

Any combination of these risk management tools may be applied in the fifth step of the process, implementation. The final step, monitoring, involves a regular review of the company's risk management tools to determine if they have obtained the desired result or if they require modification. *Nation's Business* outlined some easy risk management tools for small businesses: maintain a high quality of work; train employees well and maintain equipment properly; install strong locks, smoke detectors, and fire extinguishers; keep the office clean and free of hazards; back up computer data often; and store records securely offsite.

Risk is; therefore, to a considerable extent, ‘socially constructed’ and responses to risk reflect that social construction. The view of risk as a systematic, rational device with tools and techniques to manage risk has been challenged (Beck, 1986/1992 in translation) with a wider view than the individual or the organization. Beck’s claim that we live in a ‘risk society’ was made from the stance that much risk was both part of the physical environment and also substantially created by the actions of companies, farmers and other actors. Further, the conceptions we have of risk are socially constructed. For something to be socially constructed is for meanings to be created and reinterpreted through social interaction, not just as a consequence of individual attitudes.

Douglas and Wildavsky (1983) identified the perception of risk as a social process, with some risks being highlighted while others were downplayed. Under an interpretive or social construction perspective, risk can be thought about by reference to:

◆The existence of internal or external events

◆ Information about those events (i.e. their visibility)

◆ Managerial perception about events and information (i.e. how they are perceived)

◆how organizations establish tacit/informal or explicit/formal ways of dealing with risk.

It has been argued (Bettis and Thomas, 1990) that researchers had very little knowledge about how managers in organizations perceived and took risks, or of the commonalities or differences between individual risk taking and risk taking by managers in the organizational context. Since then, in the last decade, there has been a myriad of publications on risk management by

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professional bodies and consulting firms and published research on various aspects of risk management, including technology (Shrivastava, 1993; Bussen and Myers, 1997; Kumar, 2002), outsourcing (Bhattacharya et al., 2003), reputation (Davies, 2002a), project management (Jiang and Klein, 1999; Miller and Lessard, 2001), and crisis (Davies, 2002b).

March and Shapira (1987) suggested that managers were insensitive to probabilities but were focused on performance in relation to critical performance targets. These authors identified three motivations for risk taking by managers. Managers saw risk taking as essential to success in decision-making; managers associated risk taking with the expectations of their jobs rather than with any personal preference for risk; and managers recognized the 'emotional pleasures and pains' of risk taking. As a result of their research, March and Shapira noted that both individual and institutionalized (i.e. taken for granted within the organization) risk preferences were important in understanding organizational responses to risk management.

2.3. Credit and Credit Risk

The readers have just been introduced several basic ideas about risk, risk management and the special case, banking risk management. The topic of this thesis was narrowed down to credit risk practices in a development bank. In order to understand credit risk management, knowledge of credit and credit process should first be acquired. Then, where and how does credit risk in a bank arise? Next, what are the components of a credit risk management strategy? And finally, what factors determine an effective system and its implementation?

2.3.1. Credit

Credit is defined by the Economist Dictionary of Economics as "the use or possession of goods or services without immediate payment" and it "enables a producer to bridge the gap between the production and sale of goods" and "virtually all exchange in manufacturing, industry and services is conducted on credit". (Colquitt 2007, 2) Pays the creditor extra money earned from reinvestments of the credit amount.

Debtor

Creditor

Gives the debtor time and takes back a return for supplying the credit.

Consequently, credit generates debt that a party owes the other. The former is called a debtor or borrower. The latter is a creditor or lender. Certainly the debtor will have to pay an extra amount

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of money for delaying the payment. In that circle, both debtor and creditor expect a return which is worth their paying more and waiting, respectively.

So now it is clear why credit exists and how important it is to the economy. Firms or individuals that run short of capital need credit to continue or expand their businesses/investments. The ones that have excess money, on the other hand, never want to keep it in the safes. As a result, all are growing and making more money.

Demand and supply together exist but do they meet each other? Here borne financial intermediaries who act as the bridge between credit suppliers and clients. Now in this innovative phase of the global financial-services industry, numerous types of financial institutions have joined the credit supplier group: insurance companies, mutual funds, investment finance companies, etc. (Colquitt 2007, 2) Nevertheless, banks are still the dominant source that both individuals and corporate seek credit from.

In banking specifically, two primary kinds of credit services based on customer categories are offered: retail credit and wholesale credit. Lending in retail or personal banking are subject to individuals and may fall under: home mortgages, installment loans (e.g. consumer loans, educational loans, auto loans…), credit card revolving loans, revolving credits (e.g. overdrafts), etc. (Crouhy et al. 2006, 207-208). Wholesale lending, on the other hand, involves firms as the borrowers and therefore is of much higher value, more complicated and poses more threats to the banks.

2.3.2. Credit Risk

Quite often in the previous sections of this paper, credit risk has been mentioned or even defined. However, it still needs to be repeated from a deeper point of view. Basically, it is understandable that credit risk occurs when the debtor cannot repay part or whole of the debt to the creditor as agreed in the mutual contract. More formally, "credit risk arises whenever a lender is exposed to loss from a borrower, counterparty, or an obligor who fails to honor their debt obligation as they have agreed or contracted". This loss may derive from deterioration in the counterparty's credit quality, which consequently leads to a loss to the value of the debt. (Colquitt 2007, 1) Or in the worst case, the borrower *defaults* when he/she is unwilling or unable to fulfill the obligations (Crouhy et al. 2006, 29).

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That is the story Greece is facing. The Greek government, on behalf of the country, is a debtor to a lot of banks in Germany, France, etc. Now when the country defaults and is not able to pay the debts, EU and IMF have to interfere to prevent the country from going bankrupt and also to help the European banks avoid big losses. (The Wall Street Journal, 2010)

In banks, credit failures are not rare and they critically affect the bank's liquidity, cash flows and eventually, profit and shareholders' dividends. Banks call them *'bad debts'*. Modern banking no longer experiences credit risk solely in its traditional activity of loan making. In reality, credit risk falls in a broader scope. For instance, a well-known British banking group sees that the group's credit risk may take the following forms:

- Lending: funds are not repaid
- Guarantees or bonds: Funds are not ready upon collection of the liability
- Treasury products: payments due from the counterparty under the contract is not forthcoming or ceases
- Trading businesses: settlement will not be effected
- Insurance risks reinsured: the reinsurance counterparty will be unwilling or unable to meet its commitments
- Cross-border exposure: the availability and free transfer of currency is restricted or ceases
- Holdings of assets in form of debt securities: value of these falls e.g. after a downgrading of credit rating.

Again it is necessary to stress that credit risk has always been the biggest threat to any bank's performance and "the principal cause of bank failures" (Greuning & Bratanovic 2009, 161). Therefore, a sound credit risk management framework is indispensable to a healthy and profitable banking institution. The following part will give the audience a clearer view of how credit risk management looks like in a bank.

2.4. Credit Risk Management

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships

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between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization.

In banking, credit risk is taken for granted as a fundamental feature of the institutions. If an organization refuses to acknowledge the inherent risk, it is not in the lending industry. Wherever risk survives, its enemy, risk management, will also exist and fight against it. Credit risk management is simply the procedures implemented by organizations with the aim of diminishing or avoiding credit risk.

Credit risk management has been a hot topic of debate as it is one of the fastest evolving practices thanks to institutional developments in the credit market, diversification of financial institutions participating in the lending business and modern technologies. (Caouette, Altman, Narayanan, Nimmo 2008, xvi-xvii) As also discussed by the four authors above, credit risk management lies in an expert analysis system, whose objective is to "look at both the borrower and the lending facility being proposed and to assign a *risk rating"* (Caouette, Altman, Narayanan, Nimmo 2008, 106). The analyzed information is summarized in figure 3 on the next page. Among the evaluated data, financial ratios are perceived to be very important. The philosophy that Caouette, Altman, Narayanan, Nimmo presents is that credit risk management is a form of engineering in which "models and structures are created that either prevent financial failure or else provide safeguards against it". The emphasis of these four authors" book "Managing Credit Risk" is credit risk models. However most of the models are for enterprises in general. For financial institutions or banks, perhaps the credit analysis system is of much larger help.

Banking credit risk management in the eyes of Crouhy, Galai & Mark (2006) can be divided into retail and commercial credit risk management. Credit risk management based upon portfolio management is highlighted for both retail and commercial. This means that the customers are categorized into different portfolios, each of which is homogenous in several characteristics. Instead of manage every single client, the bank will handle them in groups and therefore usually saves time, effort and cut cost. For retail banking, the book introduces the credit scoring model that is customized for personal banking. Commercial lending, on the other hand, will utilize the helpfulness of internal risk rating system established based on the rating system of professional

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credit rating agencies such as Moody's, Fitch Ratings or Standard and Poor's. Either the credit scoring or internal rating is both based upon financial and non-financial assessment.

For the scope of a bachelor's thesis, it will be extremely burdensome if credit risk management measurement is based on credit models. The thesis would like to make the assessment from simpler but also very comprehensive theory that is explained in the book of Colquitt "Credit Risk Management: How to Avoid lending disasters & maximize earnings" (2007). According to him, credit risk management is embodied in:

- Credit culture
- Credit organization
- Credit policies
- Credit risk management process, i.e. activities in reality

2.5. Evaluation of Credit Risk Management Implementation

The previous chapters have explained through basic concepts, definitions and many related details of risk, banking risks, risk management, risk management in banks, credit risk, and credit risk management. The main objective of this thesis is to evaluate the effectiveness of a bank transaction office credit risk management practices. The effectiveness of a credit risk management framework lies partly on the perfection of credit risk management determinants mentioned in the previous part and partly on how the bank, or the credit people in the bank, in reality carry them out.

While numerous publications have dedicated their intelligence on credit risk management and measurement, none puts a genuine emphasis on the evaluation of credit risk management practices. This thesis wishes to fill in that gap with a set of benchmarks for assessment. This 2.5 section will summarize the criteria or benchmarks which are going to be used in the analysis and assessment of the empirical part. An important note is that the evaluation is based on the traditional and fundamental non-quantified tools, which mean no computational finance methods (credit models, credit metrics, etc.) are used. The traditional tools of credit risk management are: loan policies, credit proposal standards, delegation of loan approving powers, credit approving system, limits on credit exposures, instructions on collaterals, loan review mechanism, non-performing loan collection method. (Arora & Agarwal 2009, 23) Or some typical benchmarks for credit risk management discussed by Ardrey, Perryer, Keane & Stockport (2009, 6) consist of: an established risk management philosophy (or culture), risk tolerance level planning and definition, risk

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identification policies and procedures, risk monitoring and risk quantitative benchmarks (risk scores, value at risk…).

The mentioned tools and benchmarks have been integrated in to the list presented below. Several criteria have appeared here and there in the previous text. Others are derived from the literature and first time introduced in this section. The criteria are classified into 4 groups: credit culture, credit policies, credit personnel & organization and credit performance.

Group 1 Credit Culture

1. Does the bank have its own credit culture, which is clearly defined in written form and recognized by all employees?
2. Does it contain the information mentioned in 2.4.1 part about an effective credit culture?
3. Is the risk appetite stated and does it accurately respond to the bank's risk capacity?

(See, e.g. Colquitt 2007, 20-30)

*Group 2 Credit Policies*1. How do the Central Bank's regulatory policies help the bank in credit risk management?
2. Does the lending policy contain key details listed in 2.4.3.2 part?
3. Is there any rule for collaterals?
4. Is the bank using an internal credit risk rating system? How does it look like? How does it help the employees in their work?
5. Is there any debt classification? If yes, how can the classification help the bank's operation?
6. Are the policies and procedures constantly reviewed and improved?

(see, e.g. Greuning & Bratanovic 2009, 162-187)

*Group 3 Credit Personnel and Organization*1. What are the staffs like? (education, skills, experience, positions, responsibilities)
2. Do all staffs in the transaction office fully understand the details of credit culture, policies, process of the bank?
3. What are the control activities in the bank? (Management structure, loan review, internal audit)
4. How is the information flow within the organization? (Top-down, bottom-up; timely, complete and accurate)

However, complete the bank's credit culture and policies can be, the utmost standard for a successful credit risk management framework lies on the bank's actual practices and performance.

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The non-performing loan statistics are typical demonstration of good or improper credit risk management. Besides, loan loss provision plays the role of a cushion for any potential losses. The prudential ratios also contribute to sound financial and risk management at the banks.

Principles for the Management of Credit Risk

While financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counterparties, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. This experience is common in both G-10 and non-G-10 countries.

For most banks, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet. Banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transactions.

Since exposure to credit risk continues to be the leading source of problems in banks world-wide, banks and their supervisors should be able to draw useful lessons from past experiences. Banks should now have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred. The Basel Committee is issuing this document in order to encourage banking supervisors globally to promote sound practices for managing credit risk. Although the principles contained in this paper are most clearly applicable to the business of lending, they should be applied to all activities where credit risk is present.

The sound practices set out in this document specifically address the following areas: (i) establishing an appropriate credit risk environment; (ii) operating under a sound credit-granting process; (iii) maintaining an appropriate credit administration, measurement and monitoring process; and (iv) ensuring adequate controls over credit risk. Although specific credit risk management practices may differ among banks depending upon the nature and complexity of their credit activities, a comprehensive credit risk management program will address these four areas.

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These practices should also be applied in conjunction with sound practices related to the assessment of asset quality, the adequacy of provisions and reserves, and the disclosure of credit risk, all of which have been addressed in other recent Basel Committee documents.

While the exact approach chosen by individual supervisors will depend on a host of factors, including their on-site and off-site supervisory techniques and the degree to which external auditors are also used in the supervisory function, all members of the Basel Committee agree that the principles set out in this paper should be used in evaluating a bank's credit risk management system. Supervisory expectations for the credit risk management approach used by individual banks should be commensurate with the scope and sophistication of the bank's activities. For smaller or less sophisticated banks, supervisors need to determine that the credit risk management approach used is sufficient for their activities and that they have instilled sufficient risk-return discipline in their credit risk management processes.

The Committee stipulates in Sections II through VI of the paper, principles for banking supervisory authorities to apply in assessing bank's credit risk management systems. In addition, the appendix provides an overview of credit problems commonly seen by supervisors.

