REGULATION OF CENTRAL BANK–CAPITAL ADEQUACY AND LOAN CLASSIFICATION

(Comparative Study of Kumari Bank Limited, Machhapuchchhre Bank Limited and Everest Bank Limited)

A THESIS

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Nepal is one of the least developed countries with poorest economy in the world. Nepal is known as Land locked country. It lies between India and china having area 147181 Sq. Km. It has more than 31.5 percent leaving below the poverty line. Its per capita income is $270 only. The Economic development reflected by the annual GDP rate in recent year is around four percent and has fluctuating trend. The nearest distance to reach ocean from here is 2000 Km .Likewise, it has 500 Mile open border with India. Nepal is located in between altitude 26 22' North to 30 27' North and longitude 80 4' East to 88 12' East. The average length being 885 Km East to West and average breath is about 193 Km North to South (CBS, 2007).

Agriculture is the mainstay of the Economy, providing a livelihood for over 80 % of the population and accounting for 40% of GDP. Industrial activities mainly involve the processing of agricultural produce including jute, sugarcane, tobacco and grains. Therefore, major concentration of every government of Nepal has been the development and advancement of agriculture sector. But still there has been scarcity of finance in this sector .Nepalese agriculture has been suffering form lack of modernization, deterioration in fertility due to soil erosion, rapid deforestation, and over dependent on monsoon. To some extent the establishment of Agricultural Development Bank has provided the support the farmer to raise the required capital (Dahal, 2002:15)

Capital formation commercial banks play a crucial role on it. Capital is one of the most important components for an organization. Capital, in the simple term, is defined as the wealth employed for the production of more wealth**.** Capital includes any fund thus employed. In accounting term, Capital is excess of assets of assets over liabilities**.** Without capital it is not possible to set up any type of business whether it is a general store or a big business house. Every organization is started with a zero position and only come into existence when the promoters, owners or shareholders finance on it as capital.

Each and every organization should have adequate capital to run business. Although the banks are the major source of capital, they also have to raise the capital to run business. Especially, the banks' capital have major role to play as the banks have obligation to mass people and its depositors. Capital is required by a bank as a cushion to absorb losses, which should be borne by shareholders rather than depositors and to finance the infrastructure of the business (NRB, 2006:15-17).

Capital adequacy has become one of the most important factors for assessing the soundness of the banking sector. Raise and utilization of fund are the primary function of the commercial banks. Commercial banks collect the large amount of deposit from general public. The depositors think that the depositing their money in a bank is safe. But what does happen if the bank does not have enough capital to provide a buffer against the future, unexpected losses? So, capital must be sufficient to protect a bank's depositors and counterparties from the risk like, market and credit risks. Otherwise the bank will use all the money of depositors in their own interest and depositors will have to bear loss (NRB, 2006:17).

Capital adequacy is one of the most important and emerging topics in the prudential regulations issued by Nepal Rastra Bank (central bank of Nepal) and implemented by Commercial Bank in Nepal. Capital adequacy is a measure of the financial strength of banks or securities firms, usually expressed as a ratio of its capital to its assets. For banks, there is now a worldwide capital adequacy standard, drawn up by the Basel committee, of the Bank for International Settlements (BIS). This BIS ration requires banks to have capital equal to 8 per cent of their assets.

Capital adequacy measures the financial strength of a financial institution. It tells how much capital it has relative to (as a percentage of) the money it has lent out, i.e. its assets. There are specific minimum levels of capital set by international banking rules. They are designed to make it possible for banks to absorb a reasonable amount of losses before getting into deep trouble.

With every investment decision, there is not only an anticipated return, but also a certain amount of risk associated with that return. The investment decision therefore, may be

characterized as trade off between risk and return. It is generally assumed that the larger amount of risk, the larger the anticipated return must be to compensate for this risk. Just as the risk associated with various securities and assets varies widely, the ability and willingness to accept risk also varies substantially from investor to investor. This proposed study aims to look at the role of capital adequacy of the commercial banks in economic development, sustainable future for commercial banks with the maintenance of adequate capital.

The efficient functioning of markets requires participants to have confidence in each other's stability and ability to transact business. Capitals rules help foster this confidence because they require each member of the financial community to have adequate capital. This capital must be sufficient to protect depositors and counter-parties from the risks of the institution's on- and off-balance sheet risks. Banks are required to set aside capital to cover these two main risks. Capital standards should be designed to allow a firm to absorb its losses, and in the worst case, to allow a firm to wind down its business without loss to customers, counter-parties and without disrupting the orderly functioning of financial markets.

