A STUDY ON
CAPITAL ADEQUACY OF NEPALESE BANKS
(WITH SPECIAL REFERENCE
TO EVEREST BANK LTD. AND NEPAL INDUSTRIAL AND
COMMERCIAL BANK LTD.)

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DECLARATION

I hereby declare that the work reported in this thesis entitled **"*A Study on Capital Adequacy of Nepalese Banks (With Special Reference to Everest Bank Ltd. and Nepal Industrial and Commercial Bank Ltd.)*"** submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original research work carried out to satisfy partial fulfillment of the requirements for the degree of Master of Business Studies (MBS) under the supervision of Prof. Dr. Bal Krishna Shrestha of United College, T.U.

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This research study entitled **"*A Study on Capital Adequacy of Nepalese Banks (With Special Reference to Everest Bank Ltd. and Nepal Industrial and Commercial Bank Ltd.)*"** has been conducted to satisfy the partial requirements for the degree of Master of Business Studies (MBS) from Tribhuvan University.

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List of Abbreviation

ABBS	Anywhere Branch Banking System
BCBS	Basel Committee on Banking Supervision
CAR	Capital Adequacy Ratio
EBL	Everest Bank Limited
FY	Fiscal Year
ICAP	Internal Capital Adequacy Process
Ltd.	Limited
M.B.S.	Master of Business Studies
NABIL	NABIL Bank Limited
NBL	Nepal Bank Limited
NIBL	Nepal Investment Bank Limited
NIC	Nepal Industrial and Commercial
NRB	Nepal Rastra Bank
RBB	Rastriya Banijya Bank
RWA	Risk Weighted Assets
SCBNL	Standard Chartered Bank Nepal Limited
SSA	Simplified Standardized Approach
T.U.	Tribhuvan University
UAE	United Arab Emirates

Chapter I

1 Introduction

1.1 General Background of the Study

Banking as a vital section of total financial system, has a greater importance in overall economic development. The Banking System occupies an important place in the nation's economy. A banking institution is indispensable in a modern society. It plays a pivotal role in the economic development of the country and forms the core of the money market in an advanced country. The banking sector in Nepal is growing rapidly. Commercial banks are mushrooming even at this time of recession in the economy of the world. In the current context of the rapid expansion of the banks and financial institutions along with the financial sector liberalization, Nepal Rastra Bank, the central bank of Nepal must regulate, supervise and monitor the financial sector.

In today's fast moving finance world, governments have imposed capital adequacy and loan loss provisioning requirements on banks by means of their regulation authorities due to the fact that banks are in the risk business. As obviously seen bank failures and of course dramatic losses in banking industry in the past two decades such as Tokyo Kyova (1994), Barings (1995), Long term Capital Management Fund (1998), Nippon Credit (1998), Demir Bank (2000) and Lehman Brothers (2008), Southwest USA Bank, Home Valley Bank, Sterling Bank, Williamsburg First National Bank, Thunder Bank, Crescent Bank and Trust Company and Community Security Bank (2010). On the other hand, banking organizations are growing larger, more complex and more diversified in their operations worldwide so, bank regulators are becoming less able to understand and

supervise their regulatory charges especially within the complex risk environment. Bank insolvencies have become increasingly common.

Banks that had been performing well suddenly announced large loses owing to credit exposures that turned sour, interest rate position taken, or derivative exposures that may or may not have been assumed to hedge balance sheet risk. In return for this, commercial banks have almost embarked on upgrading of their risk management and control systems. In this respect, Nepalese banks are also exposed to such risks and need to formulate the strategies so that they don't have to face any such problems. For this, every bank must have the adequate capital and proper loan loss provision which are the focus of BASEL II, the more risk-sensitive framework. The central bank of Nepal, Nepal Rastra Bank (NRB) has the provision under Directives 1 about the capital adequacy of the commercial banks. NRB has explicitly provided the new capital adequacy framework with a view to adopt the BASEL II Framework. This deals with the minimum capital requirements, supervisory review process and the disclosure requirements. The study is entirely based on the capital adequacy position of the Nepalese banks which is guided by the NRB directives under Basel II Framework.

1.2 Introduction to Selected Commercial Banks

1.2.1 Introduction to Everest Bank Ltd.

Everest Bank Limited (EBL) started its operations in 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer-friendly services through its Branch Network. All the branches of the bank are connected through Anywhere Branch Banking System (ABBS), which enables customers for operational transactions from any branches. .

With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries, which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, Singapore and U.K. Bank has set up its representative offices at New Delhi (India) to support Nepalese citizen remitting money and advising banking related services.

I. Products and Services Offered By EBL

Recognizing the value of offerings a complete range of services, the bank has pioneered in extending various customer friendly products such as

- Home Loan
- Education Loan
- EBL Flexi Loan
- EBL Property Plus (Future Lease Rental)
- Home Equity Loan
- Vehicle Loan
- Loan Against Share
- Loan Against Life Insurance Policy
- Loan for Professionals.

II. Major Achievements of the Bank

The bank has been conferred with "Bank of the Year 2006, Nepal" by the banker, a publication of financial times, London.

- The bank was bestowed with the "NICCI Excellence award" by Nepal India chamber of commerce for its spectacular performance under finance sector.
- EBL was one of the first banks to introduce Any Branch Banking System (ABBS) in Nepal.

- EBL has introduced Mobile Vehicle Banking system to serve the segment deprived of proper banking facilities through its Birtamod Branch, which is the first of its kind.
- EBL has introduced branchless banking system first time in Nepal to cover unbanked sector of Nepalese society.
- EBL is first bank that has launched e-ticketing system in Nepal. EBL customer can buy yeti airlines ticket through internet.
- EBL is the bank to have the highest number of branches inside the country.

1.2.2 Introduction to Nepal Industrial and Commercial Bank Ltd. (NIC Bank Ltd.)

Nepal Industrial & Commercial Bank Ltd. commenced its operation from 21st July 1998. Promoted by several prominent business houses of Nepal, it is the first commercial bank in the country to be capitalized at NPR 500 million. It is one of the most widely held companies in Nepal with over 34 thousand shareholders. The present shareholding constitutes 51 % of promoters' stake and 49 % general public. The shares of the bank are actively traded in Nepal Stock Exchange with recent market capitalization of about NPR 10.49 billion.

The bank, with the vision to become one of the most respectable banks in Nepal based on honorable conduct and long- term financial performance, has been extending its financial services through 36 branches. It holds the mission to become a leading bank in Nepal by providing complete financial solutions to the customers, superior value to the shareholders and promising growth opportunities to the employees.

NIC bank has played a pioneering role in the Nepalese banking sector introducing innovative and customized products and services to its customers. Then bank has

managed to achieve many “Firsts” to its credit, besides also receiving several internationally coveted recognitions, some of which are listed below:

- The first bank in Nepal to be awarded an ISO 9001:2000 Certification for Quality Management System
- The first bank in Nepal to be sanctioned a credit line by international Finance Corporation. World Bank Group, under Global Trade Finance Program.
- The first bank in the country to introduce savings account scheme bundled with life insurance.
- The first bank in Nepal to offer lowest-priced home loan schemes.
- The first bank to offer bullion trading in the country by directly importing from internationally recognized mints.
- The first bank to introduce high-interest-earning Fixed deposit scheme with the ease of a saving account.

Besides, the bank has been awarded **“Bank of the year, 2007”** by the banker magazine Financial Times London.

1.3 Focus of the Study

The present study entirely focuses on the capital adequacy position of the selected commercial banks of Nepal. Special attention has been made to examine the capital adequacy in the respective banks in comparison with the benchmarks set out by the central bank (Nepal Rastra Bank). To simplify the study, sampling method has been used. Out of 32 commercial banks, only two commercial banks has been selected, namely, Everest Bank Ltd. (EBL) and Nepal Industrial and Commercial Bank Ltd. (NIC Bank Ltd.) However, it mainly focuses that the results will be important to other commercial banks as well to make the necessary decisions regarding the capital adequacy.

1.4 Statement of the Problem

Nepalese economy is in primitive stage. There are various challenges that are emerging with the globalization and liberalization. So, to boost up the economy, proper supervisory and monitoring body is essential. In the context of the favorable macro-economic indicators and based on the concept of competitive financial system, Nepal Rastra Bank (NRB) has been implementing the monetary policy so as to provide dynamism to the economy. In the light of the global scenario, a strong, well-managed, and efficient financial system would contribute positively to the sustainable development of the economy; NRB has come up with the updated capital adequacy framework. This helps to set its priority in devising and implementing appropriate legal, regulatory, managerial, and supervisory policies and provisions aimed at building a sound and stable financial sector. The implementation of this updated capital adequacy framework, 2008 and Unified Directives 2011 will enhance the effectiveness of the NRB to undertake appropriate regulation, supervision and monitoring responsibilities for the qualitative development of the financial sector.

Realizing the significance of capital for ensuring the safety and soundness of the banks and the banking system, and in order to safeguard the public deposits and ensure the economic stability in the country, at large, NRB has developed and enforced capital adequacy requirement based on international practices with appropriate level of customization based on domestic state of market developments.

The product and services offered by the Nepalese Banks are still largely primitive and conventional, in comparison to other economies. This coupled with the various inherent limitations of system like the absence of credit rating agencies makes the advanced approaches like Internal Ratings Based Approach or even Standardized Approach impractical and unfeasible. Thus, at this juncture, this framework prescribes Simplified Standardized Approach (SSA) to measure credit risk.

The study focuses on the following statements of problems.

- Whether the selected commercial banks maintain the capital adequacy position as per the NRB directives or not?
- Does the Capital Adequacy Framework adopted by Nepalese Commercial Banks help to protect the depositors and creditors?
- Are there any challenges in implementing Capital Adequacy Framework prescribed in NRB Directive in Nepalese Commercial banks?
- What are the major problems faced by these commercial banks regarding the above mentioned two problems?
- Does the appropriate capital adequacy assist in improving the financial performance of these banks?

1.5 Objectives of the Study

The major focus of this research work is to study on Capital Adequacy (BASEL II) of EBL and NIC Bank. The study will help these banks to be acquainted about the adequacy of their capital as well. It helps these banks to determine the adequate level of the capital according to the loss-absorbing or creditor-protecting characteristics as well as to determine the capital to hold in relation to the risks they are exposed to. Further, the specific objectives of the study are as follows:

- To assess the capital adequacy position of selected commercial banks and compare it with the standard mentioned by NRB directives.
- To assess whether the selected commercial banks have maintained the capital adequacy to safeguard the creditors and depositors
- To explore different challenges faced by the commercial banks in practicing NRB Directive related to Capital Adequacy.
- To suggest & recommend on the basis of major findings.

1.6 Significance of the Study

The capital was regarded as the most important ingredient of any organization. However, there was no uniform international regulatory standard for setting bank capital requirements prior to 1988. The Basel Committee on Banking Supervision (BCBS) developed the Capital Accord, which is known as Basel I, to align the capital adequacy requirements applicable especially to banks in G-10 countries. Basel I introduced two key concepts regarding the capital adequacy and the loan loss provision.

Thus, the minimum capital standards set by NRB for the Nepalese Commercial banks as per the international standard is very vital to safeguard the rights of the depositors and the creditors. The study attempts to provide the basis for the

reference for the Nepalese commercial banks. The banks can use the analysis and the results of the study to compare and evaluate their capital adequacy position so that the appropriate decision can be taken as required.

In this sense the study undertakes the significant role for the commercial banks to suggest for their improvement to the selected commercial banks as well as the other commercial banks. Moreover, the policy makers as well as the planners at various levels can even get benefitted through the reference from the analysis and the results of the research. The study will have further importance on various other groups like Nepal Rastra Bank, other financial institutions, depositors, borrowers, shareholders and other stake holders of the banks and financial institutions, and other researchers on similar matters at large.

1.7 Limitations of the Study

The thesis report presented is for the partial fulfillment of the requirements for the Degree of Master of Business Studies (M.B.S.). There are various limitations faced during the research work. Some major limitations faced are listed out as below.

- It mostly focuses on the study of Nepalese banks with special reference to Capital Adequacy only.
- Though there are 32 commercial banks functioning at present, this study undertakes only two banks viz. Everest Bank Ltd. and NIC Bank Ltd.
- The research is based on the secondary data only. The primary sources are not used. The report presented is merely based on the annual reports of the banks mentioned.
- The study mainly covers period from FY 2063/64 to 2067/68.

1.8 Organization of the Study

The study has been organized into five chapters whereby each chapter deals with the aspects of the study of capital adequacy. The chapters are viz. Introduction, Review of Literature, Research Methodology, Data Presentation and analysis and Summary, Conclusions and Recommendation.

Chapter 1: Introduction

The first chapter is the introduction of the main topic of the study which includes General Background of the study, Introduction to the selected commercial banks viz. Everest Bank Ltd. and NIC Bank Ltd., focus of the study, statement of the problem, objectives of the study, significance of the study, limitations of the study and other introductory framework.

Chapter 2: Review of literature

Second chapter is review of literature. This includes the conceptual review of the related books, journals, articles and the published and unpublished research works as well as the previous thesis. This also includes review of BASEL II Accord and Updated Capital Adequacy Framework 2008 and Unified Directives 2011 regarding capital adequacy issued by NRB for commercial banks.

Chapter 3: Research methodology

The third chapter describes the research methodology applied in this study. This also describes the overall framework or the plan for the activities to be undertaken during the research along with the data collecting techniques, data presentation and analysis procedures. Besides, this also defines the various financial and statistical tools and techniques that are used for the analysis of the presented data.

Chapter 4: Presentation and Analysis of data

Fourth Chapter deals with data presentation and analysis. This is the major part of the whole study in which all collected relevant data are presented, analyzed and interpreted. The various diagrams, financial & statistical tools are used to present the data clearly and precisely. This chapter is significant since the major findings of the study are obtained through the analysis of the data.

Chapter 5: Summary, Conclusion and Recommendation

The fifth chapter is summary, conclusions and recommendations. This chapter consists of three parts viz. summary, conclusion and recommendations of the study. The summary describes the research in brief; the conclusion is derived from the analysis and interpretation of the data. Finally, the recommendations are made on the basis of the conclusions.