A further particular instance of credit risk relates to the process of settling financial transactions. If one side of a transaction is settled but the other fails, a loss may be incurred that is equal to the principal amount of the transaction. Even if one party is simply late in settling, then the other party may incur a loss relating to missed investment opportunities. Settlement risk (i.e. the risk that the completion or settlement of a financial transaction will fail to take place as expected) thus includes elements of liquidity, market, operational and reputational risk as well as credit risk. The level of risk is determined by the particular arrangements for settlement. Factors in such arrangements that have a bearing on credit risk include: the timing of the exchange of value; payment/settlement finality; and the role of intermediaries and clearing houses.

Credit risk management and loan portfolio performance

Credit risk management can be described as a function that must be performed by a commercial bank in order to ensure that the loans it advances to its clients are orderly repaid back. The basis of a sound credit risk management is the Identification of the existing and potential risks inherent in the lending activities.

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Credit risk management is the support, control systems and other practices necessary to manage the outstanding risk assets, normal repayment and to monitor business risk properly.

Credit evaluation involves finding whether the customers' credit worthiness agrees with the banks credit policies, procedures and directives.

Bankers should base their credit evaluation on the basic principles of lending, the 5C's of credit. These 5C's are discussed by Kakuru (2003), Van Horne (1998), Pandey (1997), and Sinkey (1998), they refer to the customer's conditions or business cash flow and net worth, collateral securities, and economic conditions or business fluctuation. There is need for the banker to evaluate the customers' capacity to pay persistently because of the over- worsening economic conditions in countries like Rwanda and the information Asymmetry, which exist between the two stakeholders. Ideally sensitivity analysis on the clients' ability should be carefully conducted by the banker to minimize risks.

Credit negotiation and Approval. This is the last step of the credit initiation process. It involves negotiating with the credit worthy customer on the terms of the credit; the loan interest rate, the loan amortization schedule, collateral securities and guarantees, loan covenants and other relevant agreement. Negotiation process should ensure that the credit advanced by the bank is beneficial to the client and that the payment will be orderly and favorable. It should result into a good quality loan portfolio. Once the process of negotiation is concluded, then the loan is approved. The bank's loan committee should ensure that all terms and procedures have been adhered to.

Credit documentation and Disbursement

Credit documentation involves the following:

- Maintenance of orderly and up- to date records and credit files
- Drafting of the legal documents
- Notification and renewal dates records
- Collateral securities checks.
- Relevant fees chargeable.
- Loan covenants

Loan documentation is a necessary element of credit risk management since it ensures that the bank is protected against default risks while providing grounds for taking legal action in case the client runs into problems.

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Weakness in loan documentation can create serious problems because if they are faulty, they leave the bank unprotected should clients run into difficulties. Credit disbursement on the other hand must ensure that all documentary requirements have been duly met and agree with the banks credit policy before money is given out.

By Credit culture we mean the shared assumptions, perceptions, the norms and the over all approach of the bank's employees in managing credit risks. A bank's credit culture should be an integral part of the lending function whether it is explicit or implicit, written or not written.

It should involve such aspects like organizational design, communication and reporting arrangement incentives and motivation schemes to create staff. A good credit culture should start from top management of the bank and be widely defused and perceived by the entire staff. The credit culture is the assumptions and values bank employees believe are true and the norms that govern their behavior in specific situations.

Loan administration, Monitoring and Control

This is the last step of credit risk management and measurement of risks guidelines and procedures of minimizing them. It also involves the following administrative aspects:

• Monitoring of the portfolio performance.
• Classification of the portfolio according to performance.
• Ensuring that the credit is orderly and fully repaid.
• Conducting of site visits and regular contact with clients.
• Conducting of credit audit or risk asset review to assess portfolio quality.
• Management and review of clients' files and documents as well as collateral securities.

All the aspects of credit administration are vital in monitoring change in behavior and non-compliance. In this way bankers are able to detect early warning signals of deterioration or non-compliance and timely effect corrective measures to avoid losses. Another important aspect of credit administration is, collecting, processing, and analyzing of up to date and accurate information on portfolio performance. RMA (2004), Sinkey (1998), and Greuning et al (1999), agree that the best way to detect the flaws and weaknesses that the quality of the bank's portfolio is through gathering processing, and analyzing quality information. RMA (2004), Sinkey (1998), and Greuning et al (1999), agree that the best way to detect the flaws and weaknesses that the quality of the bank's portfolio is through gathering processing, and analyzing quality information.

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Because of changing economic conditions and customers' behavior (moral hazards) and the failure to give timely data, there is information asymmetry and the bank must constantly update its management information system (MIS) database. Thus, good quality portfolio management and administration should contain risks in market segments.

The basis for an effective credit risk management process is the identification and analysis of existing and potential risks inherent in any product or activity. Consequently, it is important that banks identify all credit risk inherent in the products they offer and the activities in which they engage. Such identification stems from a careful review of the existing and potential credit risk characteristics of the product or activity.

Banks must develop a clear understanding of the credit risk involved in more complex credit-granting activities (for example, loans to certain industry sectors, asset Securitization, Customer-written option, Credit derivatives, Credit- linked notes). This is particularly important because the credit risk involved, while not new to banking, may be less obvious and require more analysis than the risk of traditional credit- granting activities. Although more complex credit- granting activities may require tailored procedures and controls, the basic principles of credit risk management will still apply.

New ventures require significant planning and careful oversight to ensure the risks are a appropriately identified and managed. Banks should ensure that the risks of new products and activities are subject to adequate procedures and controls before being introduced or undertaken. Any major new activity should be approved in advance by the board of directors or its appropriate delegated committee

It is critical that senior management determine that the staff involved in any activity where there is borrower or counterparty credit risk, whether established or new, basic or more complex be fully capable of conducting the activity to the highest standards and in compliance with the bank's policies and procedures.

Operating under a sound credit granting process Banks must operate within sound, well- defined credit- granting criteria. These criteria should include a clear I identification of the bank's target market and through understanding of the borrower or counterparty, as well as the purpose and the structure of the credit, and its source of payment

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Establishing sound, well- defined credit- granting criteria is essential to approving credit in a safe and sound manner. The criteria should set out who is eligible for credit and for how much, what type of credit are available, and under what terms and conditions the credit should be granted.

Banks must receive sufficient information to enable a comprehensive assessment of the true risk profile of the borrower or counterparty. Depending on the type of credit exposure and the nature of the credit relationship to date, the factors to be considered and documented in approving credits include:

• The purpose of the credit and sources of repayment

• The current risk profile (including the nature and the aggregate amount of risks) of the borrower or counterparty and collateral and its sensitivity to economic and market developments;

• The borrower’s repayment history and current capacity to repay based on historical financial trends and future cash flow projections, various scenarios;

• For commercial credits, the borrower’s business expertise and the status of borrower’s economic sector and its position with in that sector;

• The proposed terms and condition of the credit, including covenants designed to limit changes in the future risk profile of the borrower; and

• Where applicable, the adequacy and enforceability of collateral or guarantees, including under various scenarios.

In addition, in approving borrowers or counterparties for the first time, consideration should be given to the integrity and reputation of the borrower or counterparty as well as their legal capacity to assume the liability. One credit- granting criteria have been established, it is essential for the bank to ensure that the information it receives is sufficient to make proper credit- granting decisions.

This information will also serve as the basis for rating the credit under the bank’s internal rating system.

Banks need to understand to whom they are granting credit. Therefore, prior to entering into any new credit relationship, a bank must became familiar with the borrower or counterparty and be confident that they are dealing with an individual or organization of sound repute and creditworthiness. In particular, strict policies must be in place to avoid association with individual involved in fraudulent activities and other crimes.

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However, a bank should not grant credit simply because the borrower or counterparty is familiar to the bank or is perceived to be highly reputable.

Banks should have procedures to identify situations where, in considering the credits, it is appropriate to classify a group of obligors as connected counterparties and, thus, as a single obligor. This would include aggregating exposure to groups of accounts exhibiting financial interdependence, including corporate or non- corporate, where they are under common ownership or control or with strong connecting links (for example, common management, familial ties). Banks should also have procedures for aggregating exposures to individual clients across business activities.

Granting credit involves accepting risks as well as producing profits. Banks should assess the risk/reward relationship in any credit as well as the overall profitability of the count relationship. In evaluating whether, and on what terms, to grant credit, banks need to assess the risk against expected return, factoring in, to the greatest extent possible, price and non- price (e.g. collateral, restrictive covenants, terms. In evaluating risk, banks should also assess likely downside scenarios and their possible impact on borrowers or counterparties. A common problem among bank is the tendency not to price a credit or overall relationship properly and therefore not receive adequate compensation for the risk incurred.

In considering potential credits, banks must recognize the necessity of establishing provisions for the identified and expected losses and holding adequate capital to absorb unexpected losses. The banks should factor these considerations into credit- granting decision, as well as into the overall portfolio risk management process.

Banks can utilize transaction structure, collateral and guarantees to help mitigate risks (both identified and inherent) in individual credits but transactions should be entered into primarily on the strength of the borrower's repayment capacity. Collateral cannot be substitute for a comprehensive assessment of the borrowers or counterparty, nor can it compensates for insufficient information. It should be recognized that any credit Enforcement actions (e.g. foreclosure proceedings) can eliminate the profit margin on the transaction.

In addition, banks need to be mindful that the value of collateral may well be impaired by the same factors that have led to the diminished recoverability of the credit. Banks should have policies covering the acceptability of various forms of collateral, procedures for the ongoing valuation of

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such collateral, and a process to ensure that collateral is, and continues to be, enforceable and realizable.

With regard to guarantees, banks should evaluate the level of coverage being provided in relation to the credit- quality and legal capacity of the guarantor.

Banks should be careful when making assumptions about implied support from third parties such as the government.

Netting agreements are an important way to reduce credit risks, especially in interbank transactions. In order to actually reduce risk, such agreements need to be sound and legally enforceable

Where actual or potential conflicts of interests exist within the bank, internal confidentiality arrangements (e.g. “Chinese walls”) should be established to ensure that there is no hindrance to the bank obtaining all relevant information from the borrower.

Banks should establish overall credit limits at the level of individual borrowers and Counterparties and groups of connected counterparties that aggregate in a Comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet. An important element of credit risk management is the establishment of exposure limits on single counterparties and groups of connected counterparties. Such limits are frequently based in part on the internal risk rating assigned to the borrower or counterparty, with counterparties assigned better risk rating having potentially higher exposure limits. Limits should also be established for particular industries or economic sectors, geographic regions and specific products.

Exposure limits are needed in all areas of the bank’s activities that involve credit risk. These limits help to ensure that the bank’s credit- granting activities are

Adequately diversified. As mentioned earlier, much of the credit exposure faced by some banks Comes from activities instruments in the trading book and off the balance sheet. Limits on such transaction are particularly effective in managing the overall credit risk profile or counterparty risk of a bank. In order to be effective, limits should generally be binding and not driven by customer demand.

Effective measures of potential future exposure are essential for the establishment of meaningful limits, placing an upper bound on the overall scale of activity with, and exposure to, a given

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counterparty, based on comparable measure of exposure across a bank's various activities (both on and off- balance- sheet).

Banks should consider the result of stress testing in the overall limit setting and monitoring process. Such stress testing should take into consideration economic cycles, interest rate and other market movements, and liquidity conditions.

Bank's credit limits should recognize and reflect the risks associated with the near-term liquidation of position in the event of the counterparty default[21] Where a bank has several transactions with a counterparty, its potential exposure to that counterparty is likely to vary significantly and discontinuously over the maturity over which it is calculated. Potential future exposures should therefore be calculated over multiple time horizons. Limits should also factor in any unsecured exposure in a liquidation scenario.

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

Many individuals within a bank are involved in the credit-granting process. These include individuals from the business origination function, the credit analysis function and the credit approval function. In addition, the same counterparty may be approaching several different areas of the bank for various forms of credit. Banks may choose to assign responsibilities in different ways; however, it is important that the credit granting process coordinate the effort of all of the various individuals in order to ensure that sound credit decisions are made.

In order to maintain a sound credit portfolio, a bank must have an established formal transaction evaluation and approval process for the granting of credits. Approvals should be made in accordance with the bank's written guidelines and granted by the appropriate level of management there should be clear audit trial documenting that the approval process was complied with and identifying the individual (s) and/or committee (s) providing input as well as making the credit decision. Banks often benefit from the establishment of specialist credit groups to analyze and approve credits related to significant product lines, types of credit facilities and industrial and geographical sectors. Banks should invest in adequate credit decision resources so that they are able to make sound credit decisions consistent with their credit strategy and meet competitive time, pricing and structuring pressures.

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Each credit proposal should be subject to careful analysis by a qualified credit analyst with expertise commensurate with the size and the complexity of the transaction. An Effective evaluation process establishes minimum requirements for the information on which the analysis is to be based.

There should be policies in place regarding the Information and documentation needed to approve new credits, new existing credits and/or change the terms and conditions of previously approved credits. The information received will be the basis for any internal evaluation or rating assigned to the credit and its accuracy and adequacy is critical to management making appropriate judgments about the acceptability of the credit.

Banks must develop a corps of credit risk officers who have the experience, knowledge and background to exercise prudent judgment in assessing, approving and managing credit risks.

A bank's credit-granting approval process should establish accountability for decision taken and designate that has the absolute authority to approve credits or changes in credit terms. Banks typically utilize a combination of individual signature authority, dual or joint authorities, and a credit approval group or committee, depending upon the size and nature of the credit Approval authorities should be commensurate with the expertise of the individuals involved.

All extensions of credit must be made on an arm's-length basis. In particular,

Credits to related companies and individuals must be authorized on an exception basis, monitored with particular care and other appropriate steps taken to control or mitigate the risks of non- arm's length lending.

Extensions of credit should be made subject to the criteria and processes described above. These create a system of checks and balances that promote sound credit decisions. Therefore, directors, senior management and other influential parties (e.g. shareholders) should not seek to override the established credit-granting and monitoring process of the bank.

A potential area of abuse arises from granting credit to non-arms-length and related parties, whether companies or individuals consequently, it is important that banks grant credit to such parties on an arm's-length basis and that the amount of credit granted, is suitably monitored. Such controls are most easily implemented by requiring that the terms and conditions of such credits not be more favorable than credit granted to non- related borrowers under similar circumstances and by imposing strict absolute limits on related borrowers under similar circumstances and by

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imposing strict absolute limits on such credits. Another possible method of control is the public disclosure of the terms of Credits granted to related parties. The bank's credit –granting criteria should not be altered to accommodate related companies and individuals.