The commercial bank established under the commercial banks Act 2031 BS and Company Act 2053 BS. However, Nepal Rastra Bank as a regulatory body for banks and the financial institutions, has right to specify the capital requirements and other requirements. Being the Central Bank of Nepal, Nepal Rastra Bank has the responsibility to give special attention to the interest of the depositors. It is to be noted that as per the banking and financial statistics of Nepal Rastra Bank , the commercial banks of Nepal have collected more than Rs 310 billion money from the depositors by the end of 2006/2007. Such a big amount of money should have to be secured and Nepal Rastra Bank has the major responsibility to protect it (NRB, 2007:10).

Nepal Rastra Bank issues various directives to be complied by all commercial banks of the country in March 2001. The directives consist of nice volumes. The NRB directive no 1 includes the capital adequacy norms for the commercial banks representing the requirements of maintaining capital fund to the prescribed ratios. The directives are said

to be based on the internationally accepted norms of Basel Committee. The Basle committee on banking supervision is a committee of banking supervisory authorities which was established by the central bank Governors of the Group of Ten countries in 1997. The Basle committee on banking supervision in 1988 has developed an internationally accepted standard for capital adequacy based on what is known as the "risk assets" approach. This show how important capital for supervisory purposes allocates weight to different board categories of assets (e.g. government securities, loans to banks, customers' advances) and expresses capital as a percentage of total risk – weighted assets. The committee consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Sweden Switzerland, the United Kingdom and the United States. Widely accepted, though national authorities are free to impose higher standards on their banks and often do so. As originally designed, this approach was only concerned with credit risk, but at the beginning of 1996 the Basle Committee published proposal to bring market risks into the calculation of capital requirements (NRB, 2001:11-12).

1.1.1 Introduction of Sample Banks

a) Machhapuchchhre Bank Limited (MBL)

Machhapuchchhre Bank Limited, registered in 1998 is the first commercial bank in the western part of the Kingdom of Nepal having head office in Pokhara. The bank has its own land and well-built three storied office building with sufficient parking area and electronic surveillance system.

The bank with perception of tremendous business potentials outside Kathamandu, in a very short span of time, expanded branches in Kathmandu, Damauli, Bhairahawa, Birgunj, Mahendrapul (Pokhara), Rambazar (Pokhara) and in Bagar (Pokhara). A full-fledged banking branch is opened in Jomsom too. The bank aims to serve the people of urban and rural areas.

Machhapuchchhre Bank Limited is a pioneer in introducing the latest technology in banking in the country. It is the first bank to introduce centralized banking software named GLOBUS BANKING SOFTWARE developed by Temenos NV, Switzerland.

The bank provides modern banking facilities such as Anywhere Banking and Internet Banking to its valued customers.

Machhapuchchhre Bank Limited Strives to facilitate its customer needs by delivering the best services in combination with the state of the art technologies and best international practices.

b) Kumari Bank Limited (KBL)

Kumari Bank Limited, came into existence as the fifteenth commercial bank by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in Nepal.

Kumari Bank Ltd has been providing wide- range of modern banking services through 6 points of representation across the country. The bank has adopted Globus Banking Software, developed by Temenos NV, Switzerland, to provide centralized data base system to all branches. The bank has also been providing visa debit card, which has an access on ATMs (including 6 own ATMs) and POS (Point of Sale) terminals both in Nepal and India.

Within 5 years of its establishment, the bank has been able to recognize itself as an innovative and growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organizational mission.

c) Everest Bank Limited (EBL)

Everest Bank Limited (EBL) was established in 1994 and started its operations with a view and objective of extending professionalzed and efficient banking services to various segments of the society. EBL joined hands with Punjab National Bank (PNB), India as its

joint venture partner in 1997. PNB is the largest Public Sector Bank of India having 109 years of banking history with more than 4400 offices all over India and is known for its strong systems and procedures and a distinct work culture

The Bank's Paid-up Capital has increased to 455 million against the Authorized Capital of 750 million whereas the Core Capital of the Bank is around 700 million. The local Nepalese promoters hold 50% stock in the Bank's equity, while joint venture partner PNB contributes 20 % of equity whereas the public holds remaining 30%.