Chapter II

2 Review of Literature

The main objective of this study is to analyze the capital adequacy position of the Nepalese banks with reference to the new Basel Capital Accord. Today, the zero risk business does not exist and risk has always existed in business. As to banking, it is a risky business and the banks assume various kinds of risks in the process of providing financial services. Therefore, risk management is at the heart of bank management and important to reduce potential losses. Since the late 1970s, bank insolvencies have become dramatically common. As a result, bank regulators have realized that business transactions are completed before measuring the risk and have created a set of regulations commencing with BASEL I for the purpose of harmonizing all efforts on an international basis to cope with this turmoil. The Basel capital accord of 1988 was a first step and the “new accord” called “BASEL II” arose together with its extensive framework in 2004.

2.1 Executive Summary of Basel Committee on Banking Supervision

The Basel Committee on Banking Supervision (the Committee) has decided to introduce a new capital adequacy framework to replace the 1988 Accord. The Committee seeks views on its proposed approaches and on its plans for future work.

This new capital framework consists of three pillars: minimum capital requirements, a supervisory review process, and effective use of market discipline. With regard to minimum capital requirements, the Committee recognizes that a modified version of the existing Accord should remain the "standardized”

approach, but that for some sophisticated banks use of internal credit ratings and, at a later stage, portfolio models could contribute to a more accurate assessment of a bank's capital requirement in relation to its particular risk profile. It is also proposed that the Accord's scope of application be extended, so that it fully captures the risks in a banking group.

The world financial system has witnessed considerable economic turbulence over the last two years and, while these conditions have generally not been focused on G-10 countries directly, the risks that internationally active banks from G-10 countries have had to deal with have become more complex and challenging. This review of the Accord is designed to improve the way regulatory capital requirements reflect underlying risks. It is also designed to better address the financial innovation that has occurred in recent years, as shown, for example, by asset securitization structures. As a result of this innovation, the current Accord has been less effective in ensuring that capital requirements match a bank’s true risk profile. The review is also aimed at recognizing the improvements in risk measurement and control that have occurred.

The Committee is committed to ensuring that any review of the Accord should meet the following supervisory objectives:

- the Accord should continue to promote safety and soundness in the financial system and, as such, the new framework should at least maintain the current overall level of capital in the system;
- the Accord should continue to enhance competitive equality;
- the Accord should constitute a more comprehensive approach to addressing risks and
- The Accord should focus on internationally active banks, although its underlying principles should be suitable for application to banks of varying levels of complexity and sophistication.

In constructing a revised capital framework, the importance of minimum regulatory capital requirements continues to be recognized. This is the first pillar of the framework. The Committee is now stressing the importance of the supervisory review of an institution's capital adequacy and internal assessment process as the second pillar. The third pillar, which the committee has underlined in recent years, is the need for greater market discipline. The Committee believes that, taken together, these three elements are the essential pillars of an effective capital framework.

With regard to minimum regulatory capital requirements, the Committee is building on the foundation of the current Accord, which will serve as a "standardized" approach for capital requirements at the majority of banks. In doing so, the Committee proposes to clarify and broaden the scope of application of the current Accord. With regard to risk weights to be applied to exposures to sovereigns, the Committee proposes replacing the existing approach by a system that would use external credit assessments for determining risk weights. It is intended that such an approach will also apply, either directly or indirectly and to varying degrees, to the risk weighting of exposures to banks, securities firms and corporate. The result will be to reduce risk weights for high quality corporate credits, and to introduce a higher-than-100% risk weight for certain low quality exposures. A new risk weighting scheme to address asset securitization and the application of a 20% credit conversion factor for certain types of short-term commitments are also proposed.

For some sophisticated banks, the Committee believes that an internal ratings-based approach could form the basis for setting capital charges, subject to supervisory approval and adherence to quantitative and qualitative guidelines. The Committee will (in consultation with the industry) be examining these issues, and

will seek to develop an alternative approach based on internal ratings within the same timeframe as its review of the "standardized" approach. The Committee believes that this will be an important step in the effort to align more closely capital charges with underlying risk. Looking further ahead, the Committee will closely monitor developments in portfolio credit risk modeling for its possible use in regulatory capital calculations.

The Committee is also examining the capital treatment of a number of important credit risk mitigation techniques. To assist in this process, the Committee is seeking comment on approaches for devising a sound and consistent approach for credit derivatives, collateral, guarantees, and on-balance-sheet netting.

The existing Accord specifies explicit capital charges only for credit and market risks. Other risks, including interest rate risk and operational risk, are also an important feature of banking. The Committee therefore proposes to develop a capital charge for interest rate risk for banks where interest rate risk is significantly above average, and is proposing to develop capital charges for other risks, principally operational risk.

The second pillar of the capital adequacy framework, the supervisory review of capital adequacy, will seek to ensure that a bank's capital position is consistent with its overall risk profile and strategy and, as such, will encourage early supervisory intervention. Supervisors should have the ability to require banks to hold capital in excess of minimum regulatory capital ratios – a point underscored in the course of the Committee's discussions with supervisors from non-G-10 countries. Furthermore, the new framework stresses the importance of bank management developing an internal capital assessment process and setting targets for capital that commensurate with the bank's particular risk profile and control

environment. This internal process would then be subject to supervisory review and intervention, where appropriate.

The third pillar, market discipline, will encourage high disclosure standards and enhance the role of market participants in encouraging banks to hold adequate capital.

Looking to the future, the Committee believes that the Accord must be responsive to financial innovation and developments in risk management practices. The Committee's longer-term aim is to develop a flexible framework that reflects more accurately the risks to which banks are exposed. The Committee therefore will examine further ways of making the capital adequacy framework more risk sensitive and welcomes comments on how best to do this.

Today's rapidly changing world requires a broad-based and flexible capital adequacy framework. The Committee believes this objective is best accomplished through three pillars: minimum capital requirements; a supervisory review of capital adequacy; and market discipline. Each of these three complementary pillars is needed for supervising both the overall financial health of the banking industry and that of individual institutions, though none can substitute for effective bank management. The Committee further believes that, by focusing on risk and risk management, the new framework has the potential to meet the challenges of innovations in increasingly complex financial markets.

2.2 BASEL II – Regulatory Framework

BASEL II has been designed to improve safety and soundness in the financial system by placing more emphasis on banks' own internal control, the supervisory review process and the market discipline. Although BASEL II focuses primarily on internationally active banks, its underlying principles are convenient for

application to banks of varying levels of complexity and sophistication so as to the new framework can be participated by all significant banks within a certain period of time.

First, it defined what banks could hold as capital, as well as designating capital as Tier 1 or Tier 2 according to its loss-absorbing or creditor-protecting characteristics. The second key concept introduced in BASEL I was that capital should be held by banks in relation to the risks that they face. The major risks faced by banks relate to the assets held on balance sheet. Thus, BASEL I calculated banks' minimum capital requirements as a percentage of assets, which are adjusted in accordance to their risk and assigning risk weights to assets. Higher weights are assigned to riskier assets such as corporate loans, and lower weights are assigned to less risky assets, such as exposures to government.

"*The International Convergence of Capital Measurements and Capital Standards: Revised Framework*", popularly known as BASEL II, was released on June 26, 2004. This framework was updated in November 2005 and a comprehensive version of the framework was issued in June 2006. BASEL II builds significantly on BASEL I by increasing the sensitivity of capital to key bank risks. In addition, BASEL II recognizes that banks can face a multitude of risks, ranging from the traditional risks associated with financial intermediation to the day-to-day risks of operating a business as well as the risks associated with the ups and downs of the local and international economies. As a result, the new framework more explicitly associates capital requirements with the particular categories of major risks that banks face.

The new capital framework also recognizes that large, usually internationally active, banks have already put in place sophisticated approaches to risk measurement and management based on statistical inference rather than judgment

alone. Thus, the framework allows banks, under certain conditions, to use their own 'internal' models and techniques to measure the key risks that they face, the probability of loss, and the capital required to meet those losses. In developing the new framework, the Basel Committee wanted to incorporate many elements that help promote a sound and efficient financial system over and above the setting of minimum capital requirements. With this in mind, the BASEL II framework incorporates three complementary 'pillars' that draw on the range of approaches to help ensure that banks are adequately capitalized in commensurate with their risk profile. The three pillars are as follows:

2.2.1 Pillar I – Minimum Capital Requirement

The first pillar regulates minimum capital requirements. The minimum capital requirement is determined by the credit risk, operational risk and market risk the bank faces. This describes the basis for the capital requirements calculation. The focus is on refining the way credit risk is calculated and accounted for and looks over the portfolio risk rating, while ensuring the new operational risk requirements are implemented and finally that a proper measurement system for these risks is created. These risks and the calculation of the minimum capital requirement is a complex procedure. BASEL II allows for a number of methods to determining the size of each risk(BCBS 2006).

2.2.2 Pillar II – Supervisory Review Process

The second pillar focuses on the supervisory review (BCBS 2006, Finansinspektinen 2009d), where the supervisor assesses whether any additional capital requirements are needed. The pillar establishes a hierarchical chain of responsibility, where the board of directors of the bank ultimately is responsible for the bank's risk management practices. The pillar also establishes that the banks need to have adequate risk management practices including stress testing. A stress test is of how robust the current capital level is to adverse economic conditions.

Finally, the pillar gives recommendations on the monitoring of banks by the financial supervisory authorities (BCBS 2006). Banks are required to prepare an Internal Capital Adequacy Process (ICAP) document, where processes etc. are described to the supervisor. A central part of BASEL II is that it is the institution itself that drives and designs its own ICAP.

2.2.3 Pillar III – Market Discipline

The third pillar regulates disclosure requirements of the banks regarding capital adequacy and risk exposures. The purpose of this pillar is to complement the regulatory discipline of the first two pillars by promoting market discipline. The focus is on information. According to the framework, it aims to provide market participants with information in order for them to assess capital, risk exposures, risk assessment process, and the capital adequacy of the banks. Reports published under this pillar constitute much of the available information for outside investors concerning the capital and risks. It is also the principal public source of information regarding the capital adequacy of the banks in terms of BASEL II minimum requirements.

2.3 Capital Adequacy Framework of Nepal

2.3.1 Capital Adequacy Ratio

Capital Adequacy ratios (CAR) are a measure of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposures. An international standard, which recommend minimum capital adequacy ratios, has been developed to ensure banks can absorb a reasonable level of losses before becoming insolvent. By applying minimum capital adequacy ratios serves to protect depositors and promote the stability and efficiency of the financial system.

Capital adequacy ratios are concerned primarily with credit risks. Also capital adequacy ratios are only as good as the information on which they are based, e.g. if

inadequate provisions have been made against problem loans, then the capital adequacy ratios will overstate the amount of losses that the bank is able to absorb. Capital adequacy ratios should not be interrupted as the only indicators necessary to judge a bank's financial soundness.

NRB, the central bank of Nepal has issued the Directive No. 1 regarding the minimum capital requirements of the commercial banks with an objective to develop a healthy, competent, and secured banking system for the economic prosperity of the country and to safeguard the interest of the depositors. The Updated Capital adequacy framework outlines the Nepal Rastra Bank's proposed guidelines based on the BASEL II framework.

2.3.2 Classification of Capital

According to unified directives 2068, capital is divided into two parts i.e. core capital and supplementary capital. Core capital and supplementary capital is also known as Tier-1 capital and Tier-2 capital respectively.

I. Core Capital (Tier 1): Core capital is capital which is permanently and freely available to absorb losses without the bank being obliged to cease trading. Tier-1 capital is important because it safeguards both the survival of the bank and the stability system. According to NRB directives**,** Tier-1 Capital/ core capital consists of the following components:

- Paid up Equity capital
- Irredeemable non-cumulative preference shares
- Share premium
- Proposed Bonus Equity Share
- Statutory General Reserve
- Retained Earnings
- Un-audited current year Cumulative profit

- Capital Redemption Reserve
- Capital adjustment reserves
- Dividend Equalization Reserves
- Other Free Reserves
- Following items should be deducted while calculating core capital:
- Goodwill
- Fictitious Assets
- Investment in equity of financial institutions licensed by NRB
- Investment in equity of institutions with financial interests
- Investment in equity of institutions in excess of limits
- Investment arising out of underwriting commitments
- Reciprocal crossholdings
- Other deductions

(Source: Unified Directives 2068)

II. Supplementary Capital (Tier-2 Capital): Tier-2- Capital/ supplementary is capital which generally absorbs losses only in the event of a winding up of a bank, and so provides a lower level of protection for depositors and other creditors. It comes into play to absorb losses only in case tier one capital has been lost by the bank. An example of tier-two capital is subordinated debt. This is debt which ranks is priority behind all creditors except shareholders. In the events of a winding-up, subordinated debt holders will only be repaid if all other creditors (including depositors) have already been repaid. According to NRB directives**,** Tier-2 Capital/ Supplementary capital includes the following components:

- Cumulative and/or redeemable preference shares
- Subordinate term debt
- Hybrid capital instruments
- General Loan loss provision
- Exchange equalization reserve

- Investment adjustment reserves
- Assets revaluation reserve
- Other Reserves

(Source: Unified Directives 2068)

2.3.3 Minimum Capital Requirements

The capital fund is the summation of Tier 1 (core) capital and Tier 2 (supplementary) capital. Unless a higher minimum ratio has been set by Nepal Rastra Bank for and individual bank through a review process, every bank shall maintain at all times, the capital requirements set as below:

- A Tier 1 capital of not less than 6 percent of total risk weighted exposure;
- A total capital fund of not less than 10 percent of its total risk weighted exposure.

The Capital Adequacy Ratio (CAR) is calculated by dividing eligible regulatory capital by total risk weighted exposure. The total risk weighted exposure shall comprise of risk weights calculated in respect of bank's credit, operational and market risks.