Material transactions with related parties should be subject to the approval of the board of directors (excluding board members with conflicts of interests), and in certain Circumstances (e.g. a large loan to a major shareholder) reported to the banking supervisory authorities

Maintaining an Appropriate Credit Administration, Measurement and Monitoring Process

Banks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.

Credit administration is a critical element in maintaining the safety and soundness of a Bank. Once a credit is granted, it is the responsibility of the business unit, often in Conjunction with a credit administration support team.

In developing their credit administration areas, banks should ensure:

- The efficiency and effectiveness of credit administration operations, including monitoring documentation, contractual requirements, legal covenants, collateral, etc;
- The accuracy and timelines of information provided to management information system;
- Adequate segregation of duties;
- The adequacy of controls over all "back office" procedures; and
- Compliance with prescribed management policies and procedures as well as applicable laws and regulations.

For the various components of credit administration to function appropriately, senior management must understand and demonstrate that it recognizes the importance of this element of monitoring and controlling credit risk.

The credit files should include all of the information necessary to ascertain the current financial condition of the borrower or counterparty as well as sufficient information to Track the decisions made and the history of the credit. For example, the credit files should include current financial statements, financial analysis and internal rating documentation, internal memoranda, reference letters, and appraisals the loan review function should determine that the credit files are complete and that all loan approvals and other necessary documents have been obtained.

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Bank must have in place a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserves.

Banks needs to develop and implement comprehensive procedures and information Systems to monitor the condition of individual credits and single obligors across the Banker's various portfolios. These procedures need to define criteria for identifying a Reporting potential problem credits and other transactions to ensure that they are subject to more frequent monitoring as well as possible corrective action, classification and/or Provisioning. An effective credit monitoring system will include measures to:

- Ensure that the bank understands the current financial condition of the borrower or the counterparty;
- Monitor compliance with existing covenants;
- Asses, where applicable, collateral coverage relative to the obligor's current condition;
- Identify contractual payment delinquencies and classify potential problem credits on a timely basis; and
- Direct promptly problems for remedial management.

Banks are encouraged to develop and utilize an internal risk rating system in managing credit risk. The rating system should be consistent with the nature, size and complexity of a bank's activities. An important tool in monitoring the quality of individual credits, as well as the total portfolio, is the use of an internal risk rating system. A well-structured internal risk rating system is a good means of differentiating the degree of credit risk in the different credit exposure of a bank. This will allow more accurate determination of the overall characteristics of the credit portfolio, concentrations, problems credits, and the adequacy of loan loss reserves.

More details and sophisticated internal risk rating systems, used primarily at larger banks, can also be used to be determining internal capital allocation, pricing of credits, and profitability of transactions and relationships.

Typically, an internal risk rating system categorizes credits into various classes designed to take into account gradations in risk. Simpler systems might be on several categories ranging from satisfactory to unsatisfactory; however, more meaningful systems will have numerous gradations for credits considered satisfactory in order to truly differentiate the relative credit risk they pose.

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In developing their systems, banks must decide whether to rate the riskiness of the borrower or counterparty, the risks associated with a specific transaction, or both.

Internal risk ratings are an important tool in monitoring and controlling credit risk.

In order to facilitate early identification of changes in risk profiles, the bank's internal risk rating system should be responsive to indicators of potential or actual deterioration in credit risk.

Credits with deteriorating ratings should be subject to additional oversight and monitoring, for example, through more frequent visits from credit officers and inclusion on a watch list that is regularly reviewed by senior management. The internal risk ratings can be used by line management in different departments to track the current characteristics of the credit portfolio and help determine necessary changes to the credit strategy of the bank. Consequently, it is important that the board of directors and senior management also receive periodic reports on the condition of the credit portfolios based on such ratings.

The ratings assigned to individual's borrowers or counterparties at the time the credit is granted must be reviewed on a periodic basis and individual credits should be assigned a new rating when conditions either improve or deteriorate. Because of the importance of ensuring the internal ratings are consistent and accurately reflect the quality of individual credits, responsibility for setting or confirming such ratings should rest with a credit review function independent of that which originated the credit concerned. It is also important that the consistency and accuracy of ratings is examined periodically by a function such as an independent credit review group.

Banks must have information systems and analytical techniques that enable management to measure the credit risk inherent in all on-balance sheet activities.

The management information system should provide adequate information on the composition of the credit portfolio, including identification of any concentrations of risks.

Banks should have methodologies that enable them to quantify the risk involved in exposures to individual borrowers or counterparties. Banks should also be able to analyze credit risk at the product and portfolio level in order to identify any particular sensitivity of concentrations. The measurement of credit risk should take account of;

The specific nature of the credit (loan, derivative, facility, etc.) and its Contractual and financial conditions (maturity, reference rate, etc.);

The exposure profile until maturity in relation to potential market movements;

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The existence of collateral or guarantees; and
The potential for default based on the internal risk rating.

The analysis of credit risk data should be undertaken at an appropriate frequency with the result reviewed against relevant limits. Banks should use measurement techniques that are appropriate to the complexity and level of the risks involved in their activities, based on robust data, and subject to periodic validation.

The effectiveness of a bank's credit risk measurement process is highly dependent on the quality of management information systems. The information generated from such systems enables the board and all levels of management to fulfil their respective oversight roles, including determining the adequate level of capital that the bank should be holding. Therefore, the quality, detail and timelines of information are critical. Including on a consolidated bank basis should permit management to assess quickly and accurately the level of credit risk that the bank has incurred through its various activities and determine whether the bank's performance is meeting the credit risk strategy.

Banks should monitor actual exposures against established limits. It is important that banks have a management information system in place to ensure that exposures approaching risk limits are brought to the attention of senior management. All exposures should be included in a risk limit measurement system. The bank's information system should be able to aggregate credit exposures to individual borrowers and counterparties and report on exceptions to credit risk limits on a meaningful and timely basis.

Banks should have information systems in place that enable management to identify any concentrations of risk within the credit portfolio. The adequacy of scope of information should be reviewed on a periodic basis by business line managers and senior management to ensure that it is sufficient to the complexity of the business. Increasingly, banks are also designing information systems that permit additional analysis of the credit portfolio, including stress testing.

Banks must have in place a system for monitoring the overall composition and quality of the credit portfolio.

Concentration of risk does not only apply to the granting of loans but to the whole range of banking activities that, by their nature, involve counterparty risk. A high level of concentration exposes the bank to adverse changes in the area in which the credits are concentrated.

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Banks have new possibilities to manage credit concentrations and other portfolio issues. These include such mechanisms as loan sales, credit derivatives, securitization programs and other secondary loan markets. However, mechanisms to deal with portfolio concentration issues involve risks that must also be identified and managed. Consequently, when banks decide to utilize these mechanisms, they need to first have policies and procedures, as well as adequate controls, in place. Banks should take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios, and should asses their credit risk exposures under stressful conditions.

An important element of sound credit risk management involves discussing what could potentially go wrong with individual credits and within the various credit portfolios, and factoring this information into the analysis of the adequacy of capital and provisions. This "what if' exercise can review previously undetected areas of potential credit risk exposure for the bank, the linkages between different categories of risk that are likely to emerge in times of crisis should be fully understood.

In case of adverse circumstances, there may be a substantial correlation of various risks, especially credit and market risk. Scenario analysis and stress testing are useful ways of assessing areas of potential problems stress testing should involve identifying possible events or future changes in economic conditions that could have unfavorable effects on a bank's credit Exposures and assessing the bank's ability to withstand such changes. Three areas that banks could usefully examine are: (i) economic or industry downturn; (ii) market-risk events; and (iii) liquidity conditions. Stress testing can range from relatively simple alterations in assumptions about one or more financial, structural or economical variables to the use of highly sophisticated financial models. Typically, the letter is used by large, internationally active banks.

Whatever the method of stress testing used, the output of the tests should be reviewed periodically by senior management and appropriate action taken in cases where the results exceed aggregate tolerances. The output should also incorporate into the process for assigning and updating policies and limits.

The bank should attempt to identify the types of situations, such as economic downturns, both in the whole economy or in particular sectors, higher than expected levels of delinquencies and defaults, or the combination of credit and Market events, which could produce substantial losses

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or liquidity problems. Such an analysis should be done on a consolidated bank basis. Stress-test analyses should also include contingency plans regarding actions management Might take given certain scenarios. These can include such techniques as hedging against the outcome or reducing the size of the exposure.

Ensuring Adequate Controls over Credit

Banks must establish a system of independent, ongoing assessment of the Bank's credit risk management processes and the result of such reviews should be communicated directly to the board of directors and senior management.

Because various appointed individuals throughout a bank have the authority to grant credit, the bank should have an efficient internal review and reporting system in order to manage effectively the bank's various portfolios. This system should provide the board of directors and senior management with sufficient information to evaluate the performance of account officers and the condition of the credit portfolio.

Internal credit reviews conducted by individual independent from the business Function provide an important assessment of individual credits and the overall Quality of the credit portfolio. Such a credit review function can help evaluate the overall credit administration process, determine the accuracy of internal risk ratings and judge whether the account officer is properly monitoring individual credits. The credit review function should report directly to the board of directors, a committee with audit responsibilities, or senior management without lending authority (e.g., senior management within the risk control function.

Banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential standards and internal limits. Banks should establish and enforce internal controls and other practices to ensure that exceptions to policies, procedures and limits are reported in a timely manner to the appropriate level of management for action.

The goal of credit risk management is to maintain a bank's credit risk exposure within parameters set by the board of directors and senior management. The establishment and enforcement or internal controls, operating limits and other practices will help ensure that credit risk exposures do not exceed levels acceptable to the individual banks. Such a system will enable bank management to monitor adherence to the established credit risk objectives.

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Limit systems should ensure that granting of credit exceeding certain predetermined levels receive prompt management attention. An appropriate limit system should assist management in controlling credit risk exposures, initiating discussion about opportunities and risks, and monitoring actual risk taking against predetermined credit risk tolerances.

Internal audits of credit risk processes should be conducted on a periodic basis to determine that credit activities are in compliance with the bank's credit policies and procedures, that credits are authorized within the guidelines established by the bank's board of directors and that the existence, quality and value of individual credits are accurately being reported to senior management. Such audit should also be used to identify areas of weakness in the credit risk management process, policies and procedures as well as any exceptions to policies, procedures and limits.

Banks must have a system in place for early remedial action on deteriorating credits, managing problem credits and similar workout situations.

One reason for establishing a systematic credit review process is to identify weakened or problem credits. A reduction in credit quality should be recognized at an early stage when there may be more options available for improving the credit. Banks must have a disciplined and vigorous remedial management process, triggered by specific events, that is administered through the credit administration and problem recognition systems.

A bank's credit risk policies should clearly set out how the bank will manage problem credits. Bank differs on the methods and organization they use to manage problem credits. Responsibility for such credits may be assigned to the originating business function, a specialized workout section, or a combination of the two, depending up on the size and nature of the credit and the reason for its problems. Effective workout program is critical to managing risk in the portfolio. When a bank has significant credit-related problems, it is important to segregate the workout function from the area that originated the credit.

The additional resources, expertise and more concentrated focus of a specialized workout section normally improve collection results. A workout section can help develop an effective strategy to rehabilitate a troubled credit or to increase the amount of repayment ultimately collected. An experience workout section can also provide valuable input into any credit structuring organized by the business function.

Specifically, these questions should be investigated:

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1. How are the credit culture and policies understood and implemented?
2. How much are bad debts in recent years? What is the ratio of bad debts/total outstanding loans?
3. What is the loan loss provision? Any conclusion from the amounts?
4. How is the bank complying with prudential ratios?

To conclude, an investigation of all criteria above may give the audience a broad picture of how credit risk management is implemented inside the subject transaction office of this thesis and a tool to evaluate the effectiveness of those practices.

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CHAPTER THREE: RESEARCH METHODOLOGY

This chapter shows the methods and techniques which are used in collecting data from the stakeholders within the scope of this study and present the areas of the study.

A thesis is all the time, in one way or another, a research conducted by a student who, in this case, becomes a researcher. A research is what "people undertake to find out things in a systematic way, thereby increasing their knowledge" (Saunders, Lewis & Thornhill 2009, 5). This is a very brief and easy to understand definition. If the readers want a more comprehensive way of defining, this sentence can be more satisfactory "A focused and systematic enquiry that goes beyond generally available knowledge to acquire specialized and detailed information, providing a basis for analysis and elucidatory comment on the topic of enquiry" (White 2003, 21). Both of these are good explanations and emphasize important characteristics of a research.

In this thesis, the research is believed to contain those significant features.

Focused and systematic: the investigated subject of this thesis has been narrowed down to only one development bank. Moreover, this thesis is conducted in a structured way step by step: critical literature review, relevant information collection based on literature, organized information grouping for analysis purpose, based on analysis and already existing knowledge. Also, the writer understands certain limitations that this research carries.

Beyond existing knowledge: Credit risk management in the researched bank has been given quite a lot of attention but still, the author thinks that it should be re-evaluated and recommended. The researcher work on this thesis with a hope to help the bank understand more thoroughly how they are operating and give valuable comments and suggestions for their sake.

Analysis and conclusions: The analysis is primarily based on theoretical knowledge and interpretation of the data collected during the research.

For this thesis, the problem of "implementation of credit risk management in Rwanda banking sector" has been clearly identified since the beginning. A well-designed research plan is the next step, in which the researcher decides what kind of data he is going to use, which methods he will apply to collect data and how he will collect them (data collection instruments). We are going to make use of purposive random sampling technique since we are going to work with institution. The sampling was made according to the level of activity of the development bank. Having sampled our target of interest, we are now going to talk about the method of analysis.

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For this reason the researcher will use his or her own judgment to choose and pick only respondents who are well equipped with information necessary to meet the purposes of the study.

In the following sections, the readers will have a closer look into the data and research methods particularly employed in this written work.

3.1. RESEARCH DATA

This includes methods which use in selecting the data collection presentation and analysis. It shows the mode of dissemination, limitation of the study and the organization of the thesis.

Basically, any research supporting evidence can fall into 2 categories: primary or secondary data. As presented earlier in the Introduction, both secondary and primary data have been utilized for this thesis.

3.1.1 Secondary Data

Secondary data are facts and figures collected by someone other than the researcher himself. These data can be used for purposes different from the researcher's. (Ghauri & Gronhaug 2010, 90) For instance, a student doing research on economic growth factors can take a line graph showing GDP data in the 2000-2010 period from the national statistics bureau.