Despite fragile law and order situation especially during last 2-3 years, the Bank has doubled its deposits, advances as well as profits during the period. Its operating profit have grown by 55% during the financial year 2060-61, the net profit has increased by 52%. The average credit growth has been over 26% reaching a figure of 6099 million, deposits having reached a figure of 8064 million, a notable feature of the bank's achievement is its containment of NPAs with gross NPAs restricted to 1.72% of the total credit whereas net NPA is being reduced to nil.

d) Introduction of Nepal Rastra Bank (NRB)

Nepal Rastra Bank was established in 1955 under the Nepal Rastra Bank Act. 2012 BS. Now, Nepal Rastra Bank is running under a new act – Nepal Rastra Bank Act, 2058 BS. Nepal Rastra Bank is the central bank of Nepal. Nepal Rastra Bank is the only authority to issued Nepalese Rupees currency. It has right to fix exchange rates with other convertible currencies. Nepal Rastra Bank has 12 branches throughout the Kingdom of Nepal including the Head office at Baluwatar and the main Banking office at Thapathali in Kathmandu. NRB has formulated several regulations related to establishment, operation, capital, ownership etc. of commercial banks operating in Nepal. To regulate the operations of commercial banks, Nepal Rastra Bank has issued various directives which include capital adequacy norms to be followed by commercial banks.

The role of NRB is that of a facilitator in addition to that of a regulator and a supervisor. This role has acquired more prominence in the deregulated and liberalized environment as it exists at present.

Nepal Rastra Bank, which acts on behalf of the government, has its policy set in line with the government's policy of the "economic liberalization" and its role in the economy is indispensable. NRB's role has further increased in this kind of recessionary period of the country. In the order to bet out of this situation, NRB with effect from Dec. 3, 1997 reduced the refinancing bank rate from 11% to 9%. There was no objective of this policy change. Firstly, NRB wanted to put pressure on commercial banks to reduce the lending rates. This was needed to increase the credit flow in the economy. Secondly, NRB wanted to inject liquidity into the system from its own source. It was believed that with the reduction in the bank rate, commercial banks would borrow from the central bank at the lower rate (Pandey, 2002:13).

As per the Nepal Rastra Bank Act, 2058 BS the objectives of NRB are stated as follows:

a) To formulate and maintain appropriate monetary and foreign exchange policy for stable price and balance of payments situation required for sustainable economic development;
b) To manage the required liquidity and stability of banking and financial sector;
c) To develop secure, healthy, and efficient payment system;
d) To monitor, and evaluate banking and financial system within the country supervise

In addition to, Nepal Rastra Banks Act. 2058 BS has prescribed the rights, duties and functions of NRB as follows:

a) To issue currency notes and coins in the market;
b) To formulate and implement necessary monetary policy for price stability;
c) To formulate and implement foreign exchange policy;
d) To determine the foreign exchange rate adjustment regime;
e) To operate and manage foreign exchange reserves;
f) To issue license to commercial banks and finance companies for carrying out financial transactions and regulate, inspect, supervise and monitor such transactions;

g) To function as the banker, advisor and fiscal agent of Nepal Government;

h) To function as a bank of commercial bank and financial institutions and as a lender of last resort,

i) To establish, promote and regulate the system of payments, clearing and settlements; and

j) To carry out other important functions as necessary towards realizing the objectives enjoined by the Act.

1.2 Focus of the Study

The study is based on the capital funds of the bank which is supposed to be adequate as per the Nepal Rastra Bank directive no. 1, which is related with the capital adequacy norms for commercial banks. Basically, the norms emphasize on the basic requirements of the capital fund that a commercial banks should possess. The basic objective of the norms is to safeguard the interest of the depositors. The thesis report is generally focused on accordance of the capital adequacy norms of Nepal Rastra Bank by these commercial banks. As stated by these norms, bank's capital has been divided into two categories which are usually known as Tier-1 and tier-2. At present, 25 commercial banks have been established in the country and some more are in the process of being established. The report as case study, analyzes the matters, issues and problem related the capital funds of Kumari Bank Ltd (KBL) and Machhapuchchhre Bank Ltd (MBL) which is struggling to include and Everest Bank Ltd (EBL) which is believed to be of the strong joint venture banks of the country. Generally, the thesis report is focused on accordance of the capital adequacy norms of Nepal Rastra Bank by these commercial banks.

1.3 Statement of the Problem

With the prevailing economic recession in the country, there has been lower investment in the agriculture, manufacturing, industrial and financial sectors. Despite the better performance of commercial bank, there are still problem, which need to be resolved. We can observe that there is a lack of investment opportunity of fund.

Every business form can take advantage through appropriate capital mix because long run profitability depends on its capital structure besides other factors. The depositors deposit their money in a bank for security of their money. Banking and financial statistics (2008) shows that the amount deposited in various banks of the country is Rs. 337497.2 million by the end of FY 2007/08. But the question arises, if the bank go bankrupted, what will happen to the depositors of such money? Thus an adequate capital fund is required to safeguard the money of depositors.