2.3.4 Significance of Capital Adequacy

Capitals adequacy requirement is a must for effective running of bank capitals adequacy play a catalytic role in protection of bank from getting failure and as well as it also helps generate sufficient confidence among depositors and creditors. Thus purpose of capital adequacy ratio is to protect the interest of depositors and creditors by making bank keep more risk –free assets and by increasing their capital base. Adequate capital keeps the bank healthy and robust against all the contingencies and enhances the image of the bank in the financial market. Higher the capital adequacy ratio the more sound the bank is.

Regarding the capital adequacy ratio, there has always been conflict between management and regulatory authorities. Regulatory authorities always focus in increasing capital adequacy ratio in order to stabilize the financial system while management wishes to reduce the ratio so as to increase shareholders rate of return on investment. Thus, capital management has been most important and most controversial issues in the financial institutions.

2.4 NRB Directives Related to Capital Adequacy

2.4.1 Minimum Capital Adequacy Ratio

The sum of core capital and supplementary capital is called total capital fund. Capital adequacy ratio is calculated on the basis of core capital, supplementary capital and risk weighted assets.

Capital adequacy as a legal requirement that a financial institution should have enough capital to meet all its obligations and fund the services it offers.

The provision of minimum capital fund to be maintained by the commercial banks as per directed by NRB since fiscal year 2063/064 is as follows:

Table 2-1 Capital fund to be maintained

Time period	Capital fund in % on the basis	
	Core capital	Total capital fund
2063/64 to 2064/65	5.5	11
2065/66 to till date	6	10

(Source: Unified Directives 2068)

2.4.2 Total Risk Weighted Assets

The risk weighted assets has been classified in following two components:

I. **On- balance sheet risk-weighted assets:** On-balance sheet assets of banks are group into four categories with assignment of separate risk-weighted. The assets categories and their corresponding risk-weights are given in the

following table. To determine the risk weighted on-balance sheet assets, the national value of the various balance sheet assets are multiplied by their respective risk weights and then added together.

Table 2-2 Risk – Weighted On-Balance Sheet Assets

On balance sheet assets	Risk weighted %
Cash balance	0%
Gold (Tradable)	0%
Balance at NRB	0%
Investment on Government bonds/ securities	0%
Investment on NRB bonds/ securities	0%
Fully secured loan against own FDR	0%
Fully Secured Loan against Government Securities	0%
Accured Interest on Government Securites	0%
Investment to Youth and Small Entrepreneurs Self-employment Fund	0%
Balance at domestic banks & financial institutions	20%
Fully secured loan against other banks FDR	20%
Balance with foreign banks	20%
Money at Call	20%
Loan against the Guarantee of Internationally Rated Banks	20%
Other Investments with Internationally Rated Banks	20%
Interbank Borrowing	20%
Investment on share, debentures and bond	100%
Other Investment	100%
Loan, Advances and Bills Purchased/Discounted	100%
Fixed assets	100%
Net interest receivables (Total IR - 8 - Interest supsense)	100%
Other assets (Except advance tax payment)	100%
Real estate/residential housing loans exceeding the limits	150%

(Source: Unified Directives 2068)

II. **Off - balance sheet risk-weighted assets:** In order to determine the value of risk –weighted assets off balance sheets items of a bank the items are grouped into six categories and accordingly risk weight of 0%, 10%, 20%, 50%, 100% and 200% have been assigned .The risk weight assigned for

off–balance sheets items, the value of the off-balance sheets items shall be multiplied by their respective risk weights and then added together.

Table 2-3 Risk – Weighted Off-Balance Sheet Items

Off –Balance Sheets Items	Risk Weighted %
Bills collection	0%
Forward foreign exchange contact.	10%
L/C with maturity less than six months (including margin)	20%
Guarantee against International rated bank's counter guarantee	20%
L/C with maturity more than six months (including margin)	50%
Bid bond, Performancd bond and Underwritng guarantee	50%
Loan sale with repurchase agreement	50%
Advance payment guarantee	100%
Financial and other guarantee	100%
Irrevocable loan commitment	100%
Possible liabilities for income tax	100%
All types of possible liabilities including acceptance	100%
Rediscounted bills	100%
Unpaid portion of partly paid share investment	100%
Unpaid guarantee claims	200%

(Source: Unified Directives 2068)

2.4.3 Capital Adequacy Ratio

Capital Adequacy Ratio is calculated by using following formula:

$$Capital\ Adequacy\ Ratio\ (CAR) = \frac{Core\ Capital + Supplementary\ Capital}{Total\ Risk\ Weighted\ Assets} \times 100$$

Or,

$$CAR = \frac{Tier\ I\ Capital + Tier\ II\ Capital}{Total\ Risk\ Weighted\ Assets} \times 100$$

Where,

$$Total\ Risk\ Weighted\ Assests$$
$$= Risk\ weighted\ on\ Balance\ sheet\ Assets$$
$$+ Risk\ weighted\ off\ Balance\ sheet\ Assets$$

2.4.4 Statements to be submitted to NRB

Banks are required to submit the report of capital adequacy along with other required data related with it, on a quarterly basis within one month from the end of each quarter.

2.4.5 Duration to Maintain Capital Adequacy

In case capital adequacy ratio is found shortfall board of directors of banks are required submit cause of shortfall of capital adequacy and capital planning and programs prepared in order to meet capital adequacy requirements within 35 days. After receiving proposed plan and program NRB directs bank to fulfill the requirement within certain time stipulated by NRB to that institution. Bonus and bonus shares cannot be issued while there is shortfall of capital.

2.4.6 Action against not fulfilling the requirement of capital adequacy ratio

- Prohibition on opening of new branch
- Refinancing facility from NRB is not provided
- Prohibition on loan distribution
- Prohibition on accepting new deposits
- Other actions as per NRB Act 2058, Article 100

2.5 Review of Previous Research Works

Timsina (2011), in his study entitled "***A study on capital adequacy of commercial banks in Nepal*"** concluded on the basis of the quantitative analysis on the selected commercial banks(SCBNL, NBL, and RBB).Average total risk weighted assets of SCBNL was Rs. 9608 million. RWA in SCBNL is more or less consistent. The bank had Rs 7839 million (81.5%) of on balance sheet risk assets and Rs 1769 million (18.5%) of off balance sheet risk assets in average. Majority of risk weighted asset is composed by loan and advance and bills and purchase (54%)in total risk weighted assets. Average total risk weighted assets of NIBL was Rs 7670 million. RWA in NIBL is in increasing trend. The bank had Rs 6640 million (86.5% of on balance sheet risk assets and Rs 1030 million (13.5%) of off balance sheet risk assets in average. Majority of risk weighted assets in NIBL is composed by loan and advance and bills and purchase (72%) in total risk weighted assets. Risk weighted assets of both on balance sheet and off balance sheet assets of RBB was fluctuating. The bank had Rs 51508 million (98%) of on balance sheet risk assets and Rs796 million (2%) of off balance sheet risk assets in average. Majority of risk weighted assets is composed by loan and advance and bills and purchase (22%) and by other assets (46%) in total risk weighted assets.

Percentage of pass loan in total loan is increasing each year in SCBNL and NIBL whereas percentage of bad loan is decreasing each year. It is good indicator of the bank to reduce credit risk and to increase profitability of the bank. Pass loan of the SCBNL consist about more than 95% of total loan where as bad loan consists less than 2.5% of total loan in SCBNL and NIBL.

The amount of nonperforming loan of SCBNL is decreasing in each year where as capital fund is in increasing trend. Percentage of non-performing loan to capital fund of SCBNL is in decreasing trend. In case of NIBL, non-performing loan was fluctuating. The growth of capital fund of NIBL is higher than SCBNL. NIBL's

percentage of non-performing loan was fluctuating. Percentage of nonperforming loan was also fluctuating in RBB.

A study had done by **Mr. Manoj Shrestha (2010)** entitled "***NRB capital Adequacy Norms for the Commercial Banks and its Impacts Case study of Bank of Kathmandu and Himalayan Bank Ltd.***" concluded the following finding and recommendation. This thesis found out that raising and utilization of funds are the primary functions of commercial banks. Commercial banks collect a large amount of deposits from general public and invest it to needy people and organizations. In order to protect the deposit of general people, capital must be sufficient. Otherwise the banks will use all the deposits in their own interest and general people's deposit will be in danger due to this general people have to suffer loss. NRB being the central bank has to be responsible to give special attention to the interest of depositors. Capital adequacy norm is required to safeguard the money of the depositors as the banks are playing with the money they collect from the depositors.

He also added that depositors are not aware of the fact of the necessity of adequate capital fund to safeguard their deposits. They deposit their money to any banks regardless of adequate capital fund, which may endanger to their money. Therefore, NRB should initiate awareness programs to make the depositors aware of such fact and think before depositing money in any commercial banks.

He further stated that NRB should consult to the various bank officials before setting or resetting standards on capital adequacy norms. The complaints and criticism of bank officials should be considered accordingly; consequently an optimal standard will ensure which will satisfy almost everyone.

Mahesh Bhattarai (2009) there was a significant impact of the directives on the various aspects of the commercial banks. Also, it was found that banks would fall short in supplementary capital but can maintain its total capital according to the new directives relating to capital adequacy norms. All the changes in NRB directives made impact on the bank and results were the increase in the operational procedures of the bank increased the operational cost of the bank. Short term decreases in profitability, which results to lesser dividends to shareholders and lesser bonus to the employees. Reduction in loan exposure of the bank decreases in interest income but increases the protection to the depositors' money. Increased protection to the money of the depositors through increased capital adequacy ratios adds more stringent loan related directives and increase in demand for shareholder's contribution in the banks by foregoing dividends for loan loss provisions and various other reserves to increase the core capital.

Krishna Khatiwada (2008) enlighten that recent financial crisis have revealed a number of data deficiencies, notably in pledge assets, deposits held in financially weak domestic banks and their foreign affiliates, valuation practices leading to bank valuation of assets being significantly different from market values and complicating assessments of the realizable value of reserve assets. He emphasized various reform majors. One of the measures was increasing capital base and revising capital adequacy. It is stressed that experience has shown that undercapitalized financial institutions are the ones that are first attacked by the spectators and hedges at the time of crisis and create contagious effect on the other institution as well. Besides, undercapitalized financial institutions cannot gain credibility and corporate growth even in normal times. This requires that financial institutions are adequately capitalized and possess resilience against the attackers by dealers and customers. In this context, capital adequacy norms are being revised upward as per Basal Capital Accord. But increasing the capital base for loss

making government owned financial institutions is not easy without involving private sector in the equity capital.

A study had done by Mr. **Santosh Pandey (2007)** entitled "***A Case Study of Himalayan Bank Ltd, NRB Directives their Implementation and Impact on the Commercial Bank***" concluded the following finding and recommendation. This study concluded that change in NRB directives has lot of impact on commercial banks rules and regulations as well as activities. Because of new directives, commercial bank has to increase the operational cost. Dividends to shareholders and bonus to the employees are scaled down due to decrease in profits of the banks. He also said that the changes in directives would bring prosperity of the shareholders depositors, employees and the economy as a whole in a long run. The tough time through which the bank is undergoing at present will prevail only for a short period. His suggestion to NRB is that the NRB should issue directives after doing proper homework. NRB must strengthen the functioning of its credit information bureau. NRB should be practical and should issue directives applicable in the context of Nepal. Directives should not be issued only to meet the international standards. Otherwise complaints may arise from commercial banks. However, in the present context, the commercial banks have to comply such directives and perform activities accordingly.

A study done by **Sachin Newa (2006)** entitled "***An Overview of Capital Adequacy Ratio and Basel Capital Accord***" concluded the following findings and recommendations. Risk has always been associated with the financial institutions in the form of liquidity risk, credit risk, market risk, operation risk, interest risk etc. But, since bearing risk is an integral part of the banking business, it is not surprising that banks have been practicing risk management ever since there have been banks. Capital Adequacy ratio is very important financial tool to measure the risk position of the bank. The fate of the investors and depositors are highly

dependent on the CAR of the bank. All the commercial banks must strictly comply with the directive issued by the supervising bank to maintain the sound financial position of the bank. Basel II has the potential to significantly improve credit risk measurement and management practices, and thereby contribute to the effectiveness and stability of the financial systems. Therefore, NRB should give the utmost attention for the implementation which would prove to be the milestone in the Nepalese financial system.

Chapter III

3 Research Methodology

3.1 Research Design

Research Design is the overall framework for the activities to be carried out during the research. It guides the collection and analysis of the data, the research instruments to be utilized, and the sampling plan to be followed. The research study has been made on the relevant data collected from the banks under study as well as the provision of NRB on the capital adequacy. For research there exists different types of research design like; Historical research, Descriptive research, Case study research, Field study research, analytical research, True experimental research and so on. This research study is made on the directives issued by the central bank on capital adequacy. This study takes two banks out of thirty two commercial banks in Nepal. The study will be analytical rather than descriptive to meet the stated objectives.

3.2 Research Methods

This thesis draws its conclusion from two separate sources of information: information related to the understanding of the general Basel II framework and information regarding its implementation in the banks.

In this chapter, the overall method used while taking part in research activity has been explained. Research methodology refers to the various sequential steps adopted by researcher in studying a problem with certain objectives in view. Hence, the present Research methods include Research Design, Sampling Design (population, sample size, sampling methods), Data Collecting Procedure and Data Analysis Procedures.

The capital adequacy of the commercial banks is the main focus of the study. Thus, the study is made with respect to capital adequacy especially of the two commercial banks of Nepal viz. Everest Bank Ltd and NIC Bank Ltd. These banks are compared on capital adequacy and on the basis of the annual report provided and mainly on Profit and Loss Account, Balance Sheet and BASEL II disclosures.

3.3 Sampling Design

There has been a remarkable development in the banking sector in Nepal. There are all together thirty two commercial banks operating in the country. These banks are listed with their respective date of establishment in the following table.