Secondary data, in fact, usually help the researcher a lot in the beginning phase of their study, especially when the research problem is not familiar. The literature in the theoretical background section is the very first example of secondary data. Secondary data can be obtained through numerous sources. Some divide the sources into publication (books, journal articles, etc.) and electronic (websites, emails, anything from the internet). Others like Saunders, Lewis and Thornhill (2009) gives these categories: documentary (books, reports, newspapers, transcripts, voice recordings, video recordings, etc.), survey-based (any data collected using survey strategy), and multiple source (documentary combined with survey-based combined) secondary data. Another way of classification is: internal and external sources (Ghauri & Gronhaug 2010, 97).

Secondary data are particularly useful to this thesis. A teacher's materials at school triggered an interest in the author to write something in risk management. Intense review of books, articles, academic journals (publications) or electronic sources related to the topic during one month has helped to narrowed down the research problem to credit risk management in a development bank. Primarily the researcher has to base her analysis on information provided by the bank in published

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annual reports or news and existing regulation documents. Without secondary data, this thesis would never become a reality.

3.1.2. Primary Data

Primary data, in contrast with secondary data, are originally collected by the researcher with the aim of directly supporting the research topic at hand (Ghauri & Gronhaug 2010, 90). Primary data are superior to secondary ones in a way that they are chosen and collected so that they completely fit the purpose of the research. For instance, you need only GDP figures for your study. However the sources where you take the figures from contain also family income information, tax revenues, etc. Sometimes, all of these are presented in one table and one chart and the researcher has to take out the GDP data only and draw the chart by himself. Nevertheless, it is undeniable that gathering primary evidence takes time, frequently costs more and depends a great deal on the willingness, honesty and ability of the respondents. (Ghauri & Gronhaug 2010, 99-100)

However tough gathering the data is, primary data are still encouraged in a student's final thesis because it is a way for the student to practice and apply what he has learnt in reality. Being capable of conducting a research is indispensable in academic learning.

Besides secondary data, primary data are also used in this thesis. The main objective of this study is to evaluate actual execution of a credit risk management system. The staffs' activities are just done, not written in any documents that can be found in the bank's record files. Moreover, the assessment presented in the thesis emphasizes on actual practices but an official research on the credit risk management; credit risk management operation has never been conducted anywhere. Hence, primary data are truly essential to this study. There are several options for collecting primary data, which will be discussed in the next part. Also, which options are employed will be presented.

3.2. DATA COLLECTION METHODS

The options for collecting data that we mentioned above are technically called research methods. Before getting into further discussion, a distinction between research methodology and research methods should be clarified. While research methodology plays a role as the "philosophical basis" for the research – what approach is used, research methods are practical techniques adopted to gather research information. (White 2003, 20)

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Basically qualitative and quantitative are the two primary alternatives for any researcher to conduct his/her research. Which method is more suitable and more effectively reflect the whole target population really depends on the research problem that he/she has. Qualitative methods are often used for exploratory purposes (hypothesis-generating) while quantitative ones are to test hypotheses. Qualitative research results in non-quantification data. Quantitative research, on the other hand, gives numerical analysis of the issues.

There is a growing trend in the business and management research that different methods are employed in one single research (Saunders, Lewis & Thornhill 2009, 151). When both qualitative and quantitative methods appear, it is called mixed methods research. As argued by Saunders, Lewis & Thornhill (2009, 153), mixed methods approach is advantageous in (i) serving different purposes of a study, (ii) multiplying the likelihood of unanticipated outcomes, and (iii) minimizing the „method effect and making the conclusions more valid and reliable („method effect always exists because each research method has its pros and cons and all the time influences the research results). In more details, the grounds for choosing mixed methods research can be:

- Triangulation: Mixed data collection methods to corroborate research findings within a study
- Facilitation: one data collection method will facilitate research using another data collection method in a study
- Complementarily: different aspects of an investigation will be studied by using multiple research methods
- Generality: a source of data will provide the main study context and quantitative analysis give sense of relative importance
- Aid interpretation: qualitative data explain relationships of quantitative variables
- Study different aspects: quantitative discovers macro aspects while qualitative discovers micro ones.
- Solving a puzzle: another data collection method is used because the initial method provide insufficient findings for analysis

(see Saunders, Lewis & Thornhill 2009, 154)

In the practical case of this thesis study, qualitative and quantitative methods are indeed employed to tackle different aspects of the research problem. Whereas the qualitative method is used to gain understanding of the actual practices inside the bank and the transaction office, the quantitative

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one has served a smaller purpose of figuring more about the credit staffs (their characteristics like education, skills, experience, responsibilities, etc.). Nevertheless, the outcomes of each method do not separate from each other but together facilitate the research findings analysis, which means the triangulation benefit is still grasped. Triangulation can also be perceived as cross-checking or cross examination of results of the two methods. If the readers have a look at the content of the interview and questionnaire in appendix 3 and 4, they can realize several questions in the interview have been repeated in the questionnaire. For instance, while the interview asks about the types of risk management policies and their elements, the questionnaire seeks for the employees assessment of their own understanding of the policies by a score scale from 1-5. Later in the analysis, these findings will be corroborated to find out the employees know the bank has those policies but their true knowledge of the policies details is not as good as expected. Hence, by cross examination, this thesis will generate more reliable outcomes.

Another important reason for utilizing multiple methods in this thesis is to mitigate the method effect. The interview is conducted with 3 credit staffs at the same time and is face to face. To some extent, the researcher's comments, tone or non-verbal behaviors or one respondent's answers can influence the other's responses. To reduce these negative effects, the questionnaire was more personal and it protected the Respondents privacy as well as enables their honesty in answering to the questions.

More explanation of the two collection methods will be in the following parts.

3.2.1. Qualitative Methods

Qualitative in research means descriptive, non-numerical, non-quantified way to collect and interpret data. "With a qualitative investigation the researcher observes a great deal and any results are mostly descriptive in nature rather than sets of numerical data." (White 2003, 28)

A number of qualitative techniques have been developed from time to time, representative of which are interviews, focus groups, and observations. Interview, more specifically in-depth interview (IDI), is the technique that collects information for this study. As defined by the business dictionary, an in-depth or face-to-face interview is "conducted usually on one to one basis, an IDI is designed to reveal the underlying motives of the interviewee's attitudes, behavior and perceptions." (Business Dictionary 2010) Face-to-face interview allows much interaction between the interviewer and interviewee. In this type of interview, the researcher often has a pre-determined

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set of questions beforehand but flexibility is a must, which means the researcher will adapt the questions to the practical situation. He can add more questions, change the questions a bit or re-order them, etc. Like other qualitative methods, the interview aims at giving a complete, detailed description, gaining understanding and providing insights into the research problem. Saunders, Lewis and Thornhill (2009, 324) concludes that an interview is the most suitable approach if (i) the number of questions is large, (ii) the questions are complex and open-ended, and (iii) the order and logic of questioning need to be varied.

Focus groups and observations obviously are inapplicable in this research because the population is so small (only three credit staffs in the unit). For this thesis, a face-to-face interview with two employees (one relationship manager and one credit assessment officer) in the credit unit of the transaction office was carried out. The researcher prepared 15 questions, which is definitely not a small number. The questions seek to dig deeply into the practices inside the bank and are very flexible (see Appendix 3). Thus, in-depth interview is the most appropriate method. The interview went quite well and lasted for about 1 hour. Basically 15 questions were fully answered. The order of the questions was changed a little to adapt to the flow of the conversation.

Qualitative techniques are extremely useful for exploratory research – a research that has an unfamiliar problem – because they help to establish hypotheses for analysis purpose (Ghauri & Gronhaug 2010, 106). However, it does not mean a descriptive and causal research cannot employ these techniques. This thesis is an example of descriptive and causal research. The research problem is fully understood and the thesis aim is to describe risk management framework in the targeted bank as well as to comment on the effectiveness of the bank's risk management implementation. Nevertheless, qualitative research method here in this case still proves to be of great assistance in several ways:

- Gathering details of the subject bank's credit policies: how the policies look like and if they contain fundamental information.
- Discovering how credit unit in the transaction office work and whether its operation complies with the policies
- Understanding how well the transaction office is performing based on comparing historical data and figures from year to year
- Detecting the credit employees understanding of and attitudes towards the bank's formal policies.

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3.2.2. Quantitative Methods

Unlike qualitative methods in which the researcher uses non-quantification way to interpret the collected data, quantitative methods mean the assessment of the research results is the product of a series of mathematical and statistical calculations and presentation (White 2003, 24). Very often statistical analysis is used to test some hypotheses. For instance, people who smoke possess a higher threat of getting cancer, is it true? This can be evaluated if the researcher, for example, has the number of smoking and non-smoking people getting cancer in the last five years at hand and knows basic knowledge of mathematics or statistics.

A typical quantitative method is survey, which can be conducted either through an interview (like qualitative interview) or through a questionnaire. A survey only fulfills its job when the researcher carefully chooses the sample which is representative of the population to reduce bias and ensure reliability and validity. (White 2003, 49)

For this thesis, the population in the development bank is high because the credit unit and risk management department have more than 20 staffs. Hence, the use of purposive random sampling technique is necessary. For the purpose of gaining understanding of the employees skills and personal opinions on the banks' policies, a questionnaire is designed. As we all know, a questionnaire is a series of questions, frequently in an established order, that give respondents a number of fixed-response alternatives to choose for their answers (White 2003, 50).

A questionnaire gives the researcher more freedom to choose the way he approaches the target respondents. If for in-depth interviews it should be face-to-face, for a quantitative interview, the researcher can conduct it through telephone or mail. Questionnaire in general saves time and money. Instead of interviewing each and every person, a large number of people can fill in the questionnaire at the same time. (Saunders, Lewis & Thornhill 2009, 362-366)

In the investigation for this thesis, the questionnaire was handed out to the respondents by hand so the threat of getting low response rate was totally eliminated. The respondents were ten credit staffs that I had mentioned above, three of who also participated in the interview earlier. The questionnaire consists of 13 questions in a structured order. The first four questions aim at getting to know about the credit person. The other eight examines his/her perspective of the relationship between their job and credit risk management as well as his/her role in making any changes to the bank policies. This questionnaire actually facilitates understanding of credit staff's skills and

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know-how, which plays an important role in determining the quality of credit risk management practices.

3.3. VALIDITY AND RELIABILITY

Validity and reliability of a research is a key determinant of the true value of this research in the practical working life. While reliability is concerned with the result consistency (Proctor 2005, 208; Saunders, Lewis & Thornhill 2009, 156), validity is about the honest nature of the research conclusion and applicability (Ghauri & Gronhaug 2010, 65). Certain obstacles, either subjective or objective, may hinder a research study's reliability or validity.

The four threats to reliability are:

- Participant error: the research conducted in different times may generate different results.
- Participant bias: the participant (or respondent) may not be honest because of some fears
- Observer error: researchers have different ways to carry out the research
- Observer bias: researcher A interprets the findings differently from researcher B

(Saunders, Lewis & Thornhill 2009, 156-157)

Hindrances to validity can be history (external events occurring at the same time of the research may have an impact on the response), testing (the research in a way or another affect the respondents), maturation (sudden changes during the research period), mortality (participants drop out of the studies) and selection bias (subjects are not chosen randomly). (Saunders, Lewis & Thornhill 2009, 157; Ghauri & Gronhaug 2010, 66)

Reflecting those impediments on this research, the thesis is proved to be fairly reliable and valid. On the side of the research participants, they are interviewed at the time when there are no customers so that they feel more relaxed at answering the questions. Also, the interviewees are voluntarily willing to participate in the study so the participant bias should be eliminated. On the researcher's side, the content and the analysis of the interview's and questionnaire's results are based closely on the theories presented in the theoretical and research methodology part. All the recorded findings are fair and truthful. The researcher believes that other observers will have the same conclusions after conducting the research on this transaction office at the same time.

History, maturation, mortality and selection bias effects were not existent in the research. The investigated transaction office has only three credit staffs and all of them have taken part in the study. The testing effect, however, does exist because this research investigates directly the

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activities of the research participants. But its negative impact has been minimized by the researcher when she ensures the interviewees that this is anonymous and secret information.

Besides, the benefits of using both qualitative and quantitative methods (argued earlier) can also reinforce the validity and reliability. Furthermore, the research analysis takes into consideration not only findings from the primary data but a lot of secondary data have also been gathered and interpreted. The secondary data (annual reports, policies, business results) are officially published by well-known sources and cannot be manipulated by the researcher or the respondents.

To summarize, most of the validity and reliability impediments have been solved and therefore, this research is believed to remain valid and reliable.

3.4. LIMITATIONS

Limitations are what impede the perfection of this thesis study. First and foremost, due to the data secrecy and overprotection culture in the Rwanda banking sector business, the author is not allowed to reveal the banks and the credit risk offices' names in the thesis.

Finally, although the thesis mainly concerns with the transaction office, an interview with someone at the management level (e.g. from risk management department) would better facilitate the research findings and assessment.

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CHAPTER FOUR: DATA INTERPRETATION AND FINDINGS

This section will completely deal with practical application of the literature and analysis of the research findings in order to solve the research problem: describe credit risk management implementation in a Rwanda development bank and assess the effectiveness. A small introduction of Rwandan banking sector and credit market will come first. Following is an overview of the investigated bank. Then most importantly, an insight into the credit risk management practices and evaluation of their execution will conclude the chapter.

4.1. Overview of the Rwandan Banking Sector & Credit Market

Rwanda is an emerging economy that has made considerable progress since the genocide of 1994(MINICOFIN Report 2010). Rwanda's transition from plan to market economy has had significant positive impacts on every business sector and the banking sector did not stay out of the trend. The number of banks has grown all the time along with an increasing number of banking products and services. No matter how numerous and modern those offers are, credit product still lies at heart of any bank's product portfolio. The credit market in Rwanda has its own characteristics, which will be discussed right after some details about the country's banking sector.

4.1.1. Rwanda Banking Sector

The Rwanda banking sector was remarked by two types of banking system. Type 1 is the National Bank of Rwanda as the central bank, the regulator and the supervisor. Type 2 is the operating system that includes the banks in the Rwanda market. In Rwanda, banks are classified into 3 groups: Development Bank, Commercial banks and Cooperative banks.