NRB issued a new set of directives to commercial banks consisting of eleven parts. Out of eleven directives, the directives no.1 has been issued for norms on capital adequacy to be followed by commercial banks. The capital adequacy ratio is based on the total risk weighted assets, According to NRB directives; commercial banks should maintain their core capital at 4.5%, 5.0%, 5.5% and 6.0% and capital fund at 9%, 10%, 11% and 12% of the total risk weighted assets as of FY 2001/02, 2002/03, 2003/04 and 2004/05 respectively.

Capital adequacy is the core subject for long-term sustainability of any organization. It is an emerging topic in financial sector. It can play a vital role for the success of commercial banks. To bridge the gap of implementing and supervisory bodies for their effective results in performance, this research is conducted.

Due to differences in economic, political and financial situations, legal and other restrictions, government polices, risky business, management ownership and control and other environmental variables, provisions of capital adequacy may be different in different years.

The present study seeks to explore the answer to the following questions:

1. Why these changes are required?
2. How efficiently do MBL, EBL and KBL use their capital?
3. Do MBL, EBL and KBL earn adequately?
4. Whether banks maintain adequate core capital and supplementary capital as required by NRB directives or not?

1.4 Objectives of the Study

The main objectives of the study are as follows:

i) To analyze the significance and impact of Nepal Rastra Bank capital adequacy norms on commercial banks;
ii) To examine the capital adequacy of MBL , EBL and KBL.
iii) To examine the relation of capital funds to the other stakes of bank
iv) To make necessary suggestions and recommendations.

1.5 Significance of the Study

The study will have a great importance in the present context of banking business in Nepal. We can study that there is a lack of investment opportunity of fund. In such a situation, these deposits have to be protected by adequate capital fund of respective commercial banks. Actually, the banks should have adequate capital fund though there are plenty of investment opportunities. Currently, raising capital is a tough task. The increasing non performing assets, being the main headache of commercial banks, meeting the capital adequacy is very tough, however it is not impossible. It has been observed that any study has not been undertaken regarding the capital adequacy norms for commercial bank. Raising capital is a tough task at present. The increasing non performing assets, being the main problem of commercial banks, meeting the capital adequacy is very tough, although it is not impossible.

1.6 Limitation of the Study

As each and every study has its limitation. We have limited resources and it may be difficult to explore researcher to find out new aspect. Reliability of statistical tools used and lack of research experience are the major limitation and some other limitations can be enlisted as follows:

- The authenticity of the report depends on the authenticity of the data provided and collected.

- Time constraint is another major limitation of this study. Because of such the scope of study is limited, so as to complete the study within specified time frame.
- The study analyzes the five-year data from 2003/04 to 2007/08
- The study is limited of the capital fund and capital adequacy norms for commercial banks.
- The study is mainly based on the secondary data collected form various sources. However, some primary data has also been derived from the analysis of questionnaire prepared for the research study.

1.7 Organization of the Study

The study has been organized into five chapters, each chapter deals with the specific aspects of the study, which is as follows:

Chapter one: Introduction.
Chapter two: Review of Literature.
Chapter three: Research Methodology.
Chapter four: Presentation and Analysis of Data.
Chapter five: Summary, Conclusion and Recommendation.

First Chapter provides a general introduction to the study named Capital adequacy norms, introduction to Nepal Rastra Bank, introduction Kumari Bank Ltd. and introduction to Machhapuchchhre Bank Ltd. It contains general background, statement of the problems, objective of the study, significance of the study and limitation of the study.

Second Chapter presents the theoretical analysis and review of the related and pertinent literature available. It will include a discussion on the conceptual framework and review of related studies highlighting on its relevant findings.

Third Chapter describes the methodology employed in preparing this study. It deals with research design, population and sample, source of data for the study. It briefly mentions the data collection and analysis technique and inherent limitation of such technique.

Four Chapter of study illustrates the collected data into a systematic format. The analysis of these data is also included in this section. As well as, interpretation of analysis has also been done in this section. The major findings of the study is presented in this chapter

Last Chapter presents summary, conclusion and recommendation of the study. This section incorporates an outlet for future research. Bibliography and appendix are included at the end of the study.

CHAPTER TWO
REVIEW OF LITERARURE

The first chapter has already highlighted about the general introduction of the study name capital adequacy norms, introduction to Nepal Rastra Bank, Kumari Bank Ltd., Everest Bank Ltd., Machhapuchchhre Bank Ltd., regarding their growth and the objectives. This second chapter consists of relevant review of literatures, which is very important as it provides valuable inputs to this study. Only by knowing what others have said, one can be realistic to make the study more useful and relevant.