Table 3-1 List of Banks in Nepal

S.No.	Name of Commercial Banks	Established Year(A.D.)
1	Nepal Bank Ltd.	1937
2	Rastriya Banijaya Bank	1966
3	Nabil Bank Ltd.	1984
4	Nepal Investment Bank Ltd.	1986
5	Standard Chartered Bank Nepal Ltd.	1987
6	Himalayan Bank Ltd.	1993
7	Nepal SBI Bank Ltd.	1993
8	Nepal Bangladesh Bank Ltd.	1993
9	Everest Bank Ltd.	1994
10	Bank of Kathmandu Ltd.	1995
11	Nepal Credit & Commerce Bank Ltd.	1996
12	Lumbini Bank Ltd.	1998
13	Nepal Industrial And Commercial Bnak Ltd.	1998
14	Macchapuchhre Bank Ltd.	2000
15	Kumari Bank Ltd.	2001
16	Laxmi Bank Ltd.	2002
17	Siddhartha Bank Ltd.	2002
18	Agriculture Development Bank Ltd.	2006
19	Global IME Bank Ltd.	2007
20	Citizen Bank International Ltd.	2007

21	Prime Bank Ltd.	2007
22	Sunrise Bank Ltd.	2007
23	Bank of Asia Nepal Ltd.	2007
24	Grand Bank Ltd.	2008
25	NMB Bank Ltd.	2008
26	KIST Bank Ltd.	2009
27	Janta Bank Nepal Ltd.	2010
28	Mega Bank Nepal Ltd.	2010
29	Commerz & Trust Bank Nepal Ltd.	2010
30	Civil Bank Ltd.	2010
31	Century Commercial Bank Ltd.	2011
32	Sanima Bank Ltd.	2012

(Source List of Banks and Financial Institutions 2012)

It will be lengthy, time-consuming and vague while taking all of these institutions into consideration. The sample method has been selected to select the banks to study for this research. The banks that have been sampled for the study are Everest Bank Ltd and NIC Bank Ltd. These banks are chosen for the comparative study in detail regarding the capital adequacy.

3.4 Sampling Procedures

The simple random sampling method is used for the sample to be taken. These two banks are selected randomly from the available thirty two commercial banks in Nepal. These sample banks will help to analyze and compare the capital adequacy position of banking system in Nepal.

3.5 Data Collection Procedures

This research is based on the secondary data. Mainly secondary data published and provided by NRB, and concerned commercial banks, annual reports etc. are used for research works. The data has been collected by the frequent visits to the central bank and the two commercial banks under study. Besides, to draw the useful information, several visits were made to Central Library, Nepal Rastra Bank

library, British council, etc. Internet websites were browsed to get the required information.

3.6 Sources of Data

Mainly secondary data published and provided by NRB, and concerned commercial banks, annual reports etc. will be used for research works. Besides, to draw the useful information, visits will be made to Central Library, Nepal Rastra Bank library etc. Internet websites will be browsed to get the required information. The major secondary documents used to collect the data are as follows:

- Annual reports, newsletters, brochures etc. of the selected banks.
- Textbooks, articles published in newspapers, journals magazines etc.
- Unified Directives 2066
- Unified Directives 2067
- Unified Directives 2068
- Laws, NRB guidelines, NRB acts etc.
- Banks websites and other relative websites.

3.7 Data Analysis Procedures

The data has been analyzed on the basis of the information gathered from the banks' annual report especially, balance sheet, capital adequacy sheet, BASEL II disclosures etc. so as to get the desired objective. Tables, graphs and charts have been used to present the data and analyze and interpret the findings precisely. The comparative study has been made and banks are analyzed on the basis of their capital adequacy ratios. The data gathered from the banks have been compared with the standard i.e. updated capital adequacy framework and Unified Directives 2068 issued by the central bank and analysis made on implementation and compliance aspects.

3.8 Data Analysis and Presentation Procedures

The data presented and analyzed in the study are all secondary data. The data are analyzed on the basis of the information gathered from the bank's annual report especially, balance sheet, capital adequacy sheet, etc. Tables, graphs and charts have been presented to analyze and interpret the findings. The comparative study has been made and banks are analyzed and ranked on the basis of their performance. The data gathered from the banks are compared with the directives issued by the central bank and analysis is made on implementation and compliance aspects.

3.9 Tools and Techniques Used for Analysis

The major analytical tools and techniques used for analysis are as follows.

3.9.1 Financial Tools

Ratio analysis is the best tool to analyze the financial data. It is very simple analysis tool but provides with the strong results that help for the comparative study of the sample banks. Ratio shows the relationship between the two or more variables. Through ratio analysis we can establish the relationship among the data and get research into conclusion.

3.9.2 Capital Adequacy Ratio

Capital adequacy ratio is used to describe or measure the bank's capital fund. It is expressed as a percentage of a bank's risk weighted credit exposures. Capital adequacy ratio is calculated on the basis of core capital, supplementary capital and total risk weighted assets of the bank. This ratio plays a significant role to protect depositors and promote the stability and efficiency of financial system around the world and to examine adequacy of the total capital fund and core capital.

Mathematically,

$$CAR = \frac{TotalCapitalFund}{RiskWeightedAssets} \times 100\%$$

Where,

Total Capital Fund = Core Capital + Supplementary Capital

3.9.3 Statistical Tools

3.9.3.1Correlation Coefficient

Correlation analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to other variable. Two or more variables are said to be correlated if change in the value of one variable appears to be related or linked with the change in the other variables. Correlation is an analysis of the relationship between two or more variables and this analysis deals to determine the degree of relationship between two or more variables. It refers the closeness of the relationship between two or more variables. The correlation between two variables X and Y is calculated as follows:

$$Karl\ Parson's\ correlation\ coefficient(rxy) = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}}$$

Where,

$x = X - \bar{X}$

$y = Y - \bar{Y}$

$N = number\ of\ observations$

$X\ \&\ Y = variables$

3.9.3.2Coefficient of Determination

The square of the correlation coefficient is called the coefficient of determination. It is used to interpret the value of the correlation coefficient. The main significance

of the coefficient of determination is to represent the proportion of total variations in the dependent variable, which is explained, by the variations in the independent variables.

It is calculated as follows:

$$coefficient\ of\ determination(rxy)^2 = (correlation\ of\ coefficient)^2$$

3.9.3.3Probable Error

Probable error is an old measure of ascertaining the reliability of the value of coefficient of correlation. It is used to test whether the calculated value of sample correlation coefficient is significant or not and also it is used to determine the limits within which the population correlation coefficient may be expected to lie. The probable error may lead to fallacious conclusions particularly when the number of observations is small.

It is calculated as follows:

$$PE(r) = 0.6745\ \times SE(r)$$

Where,

$$r = correlation\ coefficent$$

$$SE = Standard\ Error = \frac{(1 - r^2)}{\sqrt{n}}$$

$$Limits\ of\ population\ correlation\ coeffient = r \pm PE(r)$$

Chapter IV

4 Data Presentation and Analysis

The chapter deals with the Data Presentation and Analysis. Data for analysis can be obtained from the different sources and they can be presented as tables or charts like bar diagrams, graphs, etc. The methods of data presentation and analysis are used to analyze the given data and to present them in very finest manner and let the data to present for drawing inferences. The data collected from the concerned sample banks, NRB directives and from various other sources like libraries, booklets, published reports, journals, internet website are organized and classified for analysis. The data, thus collected are tabulated and presented with the help of various charts, graphs etc. and are analyzed, compared with the standard ones. In this chapter, the data related to the capital adequacy have been collected, presented, analyzed and compared with the standard set by the NRB Directives.

4.1 Analysis of Capital Adequacy of Nepalese Commercial Banks

Capital adequacy ratio shows the relationship between capital fund and total risk weighted assets of the bank. The capital fund includes the core capital (tier I capital) and the supplementary capital (tier II capital) of the bank. The capital adequacy ratio assists in determining the risk level of the depositors. Risk weight is assigned to various assets and off-balance sheet items of the bank to arrive at the risk weighted assets. According to NRB directives No. 1, commercial banks in Nepal are required to have minimum 5.5% core capital to RWA and 11% Capital Adequacy Ratio for the fiscal year 2063/64 to 2064/65 and minimum 6% core capital to RWA and 10% Capital Adequacy Ratio for the fiscal year 2065/66 to till date. Total capital funds include core capital (tier I capital) and supplementary capital (tier II capital).

4.1.1 Capital Structure of Everest Bank Ltd.

As stated earlier, the capital of the bank is the cushion for the depositors on the risk they are exposed. The capital of the bank has been categorized into two parts viz. Core Capital and Supplementary Capital.

Table 4-1 Capital Structure of EBL

(Amount in million)

Fiscal Year	2063/064	2064/065	2065/066	2066/067	2067/068
A. Core Capital	**1,171.11**	**1,900.84**	**1,981.55**	**2,537.06**	**2,927.13**
Paid up Equity Share Capital	378.00	491.40	638.82	830.46	1,119.60
Irredeemable Non-cumulative preference shares	140.00	340.00	0.00	0.00	0.00
Share Premium	6.42	206.42	14.78	14.78	14.78
Proposed Bonus Equity Shares	113.40	147.42	191.64	249.14	111.96
Statutory General Reserves	232.84	323.09	450.83	617.19	803.45
Retained Earnings	130.54	83.75	82.44	72.62	36.09
Un-audited current year cumulative profit	0.00	0.00	0.00	0.00	0.00
Capital Redemption Reserve	0.00	60.00	260.00	320.00	380.00
Capital Adjustment Reserve	170.10	220.10	284.10	367.14	367.14
Dividend Equalization Reserves	0.00	0.00	0.00	0.00	0.00
Other Free Reserve	13.22	28.66	58.94	65.73	94.11
Less: Goodwill	0.00	0.00	0.00	0.00	0.00
Less: Fictitious Assets	0.00	0.00	0.00	0.00	0.00
Less: Investment in equity in licensed Financial Institutions	0.00	0.00	0.00	0.00	0.00
Less: Investment in equity of institutions with financial interests	0.00	0.00	0.00	0.00	0.00
Less: Investment in equity of institutions in excess of limits	0.00	0.00	0.00	0.00	0.00
Less: Investments arising out of underwriting commitments	13.41	0.00	0.00	0.00	0.00
Less: Reciprocal crossholdings	0.00	0.00	0.00	0.00	0.00
Less: Other Deductions	0.00	0.00	0.00	0.00	0.00
B. Supplementary Capital	**504.96**	**505.18**	**722.28**	**720.03**	**678.66**
Cumulative and/or Redeemable Preference Share	0.00	0.00	200.00	200.00	160.00
Subordinated Term Debt	300.00	240.00	180.00	120.00	60.00
Hybrid Capital Instruments	0.00	0.00	0.00	0.00	0.00
General loan loss provision	187.20	243.21	320.24	377.99	432.29
Exchange Equalization Reserve	16.96	20.37	22.04	22.04	22.90
Investment Adjustment Reserve	0.80	1.60	0.00	0.00	3.47
Assets Revaluation Reserve	0.00	0.00	0.00	0.00	0.00
Other Reserves			0.00	0.00	0.00
Total Capital Fund (A+B)	**1,676.07**	**2,406.02**	**2,703.83**	**3,257.09**	**3,605.79**

(Source: Annual Reports of EBL 2063/64-2067/68)

As per the Table 4-1, the capital structure of EBL for FY2063/64 to FY2067/68 has been shown. The total capital consists of core capital as the major portion. The core capital consists of mainly paid up capital, irredeemable non-cumulative preference shares, proposed bonus equity shares, statutory general reserves, capital adjustment reserves and retained earnings. Besides, the supplementary capital consists of subordinated term debt and general loan loss provision as the major components. The core capital plays the significant role in the total capital fund. Both the core and the supplementary capital of the bank are in increasing trend which ultimately has been increasing the total capital fund of the bank.

4.1.2 Capital Fund Analysis of Everest Bank Ltd.

Table 4-2 Total Capital Fund of EBL

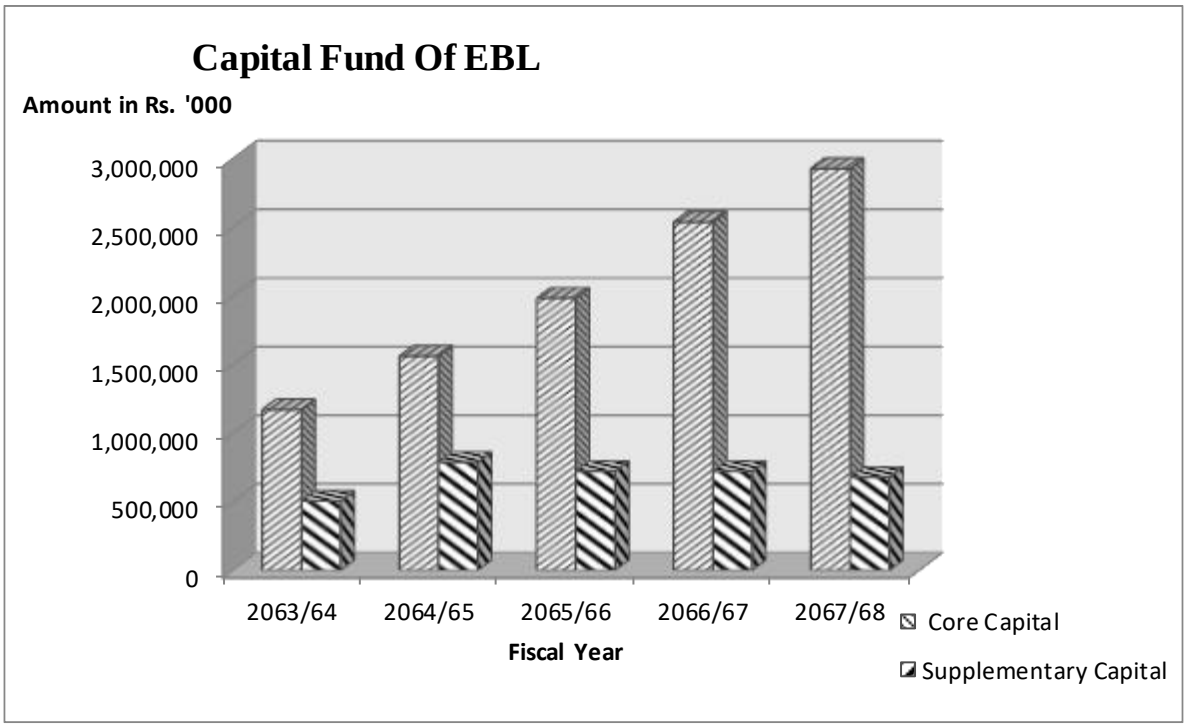
Amount in Rs. '000

Fiscal Year	2063/64	2064/65	2065/66	2066/67	2067/68
Core Capital	1,171,133	1,560,859	1,981,579	2,537,092	2,927,168
Supplementary Capital	504,982	787,531	722,291	720,049	678,673
Total Capital Fund	**1,676,115**	**2,348,390**	**2,703,870**	**3,257,141**	**3,605,841**
% of core capital on total capital fund	**70**	**66**	**73**	**78**	**81**

(Source: Annual Reports of EBL 2063/64-2067/68)

The data shows that the total capital fund and core capital is in increasing trend from fiscal year 2063/64 to 2067/68 whereas supplementary capital is increasing in the fiscal year 2064/65 but decreasing from fiscal year 2065/66 to 2067/68. The figures show that Everest bank has subsequently increased its capital fund by increasing its core capital, whereas the supplementary capital has declined in FY2065/66 to FY2067/68. The portion of core capital in total capital fund is huge as compared to the supplementary capital as 70%, 66%, 73%, 78% and 81% in FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively. It means contribution of core capital is more in growth of total capital fund.