National Bank of Rwanda (NBR) is a key macroeconomic institution in the country. It acts as the central bank and has 3 primary missions:

- Formulate and amend monetary and exchange rate policies
- Frequently inform the general public the state of the economy and stance of the mentioned policies
- License and prudentially supervise banks to ensure the banking system stability
- Issue banknotes and government bonds

Regarding the third mission, NBR's supervision is implemented through issued legislations concerning banking practices and regular inspection of how banks comply with those legislations.

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It is vital that NBR staffs are highly skilled in auditing and commercial risk management together with possess good understanding of fundamental economics.

The Rwanda Development Bank was established through an Act of Parliament in 1967. Its primary mission is to mobilize resources for use in productive investment. As a result of support received from the Rwanda Government and other financing partners significant achievements have been achieved over the years. However, the war and the genocide of 1994 inflicted very heavy losses on the Bank and adversely affected these achievements. In addition the recent changes in the banking and financial sector of Rwanda have added to the upheavals caused by the genocide. The need for sustainable growth and poverty alleviation has resulted in new challenges for the Bank, including the need to correct itself and improve its performance.

The Rwanda Development Bank (BRD) is the biggest financier of investment in the country. BRD bridges the development gap that made it very difficult or impossible to access loans from commercial financial institutions. Commercial banks emerge after the liberalization of the financial sector. There are 8 Commercial banks at the moment.

Despite the great improvement recently, the Rwanda banking sector is still perceived as weak and inefficient by global standards. The fact is that only 10% of the population, most of who live in big cities, uses banking services is quite sad for a fast-growing economy like Rwanda. The lengthy process of approving a new product by central bank is also a big hurdle to the development of the industry. A lot of reforms are still on the way and hopefully will positively change the banking sector face in the future (BNR report 2010).

4.1.2. Rwandan Credit Market

Everyone who wants to study Rwanda’s credit situation should be able to understand the following features of the market:

1. Market penetration
2. Main client and product groups
3. Risks inherent in the credit market

- Irrational division of market
- Poor lending practices and lack of credit information
- Lack of credit data
- High quantity of non-performing loans

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4.1.2.1. Market penetration

Multiple sources have quoted the penetration proportion of banking services in Rwanda. According to BRD documentation (2011), it is about 10% despite the fact that the potential market size cans effectively double that rate.

Certain reasons can explain for this sad fact. First, banks still have poor infrastructure and distribution channels in the country. Most banking institutions focus on the urban areas only. Second, banks are too cautious and reluctant to lend to individuals and small businesses because they are afraid of taking risks. Third, a large number of Rwandan people still prefer informal lending through non-bank channels such as: family, relatives, friends, loan sharks. Informal lending is faster, easier and more convenient. Sometimes, the very strict requirements from banks pose a difficulty to borrowers and they have no other choice but use informal financing sources.

4.1.2.2. Main credit client and product groups

Segmentation is essential in all type of business because it helps to better anticipate customer needs and serve them effectively. Banks have different ways to divide their client portfolio into segments. Basically there are 3 categories: corporate (big organizations), SMEs (small and medium sized enterprises) and consumers (individual customers). Especially for

Foreign banks may have another classification way, which distinguish foreign and domestic companies.

Fundamentally the corporate and SMEs segments are both involved in wholesale banking and commercial lending and therefore, share the same types of products: credit loans, property loans and project finance.

4.1.2.3. Threats in the credit market

Rwanda credit market is fairly risky and poses a lot of threats to the credit institutions. The primary problems are irrational division of market, poor lending practices, lack of credit data and high quantity of non-performing loans.

Irrational division of market

In the banking sector, there is still intangible distinction among the markets of Commercial Banks, Development Banks and cooperative banks. Generally, development banks are for large corporate and state-owned sector. Commercial Banks are said to show discrimination towards private businesses when they can only offer unsecured loans to firms with at least two consecutive years

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of profits (BNR Magazine 2009). Commercial Banks are geared towards SMEs and personal customers because "they are largely locked out of the commercial lending market due to lack of capital" (BNR magazine 2009).

Poor lending practices

People say that business in Rwanda is relationship-based. Even in banking, lending decisions are still greatly influenced by relationships rather than by borrowers" financial health. Professional credit analysis is still on the way of adjustment and perfection. Sometimes profit pressure urges the bank to lend without proper assessment of the credibility of the borrowers. 50% of short term deposits are used to offer medium and long-term loans. This is a bit troublesome. According to BRD's risk manager In addition, many SMEs are now owners by people in Commercial Banks and therefore lending to the companies within their group is somehow easier with minor concern about the riskiness.

Lack of credit data

There is one credit information center under supervision of the NBR. However this bureau only collects the credit history of very large lenders. The banks are reluctant to release data of their customers

High quantity of non-performing loans (NPLs)

Non-performing loans are the loans that the interest is overdue and the principal cannot be fully collected. Banks in this case will collect the collaterals used to secure the loans. According to international standards, NPLs accounted for 15-20% of outstanding loans in the state-owned sector. Luckily, Commercial Banks are exercising better practices of credit risk management and experience a lower rate.

4.2. RWANDA DEVELOPMENT BANK CREDIT POLICY

4.2.1. Background

The Rwandan Development Bank (BRD) is a development financial Institution created by law in August 1967. Its vision, "to be the most profitable bank at the service of poverty eradication" gives it a unique challenge to aggressively go after profitable projects that add value to the economy but at the same time minimize the credit risk impact on its portfolio and assets.

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In line with its strategic plan adopted in May 2005, BRD intervenes in the following priority sectors, identified as a having high impact on the development of the Rwandan Economy:

- Agriculture and Livestock
- Exports
- Tourism
- Health
- Education
- Industries
- Water and Energy
- ICT

With the implantation of the strategic plan, BRD has seen a tremendous growth of its portfolio with, at the same time, the increase of its exposure to credit risks inherent to project financing operations. The performance of the Bank will therefore depend on its ability to take and manage credit risks responsibly.

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DIAGRAM 1: ORGANIZATION CHART -CREDIT & RISK MANAGEMENT

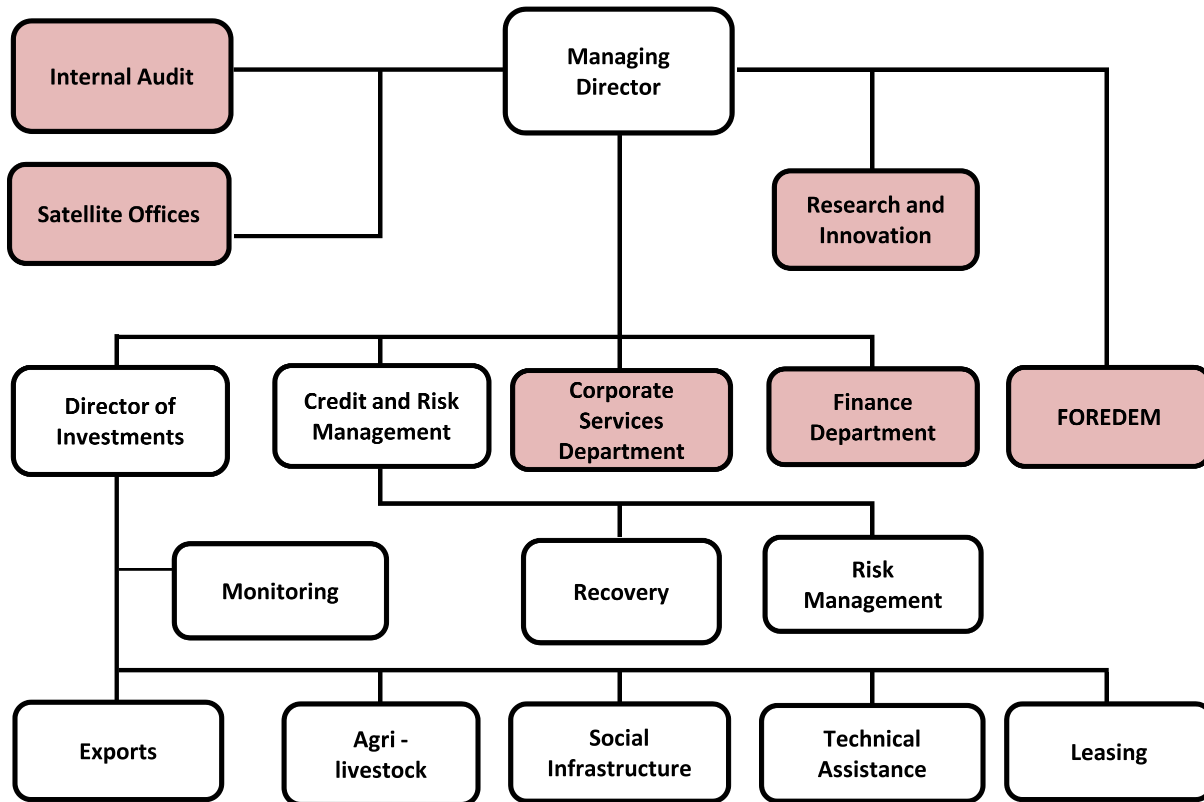

Figure 2 : Organisation chart- credit and risk management, BRD Documentation (2010)

4.2.2 Introduction

The BRD was established through an Act of Parliament in 1967. Its primary mission is to mobilize resources for use in productive investment. As a result of support received from the Rwanda Government and other financing partners significant achievements have been achieved over the years. However, the war and the genocide of 1994 inflicted very heavy losses on the Bank and adversely affected these achievements. In addition the recent changes in the banking and financial sector of Rwanda have added to the upheavals caused by the genocide. The need for sustainable growth and poverty alleviation has resulted in new challenges for the Bank, including the need to correct itself and improve its performance.

The BRD conducts development banking business in Rwanda, resulting in credit risk mainly attributable to the loan portfolio. In addition, the bank is also exposed to liquidity and operational

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risks that result from the day to day operations as well as numerous other risks. This calls for an integrated approach to risk identification, measurement, monitoring and control.

As a development institution the BRD is neither averse to risk taking nor inherent business risk. The business of development banking is conducted within an environment of complex risks. Whereas the philosophy of risk management is well established within the Bank, the idea is to manage risk pro-actively to ensure that all risk profiles fall within acceptable norms. The BRD risk philosophy is to manage risk pro-actively and ensure that all risk profiles fall within acceptable norms.

4.2.3Vision, mission and objectives

The Government of Rwanda mandated BRD to become the **Financier** of Rwanda's development. BRD's mandate is as follows:

"To become the Government of Rwanda's investment arm by financing the nation's development objectives with a focus on the priority sectors of the economy."

Its vision is to become the **first stop for all long-term investments** into Rwanda's key sectors and to serve as the **"prime pump"** for pure private sector viable investments.

The main objectives of the Bank include:

- Provide **development finance** for priority economic sectors as defined by government;
- **Provide equity investments** to stimulate the development of new firms able to participate in Rwanda's economic development;
- Promote **exports** to reverse the trade deficit and increase Rwanda's ability to invest in its development;
- Refinance **microfinance institutions and professional associations** (offering proximity services excluded from financial system but involved in priority sectors); and,
- **Facilitate technical assistance** to financed companies, microfinance associations and other stakeholders to enhance sustainability.

To maximize its impact, the following priorities have been identified:

1. Mobilize financial resources to drive Rwanda's development
2. Develop special financing programs for key export sectors
3. Foster the development of Microfinance services

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4. Expand BRD's product portfolio to meet customer needs
5. Engage and support key customers and partners
6. Increase BRD's effectiveness through reconfiguration and training

The adoption of this risk management framework is an effective enabler for BRD to address the requirements arising from its continued growth, market challenges, regulatory requirements and ongoing developments in best practice. BRD Documentation (2010)

4.2.4 Risk and Credit Management Department

The Credit and Risk Management Department is responsible for the credit recovery and the risk management functions at the bank. Its responsibilities are:

- Ensure development of risk management framework, policies and strategies;
- Recommend risk management framework, policies and strategies for board approval
- Implement risk policies and strategies;
- Ensure development of risk management procedures and standards;
- Implement an effective internal control system;
- Confirm the implementation of controls that ensure adherence to established risk limits;
- Ensure risk limit breeches are reported and explained to management;
- Ensure internal audit review and assess the adequacy of controls and compliance with limits and procedures;
- Ensure the development of management information systems that make certain that risks are adequately reported,
- To prepare documents for the risk committee meetings and hold their secretariat,
- To coordinate all activities of credit recovery for loans in class 3, 4 and 5.

It comprises the following units:

- The risk management Unit.
- The credit recovery unit.

4.3. Credit Risk Management at the Development Bank

The aim of this 4.3 Section is to describe the credit risk management procedures in the subject bank office as well as to analyze those procedures, assess the effectiveness and have an overview of loan. This analysis is done through secondary data collected on the official website of the subject

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bank, from the bank's intranet and from the primary data acquired through the personal interviews of 3 head of departments and questionnaires with seven employees in the credit risk management of the development bank.

4.3.1. Overview of Risk Management at the development Bank

As a development institution the BRD is neither averse to risk taking nor inherent business risk. The business of development banking is conducted within an environment of complex risks. Whereas the philosophy of risk management is well established within the Bank, the idea is to manage risk pro-actively to ensure that all risk profiles fall within acceptable norms. The BRD risk philosophy is to manage risk pro-actively and ensure that all risk profiles fall within acceptable norms.

The adoption of this risk management framework is an effective enabler for BRD to address the requirements arising from its continued growth, market challenges, regulatory requirements and ongoing developments in best practice.

risk management and control has emerged to be one independent division at the bank with five units: Risk Management, Asset Valuation, Legal and Compliance, Internal Control, and Debt Collection. All these five units have gained certain achievements and contributed to the stable operation of the bank. According to the bank, these five units play a much more active role in the bank's overall operation. "BRD Documentation (2010)"

4.3.2. Analysis of loan defaults and credit policies

Loans may be for a minimum of Rwf10m while the maximum can't exceed 25% of the Bank's net worth. The loan facilities may be denominated in US$, Euro or RWf depending on customer's income stream. However, in a case of a foreign denominated loan, the customer will have to bear the exchange risks associated to related operations.

According to Operational Risk manager, the causes of defaults are due to financing diverted, personal contribution insufficient leading to heavy debts. Another cause of defaults is due to evaluation highly optimistic related in cash flows and bad management of borrowers (especially cooperatives).