The available literature is reviewed relating to the field of this study and conceptual thoughts are presented below:

2.1 Conceptual Review

2.1.1 Evolution of Banking Sector Globally

The beginning of modern commercial banking is traceable to primeval days. As a pubic enterprise, banking made its first beginning around the middle of the twelfth century in Italy. The Bank of Venice, founded in 1157 was the first public banking institution. Following it were established the Bank of Barcelona and the Bank of Genoa in 1047 respectively. The Bank of Venice and the Bank of Genoa continued to operate until the end of the eighteenth century. With the expansion of commercial activities in Northern Europe there sprang up a number of private banking houses in Europe and slowly it spread throughout the world.

The scope of development of commercial banks was in the 19th century. According to M.C Vaish, the 19th century witnessed the phenomenal development of modern problems enabling to turn their attention away from old money changing business to many new important jobs that comes in the wake of the new industrial progress. The 20th century observes development of various banking institutions highly specialize, sophisticated particularly in advanced countries like the U.S.A, U.K., France, Japan and others. Today various international organizations like L.F.C, I.M.F., A.D.B., World Bank etc have

developed which are influencing the whole business of the global world (Grywinshki, 1991:87).

In the context of India, the British established the commercial bank in the colonial age, which was called as Exchange Bank's. So the term banking system is different in various countries. Similarly, in the context of Nepal the first step towards the establishment of a modern banking was taken any in 1973 A.D. However it does not mean that the banking in Nepal is of recent origin. In Nepal, modern banking starts from the establishment of Nepal Bank Limited.

2.1.2 Evolution of Banking Sector in Nepal

Banking services is the oldest service industry in Nepal. It has gone through the various stages of evolution and development since the Vedic times (2000 to 1400B.C).Though the modern banking institution has a very recent origin in Nepal, some crude bank operations were in practice even in the ancient times. Nepal has a long history of using of money. History unveils that the first Nepali coins to be introduced were Manank during the time in power of the King Mandev and Gunank during the time of power of the King Gunakamdev. Afterwards the coins were reintroduced during the control of Amshuverma. After the unification of Nepal, the great King Prithivi Narayan Shah started the coin Mohar. The Taksar was established in 1789 to issue coins scientifically. In 1876, during Rana Regime an office named Tejarath Adda was established Tejarath Adda did not collect deposits from the public but gave loans to employees and public against the bullion.

Later, with the growing necessity of the commercial banks in the world, the Nepal Bank Limited, the first commercial bank of Nepal, came into being in 1937 A.D replacing the older system of banking. Nepal Bank Limited dominated the financial sector of the country for almost 30 years without any competitor. This bank played a major role to boost up the Nepalese economy during that period. The growth and development country is possible only when competitive banking services reach each and every corner of the country. In the present situation different type of banks are being practiced in Nepal, but

among them commercial banks play essential role in the economic development of the country. Nepal Rastra Bank was established in 1955 a central bank of Nepal which was very essential for Nepalese economy. However, as the central bank Nepal Rastra Bank had its own limitations and as a commercial bank it was not logical for Nepal Bank Limited to go to unprofitable sector. So to catch up with these problems, the government established Rastriya Banijaya Bank in 2022 B.S (1965 A.D), under Banijaya Bank Act 1965 A.D as a fully state owned commercial bank. Then establishment of Nepal Industrial Development Bank etc, followed the formation of financial institutions.

With the aim to provide quality-bank service, enhance the efficiently and healthy competition, foreign investment and new technology in banking sector was introduced. Nepal Arab Bank, the first joint venture bank of Nepal was established in 1984 A.D (2041 B.S). The bank was the outcome of joint venture with Dubai Bank Ltd. of United Arab Emirates. The footstep of this bank was followed by Nepal Indosuez Bank, a joint venture bank with a bank of Paris in 1986 A.D (2041 B.S) and later Nepal Grind lays Bank, now renamed as Standard Chartered Bank, a joint venture bank with a bank of United Kingdom was established in1987 A.D (2042 B.S). (Dahal: 2002:10-11)

2.1.3 Concept of Central Bank

A central bank is the government's bank world over. Central bank is the head of monetary and banking sector. Central bank is the national institution that monitors all financial and monetary procedures and policies.

Clark has expressed "the central bank as bank that often carries out government economic policy, influences interest and exchange rates and monitors the activities of commercial and merchant banks. In this way it functions as the government's bankers and is the lender of the last resort to the banking system" (Clark, 1999:65).