Figure 4-1 Capital Fund of EBL



4.1.3 Analysis of Core Capital to RWA and CAR of Everest Bank Ltd.

Table 4-3 Analysis of Core Capital to RWA and CAR of EBL

Amount in Rs. '000

Fiscal Year	Total RWA	Core capital	Total capital fund	NRB Requirement (%)		Actual Maintained (%)		Differential (%)	
				Core Capital to RWA	CAR	Core Capital to RWA	CAR	Core Capital to RWA	CAR
2063/64	14,976,737	1,171,133	1,676,115	5.5	11	7.82	11.19	2.32	0.19
2064/65	20,974,862	1,560,859	2,348,390	5.5	11	7.44	11.20	1.94	0.20
2065/66	25,619,753	1,981,579	2,703,870	6	10	7.73	10.55	1.73	0.55
2066/67	30,240,428	2,537,092	3,257,141	6	10	8.39	10.77	2.39	0.77
2067/68	34,583,547	2,927,168	3,605,841	6	10	8.46	10.43	2.46	0.43

(Source: Annual Reports of EBL 2063/64-2067/68)

The table clearly shows that Everest bank has maintained the core capital to RWA ratio as per the Capital Adequacy guidelines of NRB. To comply with NRB norms,

this bank has subsequently increased its capital fund by increasing in its core capital and supplementary capital. Besides, its risk-weighted assets are also increasing each year during the last five years.

Core capital to RWA of Everest bank Ltd during the FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 are 7.82%, 7.44%, 7.73%, 8.39% and 8.46% respectively. The ratio is within the limit and even excess by 2.32%, 1.94%, 1.73%, 2.39 and 2.46% respectively. The Core Capital to RWA has decreased in the fiscal year 2064/065and increasing in 2065/066, 2066/67 and 2067/68. The decline is due to the lower proportionate change of the core capital compared to the RWA of the bank. However, the bank could maintain the ratio as per the NRB requirement.

CAR of the bank during the FY 2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 are 11.19%, 11.20%, 10.55%, 10.77% and 10.43% respectively. The standard CAR as per the NRB Directive is 11% for 2063/64 and 2064/65 and 10% for 2065/66 to till date which shows that the bank maintained the required CAR.

Figure 4-2 Core Capital to RWA of EBL

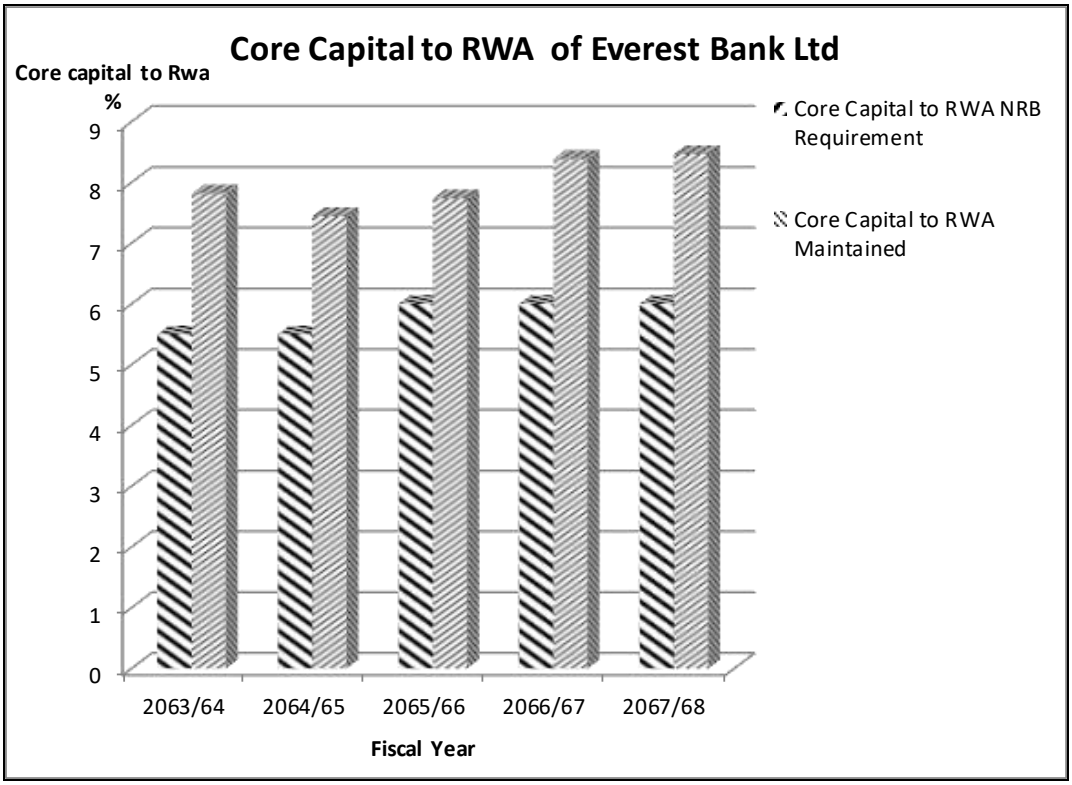
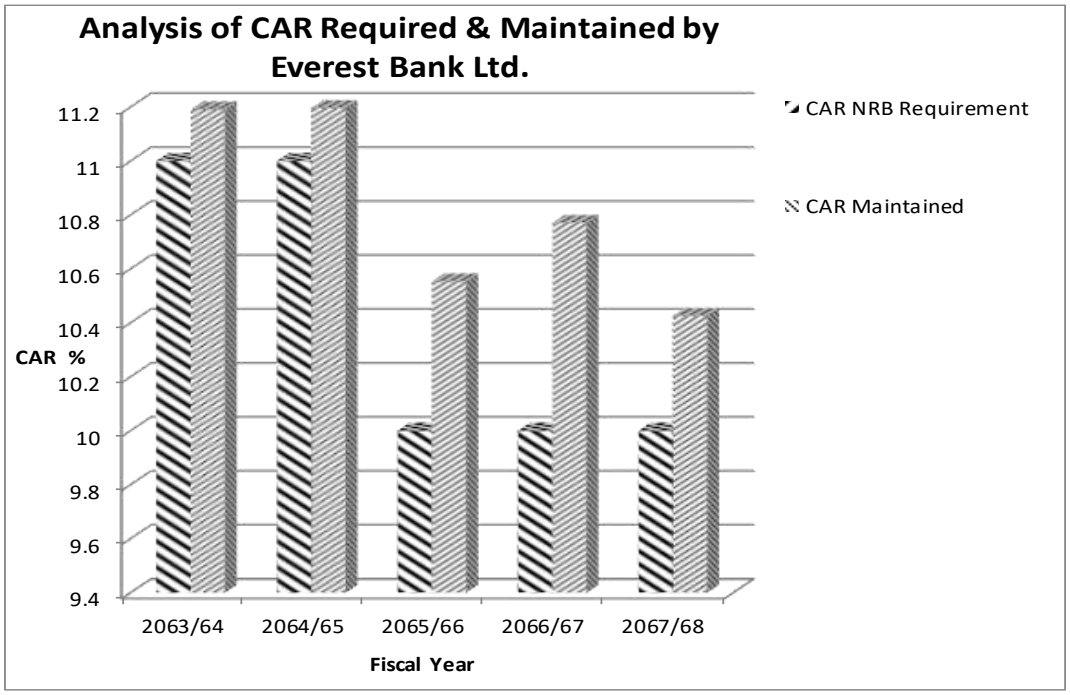


Figure 4-3 Analysis of CAR Required and Maintained by EBL



4.1.4 Capital Structure Analysis of NIC Bank Ltd.

The composition of the total capital fund i.e. the total of core capital and the supplementary capital along with the components of NIC Bank have been shown in the following table.

Table 4-4 Capital Structure of NIC Bank Ltd.

(Amount in '000)

Fiscal Year	2063/064	2064/065	2065/066	2066/067	2067/068
A. Core Capital	**911,806.55**	**1,293,750.76**	**1,649,007.42**	**1,750,459.21**	**1,956,125.42**
Paid up Equity Share Capital	660,000.00	943,877.10	1,140,480.00	1,311,552.00	1,311,552.00
Irredeemable Non-cumulative preference shares	0.00	0.00	0.00	0.00	0.00
Share Premium	0.00	0.00	41,873.58	41,873.58	41,873.58
Proposed Bonus Equity Shares	132,000.00	190,080.00	171,072.00	0.00	0.00
Statutory General Reserves	108,472.04	157,083.65	220,570.48	310,539.22	409,679.95
Retained Earnings	0.00	1,627.08	30,557.47	2,094.62	68,169.10
Un-audited current year cumulative profit	11,892.52	0.00	0.00	0.00	0.00
Capital Redemption Reserve	0.00	2,191.78	42,191.78	82,191.78	122,191.78
Capital Adjustment Reserve	0.00	0.00	0.00	0.00	0.00
Dividend Equalization Reserves	0.00	0.00	0.00	0.00	0.00
Other Free Reserve	0.00	0.00	3,100.04	2,775.01	5,791.79
Less: Goodwill		0.00	0.00	0.00	0.00
Less: Fictitious Assets	558.01	1,108.85	837.93	567.00	3,132.78
Less: Investment in equity in licensed Financial Institutions	0.00	0.00	0.00	0.00	0.00
Less: Investment in equity of institutions with financial interests	0.00	0.00	0.00	0.00	0.00
Less: Investment in equity of institutions in excess of limits	0.00	0.00	0.00	0.00	0.00
Less: Investments arising out of underwriting commitments	0.00	0.00	0.00	0.00	0.00
Less: Reciprocal crossholdings	0.00	0.00	0.00	0.00	0.00
Less: Other Deductions	0.00	0.00	0.00	0.00	0.00
B. Supplementary Capital	**296,801.24**	**319,880.06**	**305,927.35**	**260,102.26**	**267,647.02**
Cumulative and/or Redeemable Preference Share	0.00	0.00	0.00	0.00	0.00
Subordinated Term Debt	200,000.00	197,808.21	157,808.21	117,808.21	77,808.21
Hybrid Capital Instruments	0.00	0.00	0.00	0.00	0.00
General loan loss provision	91,175.65	113,504.57	137,710.77	128,368.11	150,751.59
Exchange Equalization Reserve	5,625.59	8,567.28	10,408.37	13,421.32	13,856.22
Investment Adjustment Reserve	0.00	0.00	0.00	504.62	25,231.00
Assets Revaluation Reserve	0.00	0.00	0.00	0.00	0.00
Other Reserves	0.00	0.00	0.00	0.00	0.00
Total Capital Fund (A+B)	**1,208,607.79**	**1,613,630.82**	**1,954,934.77**	**2,010,561.47**	**2,223,772.44**

(Source: Annual Reports of NIC 2063/64-2067/68)

As per the table 4-4, the core capital of the bank mainly comprises of paid up equity share capital, share premium, proposed bonus equity shares, statutory general reserves, capital redemption reserve and retained earnings. The large proportion of the core capital is fulfilled by the paid up capital, retained earnings, and the general reserves. All these factors have driven the core capital of the bank into the increasing trend over the last five years period.

On the other hand, the supplementary capital of NIC Bank has been decreasing since FY2065/66. However, there was seen a slight increment in the supplementary capital in FY2067/68 due to the increment in the general loan loss provision of the bank. But this is not the significant increment to have impact in the total capital fund. The major portion of the total capital fund of the bank is held by the core capital.

4.1.5 Capital Fund Analysis of NIC Bank Ltd.

Table 4-5 Total Capital Fund of NIC Bank Ltd.