Regulatory policies play a fairly important role in reducing risks and enhancing risk management operation. In BRD credit policies is updated frequently at least once every two years.

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The credit process starts when a customer submits an application for funding to the bank or with the identification of an opportunity of doing new business. The process is divided into several sub-processes including initial screening, credit appraisal, risk review, negotiation, documentation, credit administration and monitoring.

Credit Personnel and Organization

There are 7 credit employees. Below is the summary of 3 selected staff's answers to the questionnaire:

Summary of Respondents Answers to the Questionnaire

	Operational risk Manager	Credit assessment	Internal controller
Education	Bachelor in business administration	Master's in finance	Masters in economics
Experience in credit activities	Over 5 years	1-5 years	Over 5 years
Understanding of risk management policies	Understand clearly	Understand clearly	Quite understand
Opinion on the importance of credit risk management	Very important	Very important	Very important
Frequency of credit related staff training	Over 6 months	Over 6 months	Over 6 months
Self evaluation of credit risk effectiveness	Effective	Effective	Quite effective
Contribution to changes in policies	Regularly	Regularly	Seldom
Analysis concerning loan defaults and credit policies	Financing diverted Personal contribution Evaluation highly optimistic, update credit policies frequently	Bad management of project e.g. borrowers,	Updated credit policies at least once every two years

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Notification of the changes of a new policies	Regularly	Regularly	Sometimes

Table 2. Summary of Respondents Answers to the Questionnaire

Several conclusions can be drawn from the answers of the respondents:

- This is shown that most staffs are experienced in the field. Most of the staffs know the importance of credit risk management and the close association between their job and credit risk management, only one has a thorough understanding of the risk management policies towards credit products and services. The others assure that all the documentation requirements and reporting procedures are strictly followed but still, they are skeptical about their knowledge of the potential risks arising and the associated policies to address those risks.
- It is a good thing that the staff training is conducted in a reasonable fixed time interval. Two of the credit staffs agree that the effectiveness of the training sessions is so and the other even feels they are not really of great help.
- It seems that in this bank a centralized management approach is in use because all three respondents expressed that they hardly contribute to the policy changes. Staffs would like to be given opportunities to speak up their opinions.
- The three respondents assure that the analysis concerning loans defaults and credit policies must be caused by financing diverted, personal contribution insufficient leading to heavy debt, evaluation highly optimistic in cash flows and bad management of project. Therefore they must be a frequently update credit policies at least once every two years.
- In case there are new policies or adjustments to the existing regulations, notice to the employees seems to come on time always.

According to the respondents, a brief summary should be taken to show that most respondents know the importance of credit risk management policies but still the bank has to include them in taking decision concerning credit risk policies. In the major causes of loan default currently facing the bank is a diversion of loans to personal use instead of project planned, therefore clients fail to repay the loan, clients dishonest is also a major causes of loan default, this is a result of information asymmetry on development bank where is optimistic in credit analysis to qualify the client for credit worthiness.

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The bank has an effective credit risk management implementation but still there is a requirement for staff training to acquire more skills in internal control policies and credit risk management. According to respondents, the bank should be more careful in monitoring and controlling credit risk. It noted that the banks utilize the tools of risk management very considerably to detect, monitor and control the loan default. Several responses to the questionnaires show that the formulated credit policy is adequately implemented; therefore the respondents have a clear understanding of the guideline goals and objective of the bank's credit policy but have a littati the policy.

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4.3.3 Credit Appraisal and Risk Review

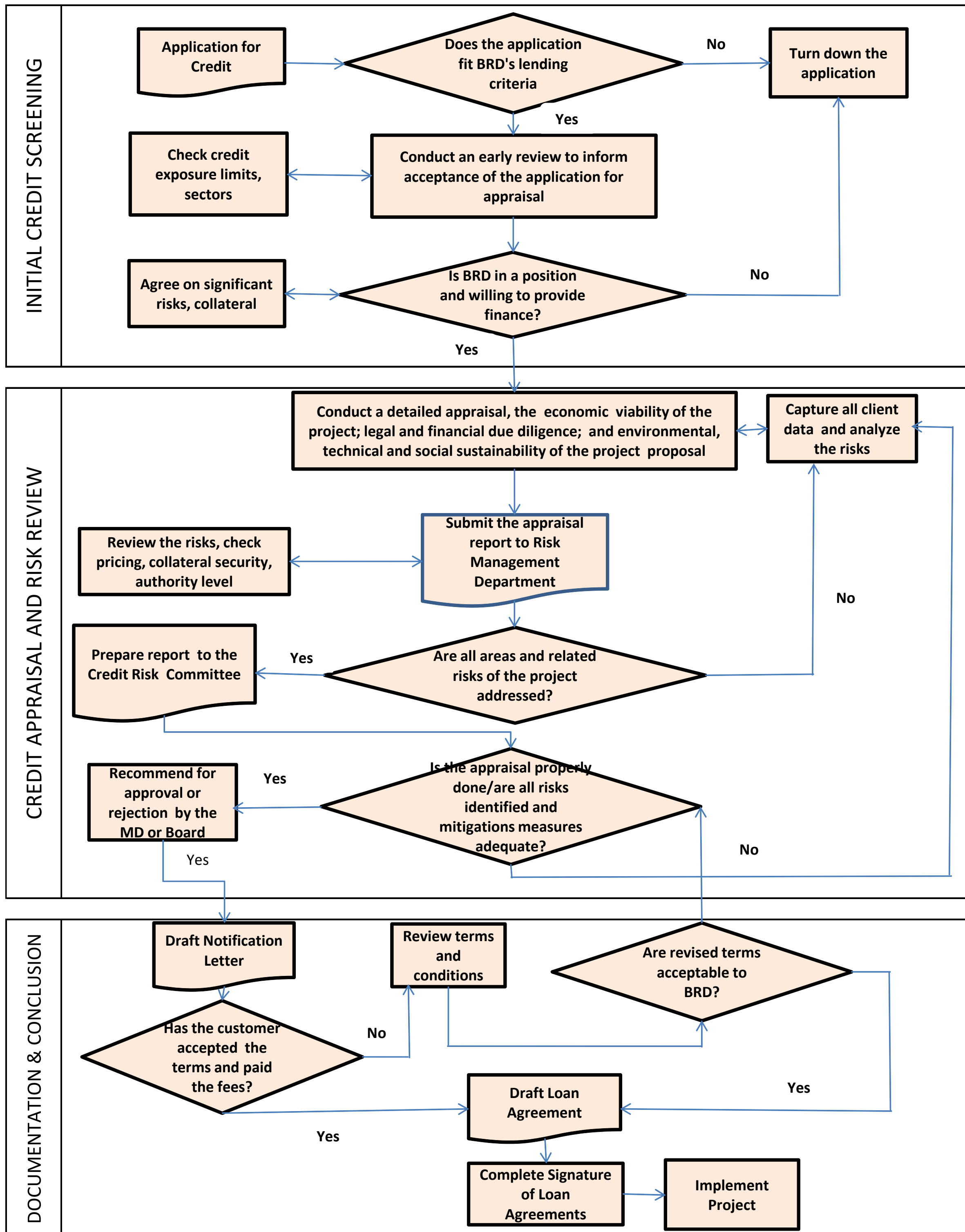

Figure 3 : Credit appraisal and risk review, BRD documentation (2010)

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The appraisal process starts in the investment/FOREDEM department. The department assesses proposals from customers and performs all the required analysis (economic, financial, market,..) to help in credit granting decision. The analysis continues with the Risk Management department which does a deeper identification of credit risks and proposes mitigations measures which are submitted to the Credit Risk Committee.

After appraisal of the project is completed it is handed over the disbursement Unit and the Monitoring Unit for implementation. The Portfolio Unit looks after the performing loans and produces monthly reports for the Central Bank on the status of the project in terms of arrears and provisions made. The Recovery Unit takes over when arrears accumulate go beyond three months and become nonperforming assets and is responsible for their monitoring.

According to risk Director Manager; Credit Appraisal commences when all the required documentation is received by the bank and ends when legal agreements are signed. Credit appraisal involves the examining all risks related to the project and proposing ways to minimize or mitigate them.

Credit appraisal looks at the project in detail including the following:

- Rational for BRD’s intervention
- Analysing the character of the promoters;
- Due diligence on the legal status and the financial and institutional capabilities of the borrower (borrower appraisal)
- The management ability of the proposed managers
- Assessment of the economic environment and economic returns of the project (especially in case of big projects)
- Analysis of the market’ project
- Financial, social, technical and environmental considerations as structural sustainability to the project in the medium and long term
- Due diligence on willingness to pay and the legal status of the borrowing entity
- Identification of the major risks facing the project and proposal of mitigation measures.

The above assessments are conducted by investment analysts with specialist inputs from legal and financial advisors.

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On completion, the appraisal document is submitted to the Risk Department for Credit risk review and Pricing. Credit Risk analysts present an objective opinion on whether the risks are well assessed and proper mitigations measures are proposed so as to cover against all the risks.

For loans below Rwf 40 million the dossier will be approved by the Head of the Risk Department Director, without passing through the Credit and Risk Committee.

For loans between Rwf 40 million and 400 million, the approval will be done by the Managing Director on the basis of the analysis and recommendations from the Credit and Risk Committee.

All the loans of 400 million and above will pass through the credit and Risk Committee for analysis and review, before they are submitted by the Managing Director to the Board of Directors for approval.

Table: APPROVAL AUTHORITY LEVELS

	Credit and Risk Committee	**Authority Level**		
Credit Amount		**Board of Directors**	**Managing Director**	**Risk Director**
< Rwf 40m				X
>= Rwf 40m-< 400m	X		X	
>=Rwf170m-<400m				
> Rwf 400m	X	X		

Table 3: BRD documentation

- The Board must give authorization to any changes in the authority levels.
- The authority limits are approved by the board each individual, they are not attached to and are not transferable.

Negotiation and Documentation

The customer is advised of the BRD decision in a letter of notification. If the project is approved the notification letter will set out the terms and conditions of the of the loan including the interest rate, loan period, conditions precedent to signing the loan and to disbursement, customers contribution and implementation schedule.

If the customer accepts the terms and conditions and pays the facility fees, a loan agreement is signed with the bank and project implementation commences as soon as all conditions precedent to disbursement are fulfilled.

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If the terms and conditions are not accepted, they are re-negociated and a supplementary dossier will be submitted to the approving authority for approval of the re-negotiated terms and conditions. "BRD Documentation (2010)".

4.3.4. Regulatory Credit-Related Policies

Regulatory policies play a fairly important role in reducing risks and enhancing risk management operation. The National Bank of Rwanda is trying to issue policies that require the banks to direct their operations more and more closely to international standards. Indeed, Rwandese bank are doing their best in that direction. The NBR's formal legal documents include: Law, Circular, Directive, Decision, Notice, Guideline, etc. For a central bank like NBR, there are numerous supervision aspects of which it is in charge. Regarding credit activity, basically we have provision on lending by credit institutions, requirements on prudential ratios that the banks need to maintain, regulations on the debts classification and provisions against credit loss. Besides, the NBR has regularly updated decisions or guidelines based on the practical situation in the market (NBR Guidelines 2008). For example, adjustment on the required reserve ratio, regulations on foreign currency lending, directive on lending to certain industries or business sectors, etc., just to name some. (NBR 2008) For the scope of this thesis, there is not enough time to mention all policies but only to analyze the most basic ones.

4.3.4.1. Provision on lending by credit institutions

The Rwandan central bank issued the decision on the provision lending by credit institutions to clients and also revised the regulations on lending limits.

The fundamental aim of these legislations is to govern Rwandan francs and foreign currency loans extended by credit institutions to their clients. Among all the articles, several points should really get a remark on.

Definition of credit limit:

The maximum amount of a loan which is maintained within a fixed period as agreed in the credit contract between a credit institution and the client.

Loan interest rate:

This interest is agreed between the credit maker and its customer in accordance with regulations of the NBR. Importantly, the interest rate for overdue debts must be fixed by the credit institution and stated in the credit contract.

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Lending Decision:

The NBR demand credit institutions to build a process of approving loans and make clear personal or joint responsibility in the stages of loan assessment or approval.

It is vital that the loan maker consider the "feasibility and effectiveness of the investment project or plan for production, business and services or the investment project or plan for servicing living conditions and the capacity of the client to repay the loan".

Credit limits:

Fundamentally, the credit institution decides the limits on its own, based on the borrowing requirements of clients and their ability to repay and on its available capital source

To prevent inadequate lending practices, a credit institution is required not to provide loans to: (a) its affiliated companies being securities trading businesses; (b) members of the board of management or inspection committee, the general director or deputy general director of the credit institution; (c) staff of the credit institution who carry out loan evaluation and approval; (d) parents, spouses or children of the members of the board of management or inspection committee, the general director or deputy general director. The final group of unpermitted clients is optional for the credit institutions. (NBR Guideline 2001).

NBR specify very clearly the lending limits and other important provisions on an adequate loan process. They will act as useful guidelines for the credit providers in order to improve the soundness of the lending decisions.

4.3.5. Internal Credit Policies

As explained clearly in the theoretical framework, along with external policies published by the central bank, it is vital that a bank develops and maintains its own legal documents that are effective throughout the group. Also, more importantly, the bank in reality must rigorously adhere its operation to the clauses and articles in those documents.

Important internal policies directly related to credit risk and credit risk management are:

- Lending procedures
- Loan supervision regulation
- Collateral guidance
- Decision on approval limits
- Internal credit rating system

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4.3.5.1 Procedures in supplying credit

Conditions precedent is a tool used to formalise preconditions that must be met by the client prior to disbursement of funds in order to guard against certain causes of risk.

The following guidelines shall be followed in using conditions precedent to guard against risks:

i. The conditions precedent shall always be aimed at minimizing the effect of events and or reducing the likelihood of certain events occurring.

ii. The following shall always constitute conditions precedent for any proposal:
   - Security
   - Presentation of certificate of non-indebtedness from Rwanda Revenue Authority and Social Security Fund
   - Payment of service commission
   - Insurance for the security proposed
   - Body insurance for individual customers
   - Continued consistency and validity of information provided to the bank at appraisal of the proposal

iii. Conditions precedent should never be waived under normal circumstances. Any requests for waiving the conditions shall be approved by the Managing Director under exceptional circumstances and after the re-evaluation of the impact on the risk profile of the borrower.

iv. Conditions precedent shall be enforced by the Disbursement Unit in conjunction with the Legal unit before the loan is disbursed.