Encyclopedia Britannica defines Central Bank as an institution that is charged with regulating the size of a nation's money supply, the availability and the const of credit, and the foreign-exchange value of its currency. Regulation of the availability and cost of credit may be nonselective of may be designed to influence the distribution of credit

among competing uses. The principal objectives of modern central bank in carrying out theses functions are to maintain monetary and credit conditions conducive to high level of employment and production, a reasonably stable level of domestic prices, and an adequate level of international reserves. (Encyclopedia Britannica, 2002)

According to R.P. Kent- "Central bank may be defines as an institution which is charged with the responsibility of managing the expansion and contraction of the volume of money in the interest of the general public welfare" (Dahal, 2002:24).

2.1.4 Development of Central Bank

Unlike commercial bank, a central bank neither accepts deposits from the public nor gives loan to the public. It is set up to male sound monetary policy. Being the bank of government, its focus is always on monetary stability. It controls banking sector by regulation, persuasion and market operation.

In 1894, the Bank of England was converted into the central bank of England. Bank of England's successful operation as the central bank encouraged other countries to establish a central bank. This was done by establishing the Governor and the Company of the Bank of England.

In Sept 1920, an international Financial Conference was held at Brussels, which pointed out that those countries which had not yet established a central bank and were suffered from the World War 1 and the consequences should establish a central bank. In the spring of 1922, the Genoa Conference also indicated the need of central bank.

Shekhar and Shekhar have stated that after the World War I and the consequent chaotic monetary conditions brought home to many countries the imperative necessity of establishing a centralized institution capable of creating and maintaining equilibrium in the monetary sphere (Shekhar & Shekhar,1994:512).

2.1.5 Importance and Function of Central Bank

The importance and function of a central bank is a complex task. It is difficult to lay down each function of a central bank. A careful study of the central banks operating in various countries would enable to draw certain bred conclusions as to fundamental function of a central bank (Shekhar& Shekhar, 1994:521)

A central bank is also important in the context to co-ordinate with different institutions such as International Monetary Fund etc. It works under the supervision and guidance of such institution to develop the monetary system of a country.

Generally, central bank enjoys the monopoly of note issue. It issues notes of various denominations and supplies to the market as per requirement. It controls money flow in the market by imposing monetary policy. It issues notes after full analysis of unemployment, inflation, economic growth, etc. of the country.

The role of central bank is that of a banker of the banks. The central bank also acts as a lender of the last resort. When banks in the country need fund and they cannot collect from other sources, they knock the door of the central bank. Central bank as the lender of the last resort gives loans to banks with or without securities. Though central banks try to rescue failing banks in a number of ways, it will not be prudent for every bank to expect all types to support from central banks. Central normally rescue those banks which are ‘to big to fail’ and the banks which can be revived.

A central bank is the supervisor of the financial sector. It makes regulations for operation of financial institutions. It gives guides and assists in operating banking system as a whole. A central bank has full authority to interfere in the banking market. It regularly monitors to ensure proper implementation of its rules. Incase of violation, it takes different types of actions. A central bank is empowered even to snatch the license of operation.

The central bank plays the role of a watch dog when it comes to supervising the financial institutions of the country. It comes up with various, monitory policies which have to be

followed by the financial institutions operating under it. Incase it is found that the central bank are not complying with prudential norms laid down by it, it has right to penalize such institutions (Vidya, 1979: 78-79).

Objectives between a central bank and other commercial banks are different. The main objectives of a central bank is to assist the government to implement economic policies without any profit motive, whereas the main objective of other banks is to earn profit by mobilizing funds collected from the general public. As well as the central bank plays the role of guardian and parents to other commercial banks.

A central bank is also important in the context to co-ordinate with different international institutions such as International Monetary Fund (IMF) etc. It works under the supervision and guidance of such institution to develop the monetary system of a country.

2.1.6 Concept of Commercial Banks

Commercial banks are the financial institutions which primarily think of profit making but which is not a sole objectives and should not evaluate just on the ground of the profit it earns. Commercial banks provide short term debt necessary for trade and commerce. They take deposits from the public, which helping the capital formation, grant loan in different forms. They provide working capital to trade, to industry and even to agriculture. Commercial banks of developing country financial small and cottage industry under priority sector investment scheme to uplift the backward sector of the economy.

“A commercial bank is a financial intermediary that provides a financial service product in an evolving industry. The industry is characterized by changing competition, regulation and technology. The central activity of banking remains the securing of deposit funds and making of consumer and commercial loans” (Johnson & Johnson, 1992:3)

Stating the function and need of commercial banks, the World Book Encyclopedia has defined, “Commercial Banks are the most numerous banks. They offer a full arrange of

services. They primarily serve the needs of business but also offer their services to industry"(The World Book Encyclopedia, 1998:93).