Amount in Rs. '000

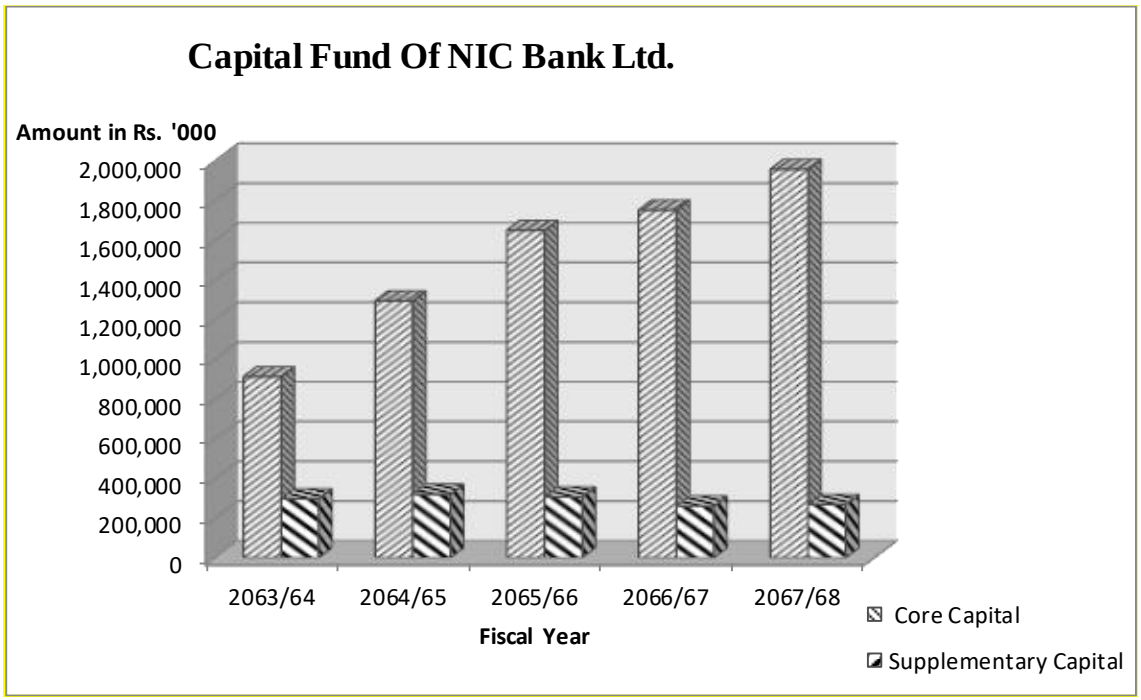
Fiscal Year	2063/64	2064/65	2065/66	2066/67	2067/68
Core Capital	911,807	1,293,751	1,649,007	1,750,459	1,956,125
Supplementary Capital	296,801	319,880	305,927	260,102	267,647
Total Capital Fund	**1,208,608**	**1,613,631**	**1,954,935**	**2,010,561**	**2,223,772**
% of core capital on total capital fund	**75**	**80**	**84**	**87**	**88**

(Source: Annual Reports of NIC 2063/64-2067/68)

The data shows the total capital fund of NIC Bank is in increasing trend. As per the given data, the bank has subsequently increased its capital fund by increasing its core capital more than the supplementary capital. The portion of core capital in total capital fund is 75%, 80%, 84%, 87% and 88% in FY 2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively. This shows that the contribution of core capital is more in growth of total capital fund. Core capital plays important

role in safeguarding both the survival of the bank and stability of the financial system.

Figure 4-4 Capital Fund of NIC Bank Ltd.



4.1.6 Capital Fund Analysis of NIC Bank Ltd.

Table 4-6 Analysis of Core Capital to RWA and CAR of NIC

Amount in Rs. '000

Fiscal Year	Total RWA	Core capital	Total capital fund	NRB Requirement (%)		Actual Maintained (%)		Differential (%)	
				Core Capital to RWA	CAR	Core Capital to RWA	CAR	Core Capital to RWA	CAR
2063/64	13,012,738	911,807	1,208,608	5.5	11	7.01	9.29	1.51	-1.71
2064/65	12,998,509	1,293,751	1,613,631	5.5	11	9.95	12.41	4.45	1.41
2065/66	15,741,614	1,649,007	1,954,935	6	10	10.48	12.42	4.48	2.42
2066/67	15,559,350	1,750,459	2,010,561	6	10	11.25	12.92	5.25	2.92
2067/68	17,250,711	1,956,125	2,223,772	6	10	11.34	12.89	5.34	2.89

(Source: Annual Reports of NIC 2063/64-2067/68)

The table shows the position of core capital to RWA and CAR of NIC Bank. This bank has subsequently increased its capital fund by increasing more in its core capital. At the same time its risk weighted assets is also increasing each year. If we see the composition of total capital fund, the portion of core capital is very high and is sufficient enough to meet the CAR also not taking into consideration of supplementary capital. The RWA of the bank is fluctuating. However, it decreased very slightly in FY2064/65. Again it increased substantially in FY2065/66 followed by reduction in FY2066/67. Further, it again raised substantially in FY2067/68. Besides, the total capital fund of the bank has been growing for the last five years.

The core capital to risk weighted assets of NIC Bank are 7.01%, 9.95%, 10.48%, 11.25% and 11.34% in FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively. This shows that it exceeds the standard limit of 5.5% for 2063/64 and 2064/65 and 6% for 2065/66 to 2067/68. Thus, it is favorable to the bank.

As per NRB directive, the standard CAR to be maintained by the banks is 11% for 2063/64 and 2064/65 and 10% for 2065/66 to 2067/68. The CAR maintained by the bank are 9.29%, 12.41%, 12.42%, 12.92% and 12.89% in FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively. This shows that NIC Bank could not maintain CAR as required by the bank in FY2063/64 by 1.71%. However, the bank has fulfilled the NRB guidelines regarding capital adequacy since FY2064/65 to FY2067/68. During these periods, the CAR maintained by the bank had excess of 1.41%, 2.42%, 2.92% and 2.89% respectively. Thus, NIC Bank is also in the trend of setting the standard CAR as well as Core Capital to RWA ratio.

Figure 4-5 Core Capital to RWA of NIC

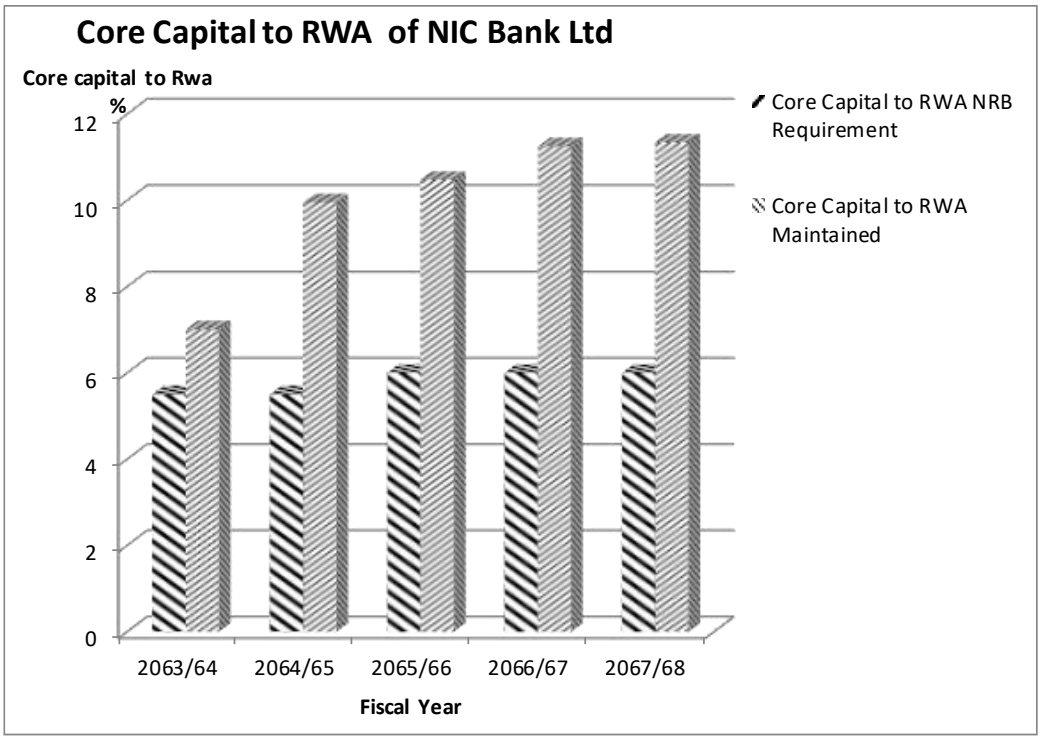
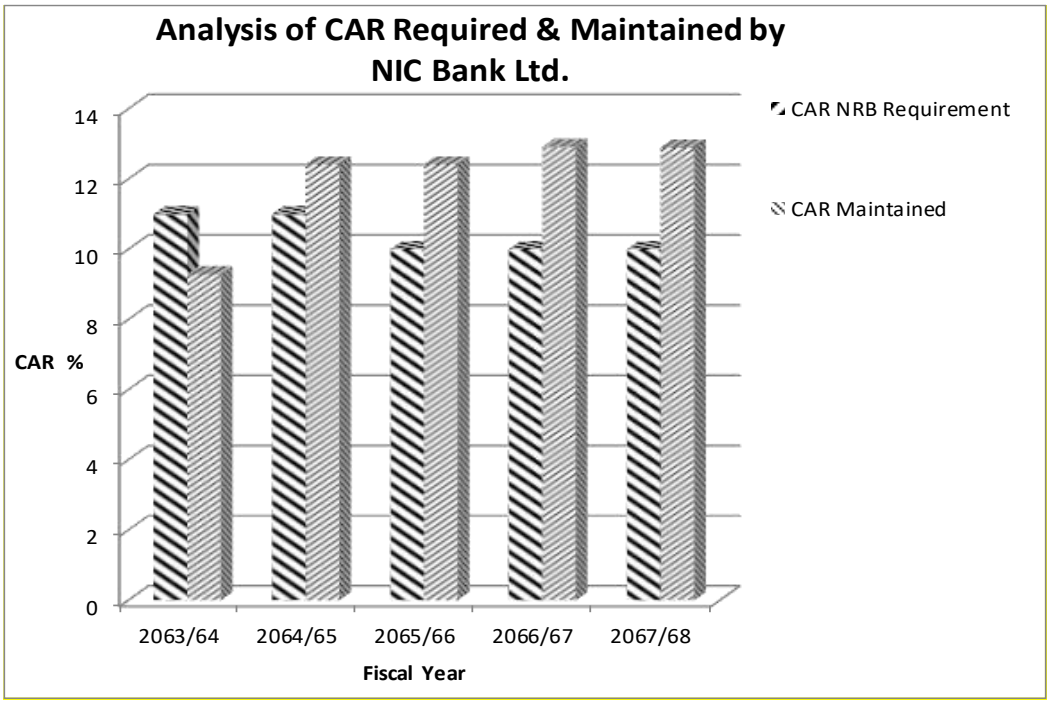


Figure 4-6 Analysis of CAR Required and Maintained by NIC



4.1.7 Comparative Analysis of Total Capital Fund and Core Capital of Sample Banks

Table 4-7 Comparative Analysis of Total Capital and Core Capital

Amount in '000

Fiscal Year	NIC		EBL	
	Total Capital	Core Capital	Total Capital	Core Capital
2063/64	1,208,608	911,807	1,676,115	1,171,133
2064/65	1,613,631	1,293,751	2,348,390	1,560,859
2065/66	1,954,935	1,649,007	2,703,870	1,981,579
2066/67	2,010,561	1,750,459	3,257,141	2,537,092
2067/68	2,223,772	1,956,125	3,605,841	2,927,168

(Source: Annual Reports of Sample Banks 2063/64-2067/68)

As per the table 4-7, EBL has higher total capital than that of NIC Bank. Similarly, the core capital of EBL is also higher than that of NIC Bank. The capital fund of both the sample banks comprises the higher portion of the core capital than the supplementary capital.

4.1.8 Comparative Analysis of RWA of Sample Banks

The Basel Committee has given the risk weight for every balance sheet and off balance sheet items. The risk weight varies from 0% to 200% depending upon their security. The total risk weighted asset is calculated by multiplying the possessed asset by its corresponding risk weight. The risk-weighted assets are derived by calculating the amount from the respective on and off balance sheet items with the prescribed weightage. The on-balance sheet items are categorized into four types while assigning weightage to them. NRB has assigned weightage of 0%, 20%, 100% and 150% according to their nature of risk bearing which is based on the standard of Basel Committee. Similarly, the off-balance sheet items are categorized into six types viz. 0%, 10%, 20%, 50%, 100% and 200%

Risk weighted assets is better for the bank if it is less. The banks should always try to minimize the risk associated with their assets. But the fact is that, where there is

no risk, there is no return. Therefore, the banks should balance between the risk and the return.

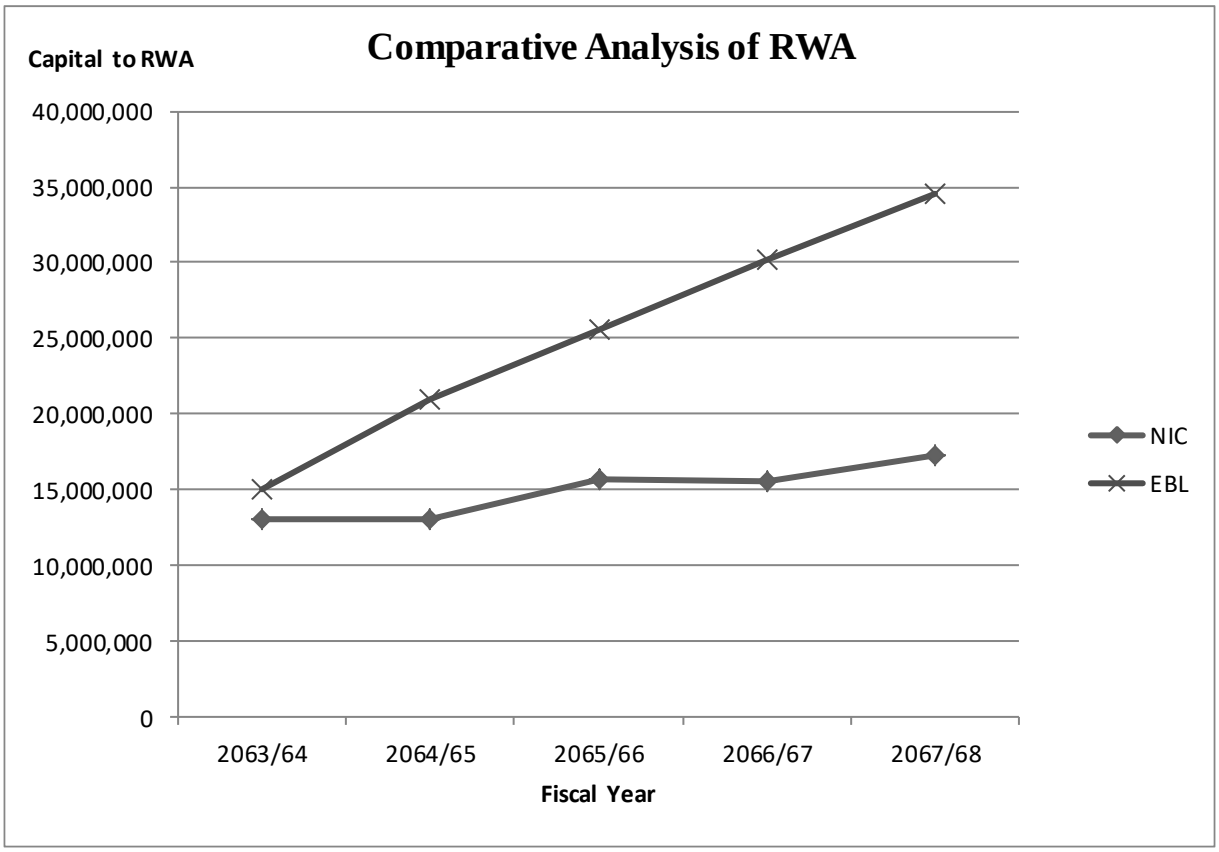
Table 4-8 Comparative Analysis of RWA

		Amount in Rs. '000
Fiscal Year	**NIC**	**EBL**
2063/64	13,012,738	14,976,737
2064/65	12,998,509	20,974,862
2065/66	15,741,614	25,619,753
2066/67	15,559,350	30,240,428
2067/68	17,250,711	34,583,547

(Source: Annual Reports of Sample Banks 2063/64-2067/68)

The table above shows the comparison of the RWA of the sample banks viz. EBL and NIC Bank. EBL holds the highest assets among the two sample banks. Thus, it also holds the highest risk weighted assets too.