If the conditions precedents are not met within the 6 months following the notification of the approval to the client, the disbursement phase will be stopped until the credit is reassessed.BNR Guidelines (2008)

4.3.5.2. Internal Credit Rating System

This is not the first time the internal credit rating system is mentioned in this thesis. The internal credit rating system is a sophisticated credit risk measurement tool used in lending organizations worldwide. The investigated bank is heading close to international standards and developing an internal credit rating system is an important step in the process. Since it is very new, a number of documents have been published internally to all employees at the bank.

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First borrowers are divided into four groups: financial institutions, corporates, enterprises and individuals. For each group, a certain measurement method is applied. Basically, the credit officer gives grades to each financial or non-financial criterion and the final score is the sum of all given grades. The final scores will group the borrowers into categories (descending order):

- Standard: AAA, AA, A
- Specially mentioned: BBB, BB, B
- Sub-standard: CCC, CC
- Doubtful: C
- Loss: D.

The calculations are clarified in BRD Documentation. The criteria used for grading are listed carefully for each group in chapter. In the four big groups, we have also have sub-groups. For instance, financial institutions include: commercial banks, securities firms, other financial service providers. Corporate are first classified by the business sectors (20), and then by the company sizes (4). The Internal control unit will be responsible for maintaining a complete rating list of all existing customers. Every month the member offices have to send a file containing the newest customer ratings (latest 5 first days of the following month).

Responsibilities of four bodies (lending units, internal control, risk management department, and IT department) associated to the internal credit rating system are also specified.

The policies on the internal credit rating system seem to be the most detailed with a very clear and understandable structure. These guidelines have formed a firm basis for the debt classification and loan loss provision at the bank.

4.3.6. Risk management framework

The risk management framework consists in strategy, process, infrastructure and environment which help business to make intelligent/well-informed risk-taking decisions prior to committing limited resources, and in monitoring the outcomes of these decisions.

The BRD's risk management framework will allow the institution to:

- ensure the identification of all significant risks faced by the organization;
- develop consistent risk measures and proper management controls;
- balance the infrastructure aspects of risk management, such as roles, responsibilities, accountabilities, policies, methodologies, controls and information tools with the

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more qualitative aspects of risk management such as philosophy, culture, training, awareness and appropriate behavioral reinforcements.

Process

As a development bank, the BRD is neither averse to risk taking nor inherent business risk (risk neutral). The business of development banking is conducted within an environment of complex risks. Whereas the philosophy of risk management is well established within the Bank, the idea is to manage risk pro-actively to ensure that all risk profiles fall within acceptable norms.

The risk management framework provides the basis for identifying all sources of risk exposure. A structured approach is implemented to manage different risks through the following process:

a) Identification of the risks: BRD needs to know precisely and completely which risks it is exposed to, which businesses these risks arise from and when they arise;
b) BRD will be as objective as possible in quantifying them accurately and timely;
c) The value of these risks and their relative importance to the Bank will be monitored closely in line with the bank's changing environment;
d) BRD will manage these risks in order to maximise returns whilst minimising risk within capital constraints;

Finally, in order to ensure that the relationship between capital, risks, and reward is managed within the boundaries of its strategy, BRD will closely control and mitigate these risks.

Infrastructure

To effectively execute the risk management process, the following risk management infrastructure which provides organizational, analytic, and operational and system support will be in place:

- Board of Directors;
- Risk Committees;
- A central and independent risk management department with clearly defined roles;
- Formalized policies and procedures that clearly define and communicate the risk management process;
- Consistent risk measurement methodologies that capture the potential losses, foregone opportunities and risk diversification effects across different risk categories;
- Limit structures that set maximum tolerances in relation to capital and the bank's risk taking philosophy;

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- Comprehensive risk management reports;
- Information technology to satisfy risk information needs throughout the Bank.

Structure

It is therefore structured as follows:

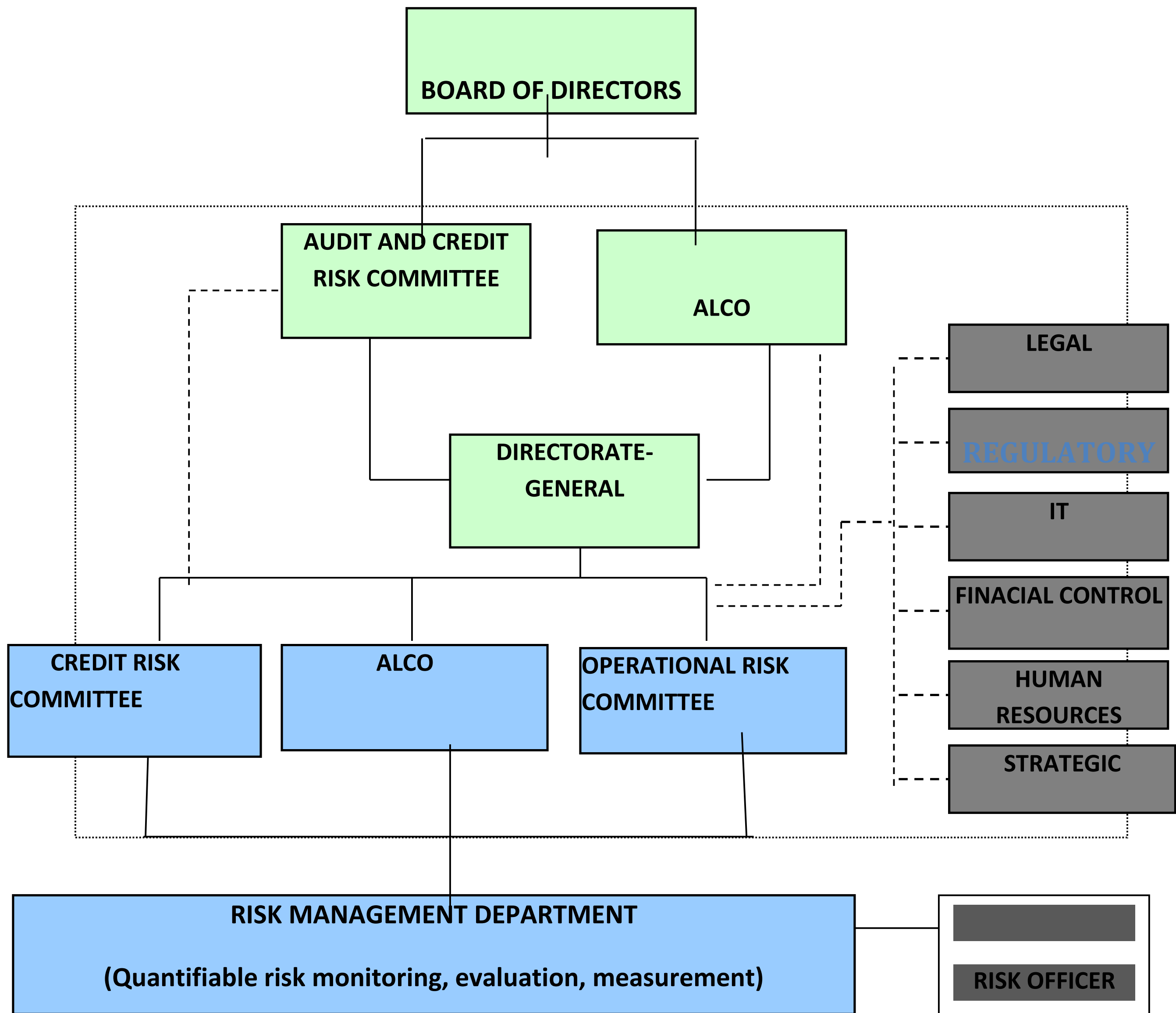

Figure 4 : BRD Structure, BRD Documentation (2010)

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4.3.6 Control Activities

According to controller credit manager, numerous persons stand at the management positions and manage credit activities. The highest should be the Board of Director. Following are the Credit and risk committee, General Director, Risk Management Department at the headquarters, Deputy General Director, etc.

The internal audit and internal control units in the bank conduct inspections at each and every transaction office every third or sixth months or when unusual signals arise (e.g. bad debts increase dramatically). One issue is that most internal control officers or auditors are more or less unprofessional in credit operations.

What they do is mainly to guarantee compliance with the guidelines or procedures and especially proper documentation. Do the credit officers keep a complete set of documents? Are they filed properly? Is any signature missing? They can hardly tell if the credit quality of this loan is declining or this client is having trouble in repaying the interest. The Risk management group consists of different committees that report to the Directorate-General. They have also a communication line with the Board Sub- Committees. These committees have the responsibility of defining the Bank's risk management policies and ensuring that the risk strategy is implemented.

Its responsibilities are:

- Review the adequacy and efficiency of the risk policies, procedures, practices and controls;
- Identify the build up and concentration of risk;
- Develop mitigation strategies to ensure the optimum management of the risk;
- Identify and regularly monitor all key risks and performance indicators to ensure the reliability, accuracy and objectivity of financial and risk information and risk management disclosure;
- Assess the integrity of the risk control systems and ensure that the risk policies and strategies are effectively managed; and;
- Define the nature, role, responsibility and authority of the risk management function within the Bank and outline the scope of risk management work.

The Risk management group consists of the following committees:

- Credit Committee;
- ALCO Committee; and

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- Operational Risk Committee

This group will focus on the overall risk profile of BRD and be responsible for the integration and co-ordination of risk management activities. The Risk management group is also responsible for support and control functions, to ensure the implementation of risk management in all aspects of BRD's business activities. These functions include strategic planning, human resources, regulatory/compliance, legal, and information technology, as well as the risk management function.

4.4 ANALYSIS OF CREDIT RISK MANAGEMENT

4.4.1 The Risk Management Function

The Risk Management Group is supported by a full-time risk management function. The day-to-day responsibility for risk monitoring, risk measurement and risk evaluation rests with a dedicated risk management function reporting to the risk management group. The risk management function is managed by the Risk and Credit Management Department. The Head of this department is a member of the Risk Management Committees.

The role of the Risk Management Function is to implement the risk policies associated specifically with credit, interest rate, liquidity and market risks arising from BRD's activities. It ensures that these are within approved limits, are properly understood and evaluated before transactions are undertaken, are monitored on an on-going basis and are reported in a timely manner to management. The Risk Management Function is independent of the business units whose activities generate risks.

Risk management activities of a bank identify, assess, mitigate and monitor risk. Risk management activities are performed by a department that is independent from other business departments. The Board approves members of Risk Management Committees, representatives of key risk areas of the bank (Investment, finance, credit risk management, information technology, etc). The Board of Directors ensures independent risk oversight and elevates the risk function to an appropriate level of independence.

The Credit and Risk Management Department has the following responsibilities:

- Assist the board of directors in its evaluation of the adequacy and efficiency of the risk policies, procedures, practices and controls applied within that bank in the day-to-day management of its business;

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- Assist the board in the identification of the build up and concentration of risk, including reputational, technological, legal and product risk, to which the bank is exposed;
- Assist the board of directors in developing risk mitigation strategy to ensure that the bank manages the risks in an optimum manner;
- Assist the board of directors in ensuring that a formal risk assessment is undertaken at least annually;
- Assist the board in identifying and regularly monitoring all key risks and key performance indicators to ensure that its decision-making capability and accuracy of its reporting and financial results are maintained at high levels at all times;
- Ensure the establishment of an independent risk management function.

To support the Risk Management Function in its day-to-day activities, Risk Managers are appointed to cover each business unit. The risk managers are responsible for producing and reporting risk management information.

However, as the responsibility for a business unit's risks remains with the head of the business unit, business unit heads need to contribute to the regular review of the appropriateness of risk management policies for their units.

The Risk Managers responsibilities are:

1. Identify, monitor, measure and report all risk exposures in a manner consistent with senior management and Board approved policies and the principles of risk management;
2. Develop, implement and maintain comprehensive risk management policies, procedures and methodologies to manage risks inherent in the lending operations of the bank. Monitor the management of these risks through risk management rules and checklists, identifying risk gaps and designing appropriate control measures;
3. Co-ordinate and assist in the development and implementation of risk management policies, procedures and methodologies in all other areas of the Bank's activities;
4. Communicate policies and methodologies across the Bank;
5. Monitor the implementation of all appropriate risk management principles and report periodically;

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6. Sign-off all project appraisals for compliance with approved policies and ensure that all risk have been identified, quantified and mitigated;
7. Advise senior management on risk mitigation measures and interventions;
8. Enhance the risk culture throughout the Bank and to clients/business partners through risk awareness programmes and training;
9. Review risk taking strategies of the business units;
10. Disseminate risk management information at appropriate level in order to assist in the management of risks and decision-making;
11. Assess and report on the business units and overall Bank's risk profiles;
12. Develop risk-related performance measures and indicators.

BRD Documentation (2010)

4.4.2 Risk Grading

Customers will be classified using a grading model (see the model) according to the risk perceived in the borrower when they first enter the bank. Credit risk rating tools will serve as an integral part of the appraisal to determine the probability that a borrower meet its obligations and will help in pricing of the inherent credit risk and the determination of an appropriate securitization. The credit risk score is calculated trough an appropriate credit rating model. This model considers among other information the following to grade customers.

- Credit worthiness and the integrity of the project promoters
- Quality of records kept
- Cash flow strength
- Operating and Earnings strength
- Balance sheet strength
- The length of time a firm has been in the business
- The customers track record in payment of its debts
- The sector a customer operates in
- Implementation and operating risks
- Quality of management
- Security pledge to the Bank

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Different rating models are applied following the type of client and transactions (see the rating forms):

- Individual companies
- Corporate companies
- Financial and Microfinance institutions
- Cooperatives

Credit risk ratings will be updated periodically based on the latest information made available on the financial and institutional capabilities of the borrower.

4.4.3 Pricing

The interest charged to a customer is function of the base cost of funds, administrative cost, risk margin and profit margin. BRD shall use risk based pricing whereby the risk margin charged customers varies with their risk profiles as reflected by the credit grade.

The grade of the customer will determine the pricing. Customers with lower grades are considered less risky than customers with higher grades. Customers with lower grades shall be well established companies with excellent borrowing records, track record and management. (Refer to the Pricing Policy).

4.4.4 Authority Levels

The approving authorities are determined according the exposure the bank is taking. Lower authorities will approve lower facility amounts and vice versa. Approving authorities are determined by instruction and may change from time to time.