Figure 4-7 Comparative Analysis of RWA



4.1.9 Comparative Analysis of Core Capital to RWA of Sample Banks

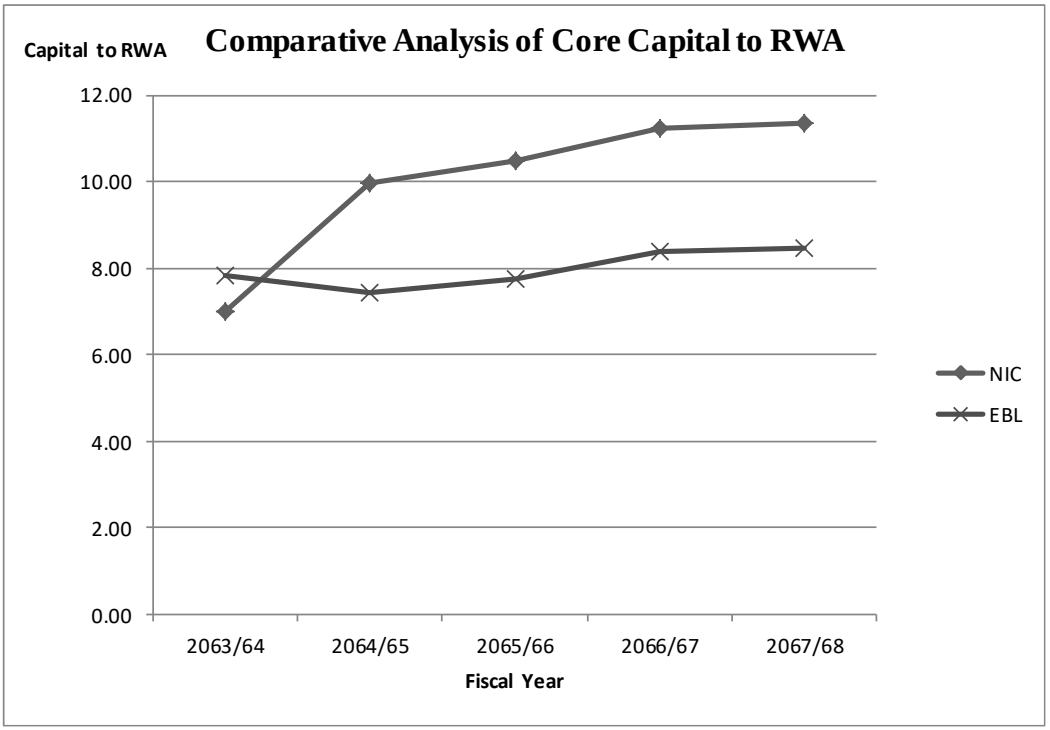
Table 4-9 Comparative Analysis of Core Capital to RWA of Sample Banks

Fiscal Year	NIC	EBL
2063/64	7.01	7.82
2064/65	9.95	7.44
2065/66	10.48	7.73
2066/67	11.25	8.39
2067/68	11.34	8.46

(Source: Annual Reports of Sample Banks 2063/64-2067/68)

The table shows the comparative analysis of core capital to risk weighted assets of the sample banks. The data shows that core capital to risk weighted asset of EBL is higher than that of NIC Bank in FY2063/64 only while NIC Bank has higher core capital to risk weighted assets than that of EBL from FY 2064/65 to FY 2067/68. However, both the sample banks could maintain the core capital to RWA as per the NRB Directive.

Figure 4-8 Comparative Analysis of Core Capital to RWA of Sample Banks



4.1.10 Comparative Analysis of CAR of Sample Banks

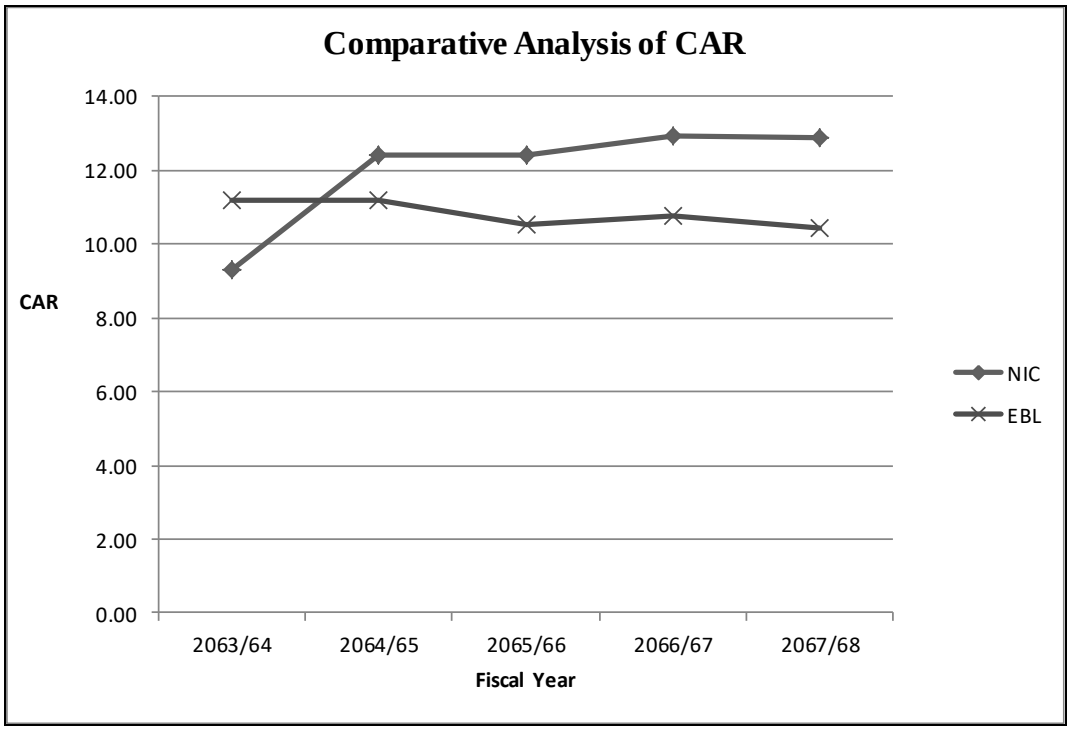
Table 4-10 Comparative Analysis of CAR of Sample Banks

Fiscal Year	NIC	EBL
2063/64	9.29	11.19
2064/65	12.41	11.20
2065/66	12.42	10.55
2066/67	12.92	10.77
2067/68	12.89	10.43

(Source: Annual Reports of Sample Banks 2063/64-2067/68)

The table shows the comparative analysis of capital adequacy ratio of sample banks from fiscal year 2063/64 to 2067/68. EBL could maintain higher CAR in FY2063/64 than that of NIB Bank. The CAR maintained by NIC Bank is higher than that of EBL from FY 2064/65 to FY 2067/68. However, the CAR maintained by both the banks are as per the NRB requirement of CAR of 11% in FY 2063/64 and FY2064/65 and 10% from FY2065/66 to FY2067/68.

Figure 4-9 Comparative Analysis of CAR of Sample Banks



4.2 Correlation Analysis

Table 4-11 Correlation Analysis Between Net Profit and Total Capital Fund

Banks	Coeffcient of Correlation (r)	Relationship	Coefficient of Determination (r^2)	Probable Error (PE)	6*PE	Significant or Insignificant
NIC	0.9444	High degree of positive correlation	0.8918	0.0326	0.1958	Significant
EBL	0.9943	High degree of positive correlation	0.9887	0.0034	0.0204	Significant

(Source - Annex-I to II)

The correlation coefficient between the total capital fund and net profit describes the degree of relationship between these two variables. Between these two variables, net profit is independent variable whereas total capital fund is dependent variable. Hence through this comparison we can find out the changes taken place in total capital fund with every charge in net profit. To what extend is the impact of net profit of bank on total capital fund can be calculated or is exhibited by the correlation coefficient.

The table shows that coefficient of correlation (r) between total capital fund and net profit of EBL and NIC Bank is 0.9943 and 0.9444 respectively. This analysis shows that there is high degree of positive correlation between total capital fund and net profit of both the sample banks. It means with every increase in the volume of net profit, there will also be increment in the total capital fund.

The coefficient of determination (r^2) for EBL is 0.9887; it means 98.87% of the total variation in Total Capital Fund (dependent variable) has been explained by the Net profit (independent variable). Similarly for NIC Bank coefficient of determination is 0.8918; it means 89.18% of the total variation in Total Capital Fund (dependent variable) has been explained by the Net profit (independent variable).

The correlation of coefficient of EBL and NIC Bank is 0.9943 and 0.9444 respectively which is greater than 6 times the values of their respective probable error. Hence we can interpret that the correlation between two variables Net profit and total capital fund of both the sample banks is certain and significant and as well as there is closeness between these two variables.

4.3 Major Findings of the Study

The major findings of the research study entitled "*A Study On Capital Adequacy Of Nepalese Banks (With Special Reference to Everest Bank Ltd. and Nepal Industrial and Commercial Bank Ltd.)*" from the above presentation and analysis have been highlighted as below:

Major Findings from the Analysis of Secondary Data:

4.3.1.1Everest Bank Ltd.:

- The Capital structure is the cushion against the probable risk. It comprises of the core capital and the supplementary capital. The core capital of Everest Bank consists of mainly paid up capital, irredeemable non-cumulative preference shares, proposed bonus equity shares, statutory general reserves, capital adjustment reserves and retained earnings.
- The supplementary capital of the bank consists of subordinated term debt and general loan loss provision as the major components. The core capital plays the significant role in the total capital fund. Both the core and the supplementary capital of the bank are in increasing trend which ultimately has been increasing the total capital fund of the bank.
- Everest bank has subsequently increased its capital fund by increasing its core capital, whereas the supplementary capital has declined after FY2065/66 till FY2067/68. The portion of core capital in total capital fund is huge as compared to the supplementary capital as 70%, 66%, 73%, 78%

and 81% in FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively. Its risk-weighted assets are also increasing each year during the last five years.

- Core capital to RWA of Everest bank ltd. during the FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 are7.82%, 7.44%, 7.73%, 8.39% and 8.46% respectively. The ratio is within the limit and even excess by 2.32%, 1.94%, 1.73%, 2.39% and 2.46% respectively.
- CAR during the FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 are 11.19%, 11.20%, 10.55%, 10.77% and 10.43% respectively. The standard CAR as per the NRB Directive is 11% for FY 2063/64 and 2064/65 and 10% from FY 2065/66 to 2067/68 which shows that the bank has maintained the CAR excess than the requirement.
- EBL has been providing various range of services through huge network of branches and thus has been able to increase profit substantially which ultimately assisted to increase the capital base of the bank.
- The bank maintains the Core capital to RWA and CAR higher than the NRB requirements. This shows that the bank has sound capital adequacy position and adequate to safeguard the depositors and creditors as well.

4.3.1.2NIC Bank:

- The core capital of NIC Bank mainly comprises of paid up equity share capital, share premium, proposed bonus equity shares, statutory general reserves, capital redemption reserve and retained earnings. The large proportion of the core capital is fulfilled by the paid up capital, retained earnings, and the general reserves. All these factors have driven the core capital of the bank into the increasing trend over the last five years period.
- The supplementary capital of NIC Bank has been decreasing since FY2065/66. However, there was seen a slight increment in the supplementary capital in FY2067/68 due to the increment in the general

loan loss provision of the bank. But this is not the significant increment to have impact in the total capital fund.