4.4.5 Portfolio/Sector Risk

BRD shall set sector limits for the various sectors and manage risk by spreading risks over a number of sectors. Analysis of sector concentration risk will be conducted and the sector caps will be monitored on quarterly basis and corrective action taken if sector caps are exceeded. The maximum for any sector should be no more than 25% of the total portfolio, although exceptions to this rule may occur at the discretion of management. The Board will be notified of any exceptions and the reason for the breach explained.

The Risk Department will monitor portfolio trends in terms of size and growth rate. Corrective action will be recommended to Management and action taken if required. The aim will always be to minimise risk to the Bank.

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Depending on whether the applicant is a company or individual (sole proprietor), the following documents are required by analysts to process an application:

Requirement	All	Individual	Company
Business Plan	X		
Bank Statement of 3-6 months		X	X
Copy of the Title Deed/Title Documents	X		
Pro forma Invoices	X		
CVs of Directors and Key Management Personnel		X	X
Certificate of Incorporation			X
Memorandum and Articles of Association			X
Bills of Quantities	X		
Copy of Approved Plan	X		
Copy of Valuation Report	X		
Audited/Management Accounts – 2 years	X		
Copy of Trading License			X
Environmental Impact Assessment	X		

Table 4 : Application process, BRD Report (2008)

4.4.6 Related Parties

In accordance with the Central Bank's instruction (see instruction n…), BRD's exposure to any related party or any enterprise in which the bank owns more than 50% of the shares or which it controls directly or indirectly through appointed directors shall not exceed 5% of the bank's total net worth.

The total exposure to related parties shall not exceed 25% of BRD's net worth at any time.

4.4.7 Single Borrower Exposure

The Bank shall not grant or promise to grant any person or related parties an advance, credit or commitment which is more than 25% of its net worth.

4.4.8 Environmental and Social Risks

Environmental and social risk evaluation shall be part of the BRD's normal risk assessment procedures. The Bank will seek to ensure that the environmental effects of the credit granted are assessed and monitored in the planning, implementation and operational stages. All its clients shall comply with all applicable local environmental regulations.

The environmental Policy of the Bank indicates the types of clients or projects for which an Environmental Impact Assessment (EIA) report shall be required. The risk shall be analyzed and

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for projects posing medium to high risk, this will be indicated on the cover of on internal approval documents and mitigation measures undertaken indicated in the proposal.

BRD will seek to finance projects whose activities do not jeopardize the health and safety of their employees and encourage businesses to adopt appropriate Health & Safety measures and comply with local legislative requirements.

BRD recognizes the importance of social issue risks and shall seek to include them in the normal risk assessment process. Customers should only engage in employment of children if education is not disrupted and if they are protected from potential exploitation, moral and physical hazards.

BRD will encourage its customers to pay wages that meet or exceed industry or legal national minima and treat its employees fairly in terms of recruitment, progression, terms & conditions of work, irrespective of gender, race, colour, disability, political opinion, religion or social origin.

4.4.9 Collateral Risk

In the event of default, the bank will look to recover its exposure from collateral, which is a form of security that is transferred to the bank or charged with the bank's right to recover the amount due. Collateral serves as an instrument to mitigate, reduce or transfer risk inherent in lending transactions. Collaterals may be in form of fixed and floating liens, pledge of shares, bank or insurance guarantees and mortgages. Collaterals enhance the quality of the credit portfolio and may influence the pricing.

The following principles shall guide Analysts in determining security adequacy:

Table: Security Risk Coverage Principles

1.Security (% cover of total risk)	75-100%
Amount to be secured	Loan Amount + Interest for 3 yrs
Security coverage computation/item	***Coverage (of the market value)***
Equipment	50%
Landed Property (with title)	70%
Landed Property (with land documents only)	50%
Cash	100%
Insurance Guarantee	100%
Bank Gurantee	100%
Floating Debeture on Stocks	20%
Solidality Guarantee/Body Insurance	0%

Table 5 : Security risk coverage principles, BRD Documentation (2010)

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- The customer is responsible to supply a valuation report of any proposed collateral.
- A collateral is acceptable to the Bank if fulfils the following conditions: i) has to be valued by appraisers acceptable to the Central Bank, ii) has real economic value, iii) is easily realizable iv) is sufficient and covers properly the risk exposure of the Bank, v) is able to last for the duration of the facility.
- In rare cases, the security requirements for a loan facility may be waived for relationship, development or strategic reasons. Under such circumstances the reasons for the departure from accepted norms shall be explained and the approving authority's concurrence with the decision sought.
- For clients in certain sectors such as agriculture, guarantees from donors and the Central Bank should be considered.
- For high risk customers, the maximum possible amount of security should be obtained to cover loan facilities.
- Only collateral that is able to appreciate/hold its value over the loan period or that depreciates in line with loan amortization shall be considered. Additional security shall be requested for temporally assets such sheds and some ICT equipment.
- The final recommendation on the security required and the impact on the risk margin will be made by the Risk Management Unit in concurrence with the legal Unit.

Security Perfection

The Legal Unit shall ensure that security is perfected as soon as possible. The Disbursement analysts are responsible for obtaining relevant documentation from customers and other parties prior to disbursement of the loan. All collateral must be registered and deposited with the Legal Unit for safe keeping. If external lawyers are required to assist in perfecting of a security, the Legal Unit is responsible for their appointment.

Security Valuation

For monitoring purposes the collateral shall be reviewed at least once every two years by the Monitoring Unit of its nature. The review may be done sooner, in case of problematic accounts. The valuation may be undertaken internally within the Bank while in some instances, it may be necessary to engage the services of qualified external property or equipment value.

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Security Realization

The realization of securities shall be undertaken by the Recovery Unit under supervision of the Director of Risk. This must be after fulfilling all necessary legal requirements such as serving the client with legal notices and favourable ruling by the Courts of Law.

Security Release

Collateral security will only be released after the debt is paid in full using an approved Release Form. In exceptional cases, the Bank may consider releasing the collateral security, if 50% of the debt is paid and the remaining security covers 100 % of the Bank's exposure. The release of securities shall be approved by the Managing Director on recommendation of the Director of Credit and Risk Management Department. BRD Documentation (2010)

4.4.10 Credit administration and monitoring

4.4.10.1 Credit Administration

According to credit manager, Credit administration involves the implementation and monitoring of the terms and conditions contained in the loan agreement and the notification letter. The promoter is responsible for the implementation of the terms and conditions agreed with the Bank with the assistance of the Disbursement and Legal Units. The legal is responsible for the drafting of agreements on the basis of the terms and conditions of the approved appraisal report.

The request for extension of the period for the fulfilment of the conditions precedent must be justified and approved by the Head of Credit and Risk department for loans of less than Rwf 50 million and by the Managing Director for loans of over that amount.

While the Disbursement Unit assists the promoter in the disbursement of the funds and implementation phase, the Monitoring Unit offers support during period of exploitation and repayment of the debt.

The disbursements are subject to compliance with conditions precedent and the release of funds is authorised jointly by the Heads of Credit and Risk Department and Investment/FOREDEM for amounts not exceeding Rwf 50 millions. For amounts above Rwf 50 million the Managing Director will also have to approve.

The Disbursement Unit will prepare a monthly report on all disbursed loan amounts and submit it the Management of the Bank for information.

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4.4.10.2 Portfolio Unit

The portfolio will be classified according to standards set by the Central Bank (BNR). Various reports will produced for reporting purposes to the Central Bank and for use in classify loans between performing (class 1 & 2) and non-performing loans (class 3 to 6). The classifications and provisions for each class are shown in Table.

Table : Classification of loans

Loan/Class	Number of Days in Arrears	Class	Provision
Performing Accounts	0-30 Days	1	0%
Watch Account	31-90 Days	2	0%
Non- performing Loans	91-180 Days	3	20%
Non- performing Loans	180-360 Days	4	50%
Projects Requiring Court Action	>360 Days	5	100%
Projects Written Off*		6	100%
(*):Number of days in arrears >360 and the customer is taken to court			

Table 6 : Classification of loans, BRD Documentation (2010)

The Portfolio Unit will look after the performing loans and the Recovery Unit will handle the non-performing loans. Officers from the portfolio unit should call on clients regularly and encourage them to honour their obligations on the due dates. Portfolio Unit officers are also responsible for updating client accounts in the Management Information System (MIS).

Portfolio Unit will calculate the provisions every month and any movements will be approved at the various authority levels.

4.4.10.3 Monitoring Unit

The Monitoring Unit is responsible monitoring of projects. Staff assigned in that unit must review and report on progress and performance throughout the implementation and the post-implementation phase of the project, including adherence to all terms and conditions. They recommend preventive and corrective actions in respect of problematic credits.

They also assess the results achieved and the likelihood of achieving the development outcome and impact and report the findings as well as the lessons learnt from the implementation of the project. To that effect, the Monitoring Unit will submit to line management a yearly plan of the projects to be visited and will issue regular report in accordance with an agreed report format.

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4.4.10.4 Recovery/Risk Unit

According to risk assessment, The Risk Management Unit is responsible for monitoring the quality of the portfolio in terms of sector exposure risks and portfolio trends. The sector risks should not exceed certain limits set and approved by the Board. Generally, the sector exposure to any sector should not exceed 25% of the total portfolio.

The Recovery unit will monitor all non-performing loans with the objective of improving their quality. In case of failure, the Unit will use all available means to recover funds including amicable negotiation, legal action and sell of the mortgaged securities. Legal action is the last resort considering the length of time taken for the Courts to settle disputes.

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CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 CONCLUSION

The preceding pages introduced credit risk management operations at a development bank. The paper begins with some research background information that triggers the author's interest in this specific field. Climbing concerns about the banking system's credit risk management soundness at both worldwide and nationwide stage are main reasons behind this interesting topic selection. What the researcher wants to figure out after the research has been clearly defined with four research questions relevant to four research objectives.

In brief, risk is inherent in every daily activity but can always be managed. Banking organizations are natural risk takers. Banking risks can be grouped into three groups: financial risks (related to the financial position or financing forms), operational risks (related to internal inadequacies) and environmental risks (associated with external changes). Credit risk arises when the borrowing party fails to repay the debts (partly or wholly) to the lending party. Credit risk belongs to financial risk category and is one of the biggest risks in banking business as lending is core to any banking services.

The question of credit risk management has continuously been studied about and improved. Banks usually handle credit risk with a well-established credit culture showing their attitudes towards credit risk, a structured credit organization and firm personnel base, and a comprehensive set of policies governing credit activities in the whole group. However, one had better not ignore the impacts of the credit market on a bank's credit risk management. Besides the conditions in the market that may favor or hinder credit risk management development, regulatory environment created by the central bank also has its significant role. Introducing theories to the audience, however, is not the final aim of this thesis. What the research truly cares about is to use those theories as the foundation for the evaluation of the effectiveness of the credit risk management actual implementation based on the established benchmarks.

The thesis has gone through those theoretical concepts to lead the readers to a much more practical section of the factual practices in the bank. Our subject bank is exposed to all types of risks in the banking business. Risk management is a separate function in the bank's organization structure and plays a growingly significant role within the bank's activities. As a small joint-stock commercial bank in the market, the bank faces many credit risk management difficulties, such as increasing

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competitive pressure due to irrational division of market, poor relationship-based lending practices, and lack of credit information and history.

The NBR, as the central bank and the national regulator, has been quite active in standardizing credit risk management framework in the banking sector with several legislations like provision on lending by credit institutions governing vital lending limits, regulations on classification of debts and loss provision and requirements on prudential ratios in bank operations. Nonetheless, the efficiency of the central bank supervision is still questionable. From the bank's side, it has developed its own credit culture, issued a lot of documents regarding credit operations, and organized the credit staffs in a hierarchy. The analysis part has given the readers a deep assessment of the bank's credit risk management practices.

In summary, there are both good points that are appreciated and areas that need improvements. This paper will conclude with some constructive suggestions for the bank and for future research.

5.2. RECOMMENDATIONS

Theoretically, it is compulsory to conform to stated regulations. Practically, the activities can sometimes slightly deviate from the standards. Although the credit risk department is just one of the business operation points, its actions may have impact on the bank's reputation or the customers' behavior and trust. Therefore, it is important to conduct proper practices.

- ❖ It is significant that the bank defines priority-based and incentives and risk appetite in separate sections of its credit culture. The risk appetite is a must because it shows the bank"s risk tolerance and guides other credit actions. Loan pricing rules should be specified in a formal document too. Even the pricing is adjusted from time to time; the bank should speak out several rigid rules and promise to follow them. For instance, at least pricing on loan must factor in the cost of capital and liquidity, ensure positive profit. And the bank had better state its pricing targets such as return on risk assets or risk adjusted return on capital for different customer types.
- ❖ Some official guidelines on how the policy review process is conducted should be developed by the bank. Especially, policy review must take the employees" ideas into consideration. It not only improves the practical factor of the policies but also enhances employees" satisfaction. The staffs will work with a better attitude if they feel their contribution is appreciated.

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The staff training quality must be critically revised. The bank should dig out whether the little effectiveness is due to the employee's own perception or due to the bank's implementation. If it is the latter case, it must be improved on the bank's accord. When the credit staffs state that they do not believe the training sessions are of great support in their career, they must think if it is owing to their lack of enthusiasm. If the answer is yes, they must definitely change their attitudes, because the training indeed will help them gain knowledge and experience.

- ❖ Internal control's expertise in credit know-how should continue to develop. The bank had better number their documents in a scientific and consistent way.
- ❖ For the bank, firstly it should always be alert to any change in the market and the regulatory environment so that it will impose timely responses to those changes.

  A sustainable and reliable credit database is recommended for the bank. Besides relying on the central bank's credit information center, the bank must have data on its own for immediate and quicker use when needed.

5.3 RECOMMENDATION FOR FURTHER RESEARCH

This research study, as well as a lot of books, focuses the credit risk management practices on the lending activity only while in reality, credit risk is exposed in other services like international payments through letter or credit or financing programs. Further research on credit risk management in these services will be extremely valuable to the banks.

Another interesting aspect is the adoption of credit derivatives in managing credit risk. This is a new concept in some areas of the world. It would be great to see the analysis and applications of successful credit derivative cases, or the reasons behind the failures of other cases.

The limited time and scope prevent this thesis from considering the credit risk management from a more advanced quantitative point of view with a lot of financial complex formulas, credit models and metrics. Future research should really take this into consideration.

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