- The major portion of the total capital fund of the bank is held by the core capital.
- Total capital fund and core capital of NIC are in increasing trend. The supplementary capital increased in FY2064/65 but it started declining trend since FY2065/66 to FY2067/68. However, the major portion of the total capital being the portion of core capital, the total capital was in raising trend. Thus, the total capital fund consists of 75%, 80%, 84%, 87% and 88% core capital and remaining the supplementary capital in FY2063/64, FY2064/65, FY2065/66, FY 2066/67 and FY2067/68 respectively.
- The contribution of core capital is more for growth of total capital fund of the bank.
- The risk weighted assets of the bank is of fluctuating nature.
- NIC Bank is able to maintain its core capital to RWA ratio as the differential CAR shows the positive figures. The differential core capital to RWA ratio of the bank is 1.51, 4.45, 4.48, 5.25 and 5.34% respectively during the study period.
- The bank maintained core capital to RWA ratio of 7.01%, 9.95%, 10.48%, 11.25% and 11.34% in FY2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively which is higher than the standard set by NRB Directive i.e. % 5.5% for FY 2063/64 and 2064/65 and 6% for 2065/66 onwards.
- The differential CAR of the bank are -1.71, 1.41, 2.42, 2.92, 2.89% in the fiscal years 2063/64, 2064/65, 2065/66, 2066/67 and 2067/68 respectively.
- The bank could not maintain CAR in FY2063/64 as per the requirement of NRB. However, it could maintain it during FY2064/65 to FY2067/68.
- Bank's performance has been consistent over the duration of last five years.

Chapter V

5 Summary, Conclusion and Recommendations

This is the final and very important chapter of the research since this chapter is the extracts of all the previously discussed chapters. This chapter consists of three sections viz. Summary, Conclusion and Recommendations. The summary section deals with the revision of all four chapters-Introduction, Review of Literature, Research Methodology and Data Presentation and Analysis. The conclusion derived from the study is also discussed in this section. Likewise, in recommendation section, various suggestions and recommendations are made based on the findings of the thesis. This chapter plays a significant role to various stakeholders like the concerned sample banks, NRB, the researchers etc.

5.1 Summary

This study *"A Study on Capital Adequacy of Nepalese Banks (With Special Reference to Everest Bank Ltd. and Nepal Industrial and Commercial Bank Ltd.)"* has been prepared for the partial fulfillment of the requirements of Master of Business Studies (MBS). The thesis originally starts from the crisis seen in the financial sector for last some years. The banks are, in fact the risky business. The banking industry is growing larger and has become very complex to supervise and regulate in such a complex risk environment. Besides, the bank failures have forced the regulatory authorities to supervise the banking sector. The thesis attempts to deal with the problems corresponding to the burning issues of the decade i.e. the Capital Adequacy of the commercial Banks. Nepal is also not free of such risk. So, the thesis deals with the abovementioned phenomenon and studies two commercial banks of Nepal viz. Everest Bank Ltd. and NIC Bank Ltd.

NRB, as the banker of the banks lays down various rules and regulation for the banks. NRB issues directives to the commercial banks from time to time and amends them on as per the requirement. The thesis deals with NRB Directive regarding the Capital Adequacy. It studies whether the commercial banks are maintaining the Capital Adequacy Ratio as per the NRB Directive or not.

This study is mainly based on secondary data provided by concerned banks. The main objectives of the research study are to assess capital adequacy position of selected commercial banks and compare their performance with the standard mentioned by NRB directives; to assess whether the selected commercial banks have maintained the capital adequacy to safeguard the creditors; to explore different challenges faced by the commercial banks in practicing NRB Directive related to Capital Adequacy and to make necessary recommendations to the commercial banks for improving their capital adequacy position.

5.2 Conclusion

The following major conclusions are derived from the research work entitled *"A Study on Capital Adequacy of Nepalese Banks (With Special Reference to Everest Bank Ltd. and Nepal Industrial and Commercial Bank Ltd)".*

The new Capital Adequacy Framework (Basel II) not only promotes improvements in risk management and regulatory capital allocation but also raises a variety of implementation challenges for both supervisors and banks. All the sample banks have paid more attention to core capital rather than supplementary capital. They have made composition of the total capital with more than 60% of the core capital and remaining that of supplementary capital.

As per the findings derived, the commercial banks have been maintaining the capital adequacy position as per the NRB Directives. The Capital Adequacy can be studied as per the core capital to Risk Weighted Assets Ratio. As far this ratio is

concerned, all the sample banks have maintained the standard ratio of 5.5% from FY 2063/64 to 2064/65 and 6% from FY 2065/66 to 2067/68.

The appropriate Capital Adequacy Ratio indicates that the depositors, creditors, as well as the investors are safe. This ultimately assists in improving the financial performance of the banks.

- All the sample commercial banks have been maintaining the capital adequacy ratio as the NRB directives in the study period. NIC Bank is maintaining higher CAR than EBL.
- Capital adequacy norms are set by the NRB in order to protect the depositors. Depositors are the prime beneficiary of the capital adequacy norm. Since the banks are maintaining the CAR as per NRB directives, it can be concluded that banks have safe-guarded the deposit of the depositors.
- The minimum capital requirement is determined by the credit risk, operational risk and market risk the bank faces. This describes the basis for the capital requirements calculation. The focus is on refining the way credit risk is calculated and accounted for and looks over the portfolio risk rating, while ensuring the new operational risk requirements are implemented and finally that a proper measurement system for these risks is created. Thus, the creditors are also safeguarded against the risk they face.
- The coefficient of correlation, coefficient of determination and probable error of all the sample banks shows that net profit is closely related with total capital fund of the banks. If the net profit increases, there is increase in total capital fund too.
- Increased protection to the money of the depositors through increased capital adequacy ratios adds more stringent to loan related directives and increase in demand for shareholder's contribution in the banks by foregoing

dividends for loan loss provisions and various other reserves to increase the core capital.

5.3 Recommendations

Based on the analysis, interpretation & conclusions, certain recommendation can be made here so that the concerned authorities, future researchers, academicians, bankers can get some insights on the capital adequacy position of the commercial banks.

- Capital adequacy ratio determines the capacity of the commercial banks to safe-guard the depositors, investors and the creditors. So, the banks should maintain the required percentage of CAR as per the NRB directive regarding the Capital adequacy ratio.
- Capital Adequacy Policy is an approach to mitigate the bank risk. It is fashioned with the strong belief that minimum capital requirements should be closely aligned with prevailing risk management practices. On the basis of risk sensitive minimum capital requirements, the bank capital can be more efficiently used to protect against risk. To mitigate the risk of the assets and protect the bank from unforeseen financial accidents, the banks should maintain the adequate capital.
- EBL and NIC Bank are maintaining CAR just above the requirement. They should increase the ratio by reducing the total risk weighted by assessing the low risk bearing assets for investment. This will help the bank to reduce the Total Risk Weighted Assets.
- The high CAR of the bank also justifies the strategy to reduce investment in less interest earning assets and take up some risky investment to increase the profit.
- The banks are only focusing on core capital although they can fulfill the capital adequacy requirements by using supplementary capital up to the 50% of total capital fund. Banks should also pay the attention toward

raising the supplementary capital so that the excess of core capital can be cushioned for the hard period.

- The internal control mechanism of the bank should be strong enough so that the timely assessment can be done.
- Balance on loans and advances and the capital should be maintained so that there is control over the huge disbursement of loans which may impose less protection against the depositors.
- Basel II has the potential to significantly improve credit risk measurement and management practices and thereby contribute to the effectiveness and stability of the financial systems. Therefore, NRB should give the utmost attention for the implementation which would prove to be the milestone in the Nepalese financial system.
- Undercapitalized financial institutions are the ones that are first attacked by the spectators and hedges at the time of crisis and create contagious effect on the other institution as well. Besides, undercapitalized financial institutions cannot gain credibility and corporate growth even in normal times. This requires that financial institutions should adequately capitalize and possess resilience against the attackers by dealers and customers.

Bibliography

A. Books

Dahal, S. and Dahal, B. (2056), *A hand Book of Banking*, Kathmandu: Times Graphics Printers (P) Ltd

Gupta, S.P. (1991), *Statistical Method*, New Delhi: Sultan Chand and Sons Publications

Gupta, S.P. (1995), *Fundamental of Statistics*, New Delhi: Himalayan Publishing House

Joshi, P.R.(2002) *Research Methodology*, 2nd Edition, Kathmandu; Buddha Academic Enterprises Pvt. Ltd.

K.C., S. (1999), *Banking Theory and Practices*, 18th edition, New Delhi: Vikash Publishing House Pvt. Ltd.

Kohan, M. (1999), *Financial Institutions and Markets*, New Delhi: Tata McGraw-Hill Publishing Company Ltd.

Kothari, C.R. (1994), *Quantitative Technique*, New Delhi: Vikash Publishing House Pvt. Ltd.

Pant, P.R. and Wolff, H.K. (2005), *Social Science Research and Thesis Writing*, Kathmandu: Buddha Academic Publishers and Distributors Pvt. Ltd.

Singh, H. B. (2063), *Banking and Insurance*, Kathmandu, Asia Publishing (P) Ltd.

Vaidya S. (1997), *Money and Banking*, Kathmandu: Prativa Joshi.

Weston, J.F. and Copeland, T.E. (1992), *Managerial Finance*, New York: The Dryden Press.

Weston, J.F. and et.al. (1996), *Essential of Managerial Finance*, San Diego: The Dryden Press.

B. Journals and Reports

Everest Bank Ltd, *Annual Reports* (2063/064 to 2067/068)

Nepal Rastra Bank (2066 - 2068), Kathmandu: *Unified Directives*

Nepal Rastra Bank (Banks & Financial Institutions Regulation, Statistics Division), *Banking and Financial Statistics (No.56)*, Mid – January 2011.

Nepal Rastra Bank (Banks & Financial Institutions Regulation, Statistics Division)), *Banking and Financial Statistics (No. 55),* Mid – July 2010.

Nepal Rastra Bank (Banks & Financial Institutions Regulation, Statistics Division)), *Banking and Financial Statistics (No. 54),* Mid – January 2010.

Nepal Rastra Bank (2011), Kathmandu: Banking Supervision Annual Reports

Nepal Rastra Bank (2012), Kathmandu: List of Banks and Financial Institutions

Nepal Industrial and Commercial Bank Ltd, *Annual Reports,* (2063/064 to 2067/068)

C. Thesis and Dissertations

Bhattarai, Mahesh (2009), *A Study of NRB Directive with Special Reference to Capital Adequacy and Loan Loss Provision*

Khatiwada, Krishna (2008), *A Study of Basel II Accord with Special Reference to Everest Bank Ltd.*

Newa, Sachin (2006), *An Overview of Capital Adequacy Ratio and Basel Capital Accord*

Pandey, Santosh (2007), *A Case Study of Himalayan Bank Ltd, NRB Directives their Implementation and Impact on the Commercial Bank*

Shrestha, Manoj (2010), *NRB capital Adequacy Norms for the Commercial Banks and its Impacts Case study of Bank of Kathmandu and Himalayan Bank Ltd*

Timsina, Suresh (2011), *A Study On Capital Adequacy Of Commercial Banks In Nepal*

D. Websites

www.everestbankltd.com

www.nicbank.com.np

www.nrb.org.np

Appendix

Annex-I

Correlation Analysis of Everest Bank Ltd.

Fiscal Year	Net Profit (x)	Total Capital Fund (y)	$x = X - \bar{X}$	x^2	$y = Y - \bar{Y}$	y^2	xy
2063/64	296.40	13664.08	-326.28	106458.64	-9236.09	85305432.38	3013552.75
2064/65	415.21	18339.08	-207.47	43043.80	-4561.09	20803578.48	946290.17
2065/66	638.73	23884.67	16.05	257.60	984.50	969232.37	15801.16
2066/67	831.76	27556.35	209.08	43714.45	4656.18	21679974.94	973513.28
2067/68	931.30	31056.69	308.62	95246.30	8156.52	66528753.26	2517263.97
Total	**3113.40**	**114500.87**		**288720.79**		**195286971.43**	**7466421.33**

$$Mean(\bar{X}) = \frac{\sum X}{n} = \frac{3113.40}{5} = 622.68$$

$$Mean(\bar{Y}) = \frac{\sum Y}{n} = \frac{114500.87}{5} = 22900.17$$

$$Karl\ parson's\ correlation\ coefficient(rxy) = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}}$$

$$= \frac{7466421.33}{\sqrt{288720.79 \times 195286971.43}} = 0.9943$$

Coefficient of Determination

$$coefficient\ of\ Determination\ (rxy)^2 = (Correlation\ of\ coefficent)^2$$

$$= 0.9943^2 = 0.9887$$

Probable of Error (PE)

$$PE(r) = 0.6745 \times SE(r) = 0.6745 \times \frac{(1 - r^2)}{\sqrt{n}} = 0.6745 \times \frac{(1 - 0.9887)}{\sqrt{5}}$$

$$= 0.0034$$

Annex-II

Correlation Analysis of NIC Bank Ltd.

Fiscal Year	Net Profit (x)	Total Capital Fund (y)	$x = X - \bar{X}$	x^2	$y = Y - \bar{Y}$	y^2	xy
2063/64	159.00	1209.00	-174.00	30276.00	-593.60	352360.96	103286.40
2064/65	243.00	1614.00	-90.00	8100.00	-188.60	35569.96	16974.00
2065/66	317.00	1955.00	-16.00	256.00	152.40	23225.76	-2438.40
2066/67	450.00	2011.00	117.00	13689.00	208.40	43430.56	24382.80
2067/68	496.00	2224.00	163.00	26569.00	421.40	177577.96	68688.20
Total	**1665.00**	**9013.00**		**78890.00**		**632165.20**	**210893.00**

$$Mean(\bar{X}) = \frac{\sum X}{n} = \frac{1665}{5} = 333$$

$$Mean(\bar{Y}) = \frac{\sum Y}{n} = \frac{9013}{5} = 1802.60$$

$$Karl\ parson's\ correlation\ coefficient(rxy) = \frac{\sum xy}{\sqrt{\sum x^2 \times \sum y^2}}$$

$$= \frac{210893}{\sqrt{78890 \times 632165.20}} = 0.9444$$

Coefficient of Determination

$$coefficient\ of\ Determination\ (rxy)^2 = (Correlation\ of\ coefficent)^2$$

$$= 0.9444^2 = 0.8918$$

Probable of Error (PE)

$$PE(r) = 0.6745 \times SE(r) = 0.6745 \times \frac{(1 - r^2)}{\sqrt{n}} = 0.6745 \times \frac{(1 - 0.8918)}{\sqrt{5}}$$

$$= 0.0326$$