"Trade within a country involves only one kind of currency such as dollars in America, Yen in Japan or Rupees in Nepal. Trade among countries may involve several kinds of currencies. For this reason, business firms and government use an international system of baking and finance to exchange one kind of currency for another." (The World Book Encyclopedia, 1998:64)

According to John Holland, "Commercial banks are financial intermediaries that borrow money from savers in the form of deposit and re-lend them to ultimate borrowers by making loans on buying securities."(Holland, 1999:67)

American institute of banking defines commercial banks as "Commercial bank is a corporation, which accepts demand deposits subject to check and makes short term loans to business enterprises, regard less of the scope of its other securities"(American Institute of Banking, 1972:345).

Under the Nepal Commercial Bank Act, 2031 B.S. "The commercial banks are those banks which provide short term and long term debts whenever necessary for trade and commerce. They accept deposits from the public and grant loans in different forms. They purchase and discount the bill for exchange, promissory notes, and exchange foreign currencies"(Nepal Commercial Bank Act. 2031 B.S).

Commercial Banks are controlled and regulated by central banks. In Nepal, Nepal Rastra Bank is the central bank that controls and regulates the commercial banks through Rastra bank Act 2012 B.S.

2.2 Theoretical Review

In 1975, an international committee was formed by the central banks and supervisory authorities of ten centralized countries to coordinate the surveillance exercised by national authorities over the international banks. This group of ten countries, known as the G-10 countries, included Belgium, Canada, France, Germany, Holland, Italy, Japan,

Sweden, the United Kingdom and the United States. Since inception, the Basle Committee on Banking Supervision has met regularly at the Bank for International Settlement in Basle, Switzerland.

The Basle concordat 1975 provided a general statement on the responsibilities of national authorities for the supervision of international banks. This concordat was revised in 1983, paving the way for more standardized methods of bank supervision among central banks around the world.

In 1988, after consulting with bank supervisors around the world, the Basle Committee proposed a risk based capital adequacy framework. Underlying this framework, commonly known as the Basle Capital Accord, was the premise that a uniform approach to establishing minimum levels of capital will help to: a) Strengthen the soundness and stability of international banking system, b) Promote a fair and consistent basis for evaluating capital; and c) Diminish competitive inequalities among international banks. The weighted risk based risk based framework proposed by the Basle Committee focuses on credit risk and takes into account both off balance sheet and on balance sheet credit risk exposure. The approach also distinguishes the varying degrees of risk inherent to different assets by assigning weights according to asset class. The Basel I Capital Accord 1988 have been endorsed by the Group of Ten central-bank Governors. The Basle Committee on Banking Supervision comprises representatives of the central banks and supervisory authorities of the Group of Ten countries (Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, United Kingdom, United States and Luxembourg (Basle Committee on Banking Supervision, 1988:1).

For the purpose of study, following major four sections are divided. The first two describe the framework: Section third constituents of capital and Section fourth the risk weighting system. Section III deals with the target standard ratio; and Section IV with implementing arrangements.

2.2.1 The constituents of capital under Capital Accord 1988

As per Capital Accord 1988, there are two types of capital. First one is core capital and the next is supplementary capital.

a) Core capital (basic equity)

The key element of capital on which the main emphasis is placed on equity capital and disclosed reserves is core capital. It includes fully paid ordinary shares/common stock and non-cumulative perpetual preferred stock (but excluding cumulative preferred stock). This emphasis on equity capital and disclosed reserves reflects the importance to secure progressive enhancement in the quality, as well as the level, of the total capital resources maintained by major banks. Notwithstanding this emphasis, there are a number of other important and legitimate constituents of a bank's capital base, which is included within the system of measurement. Individual supervisory authorities are free at their discretion to apply a policy of deduction on a case-by-case basis.

For supervisory purposes, it has been defined in two tiers in a way which have the effect of requiring at least 50% of a bank's capital base to consist of a core element comprised of equity capital and published reserves. The other element of capital (supplementary capital) is admitted to an amount equal to that of the core capital.

b) Supplementary capital

While calculating supplementary capital, following points are included.

i. Undisclosed reserves: Unpublished or hidden reserves are constituted in various ways according to differing legal and accounting regimes in member countries. Under this heading are included only reserves which, though unpublished, have been passed through the profit and loss account and which are accepted by the bank's supervisory authorities.

ii. Revaluation reserves: Some countries, under their national regulatory or accounting arrangements, allow certain assets to be revalued to reflect their current value. Such reserve is included within supplementary capital

provided that the assets are considered by the supervisory authority to be prudently valued, fully reflecting the possibility of price fluctuations. Such reevaluations can arise in two ways:

(a) from a formal revaluation, carried through to the balance sheets of banks' own premises; or

(b) from a notional addition to capital of hidden values which arise from the practice of holding securities in the balance sheet valued at historic costs.

iii. General provisions/general loan-loss reserves: General provisions or general loan-loss reserves are created against the possibility of future losses. General provisions (or general loan-loss reserves) should conceptually be regarded as part of capital. Such items would constitute no more than 1.25 percentage points, or exceptionally and temporarily up to 2.0 percentage points, of risk assets.

iv. Hybrid (debt/equity) capital instruments. This heading includes a range of instruments, which combine characteristics of equity capital and of debt. Their precise specifications differ from country to country, but they should meet the following requirements:

- they are unsecured, subordinated and fully paid-up;
- they are not redeemable at the initiative of the holder or without the prior consent of the supervisory authority;
- they are available to participate in losses without the bank being obliged to cease trading.
- Cumulative preference shares, having these characteristics, are eligible for inclusion in this category.

v. Subordinated term debt: Subordinated term debt instruments have significant deficiencies as constituents of capital in view of their fixed maturity and inability to absorb losses except in liquidation. These

deficiencies justify an additional restriction on the amount of such debt capital, which is eligible for inclusion within the capital base. Subordinated term debt instruments with a minimum original term to maturity of over five years are included within the supplementary capital.

2.2.2 The Risk Weights under Capital Accord 1988

Weighted risk ratio in which capital is related to different categories of asset or off-balance-sheet exposure, weighted according to broad categories of relative riskiness, is the method for assessing the capital adequacy of banks. The framework of weights has been kept simple and only five weights are used - 0, 10, 20, 50 and 100%.

a) There are six aspects of the structure to which attention is particularly drawn while calculating risk weights in capital accord 1988

i. Categories of risk captured in the framework: There are many different kinds of risks against which banks' managements need to guard. For most banks the major risk is credit risk, that is to say the risk of counter-party. There are many other kinds of risk - for example, investment risk, interest rate risk, exchange rate risk and concentration risk. The central focus of this framework is credit risk and, as a further aspect of credit risk, country transfer risk.

ii. Country transfer risk: Firstly, a simple differentiation between claims on domestic institutions (central government, official sector and banks) and claims on all foreign countries; and secondly, differentiation on the basis of an approach involving the selection of a defined grouping of countries considered to be of high credit standing.

iii. Claims on non-central-government, public-sector entities (PEs): In order to preserve in the application of such discretion, the weights should be 0, 10, 20 or 50% for domestic PEs.

iv. Collateral and guarantees: In view of the varying practices among banks in different countries for taking collateral and different experiences of the stability of physical or financial collateral values, it has not been found

possible to develop a basis for recognizing collateral generally in the weighting system. These attract the weight given to the collateral (i.e. a zero or low weight). The contingent liability assumed by banks in respect of guarantees attracts a credit conversion factor of 100%.

v. Loans secured on residential property: Loans fully secured by mortgage on occupied residential property have a very low record of loss in most countries. 50% weight to loans fully secured by mortgage on residential property which is rented or is (or is intended to be) occupied by the borrower. Other collateral has not been regarded as justifying the reduction of the weightings.

vi. Off-balance-sheet engagements: An importance that all off-balance-sheet activity should be caught within the capital adequacy framework. At the same time, it is recognized that there is only limited experience in assessing the risks in some of the activities. The credit conversion factors would be multiplied by the weights applicable to the category of the counter party for an on-balance-sheet transaction

b) Target Standard Ratio

The target standard ratio of capital to weighted risk assets should be set at 8% (of which the core capital element is at least 4%). This is expressed as a common minimum standard which international banks in member countries were expected to observe by the end of 1992.

Implementation

Each country should decide the way in which the supervisory authorities introduce and apply these recommendations in the light of their different legal structures and existing supervisory arrangements. Accordingly, Nepal Rastra Bank had developed it capital adequacy norms suitable to our country based on the framework prescribed in the 1988 capital accord.

This accord was revised in 1996 with the introduction of capital charge for market risk. This 1988 accord was adopted by more than 100 countries, including Nepal. The accord had contributed to strengthen bank capital at a time when a number of countries had experienced problems in their banking systems. It has become one of the benchmark measures of bank's in financial health.

2.2.3 Provisions for Capital Adequacy in Commercial Banking Sector in Nepal

Present capital adequacy norms developed by central bank of Nepal had considered major international norms from The Basel I Capital Accord 1988. Nepal Rastra Bank had issued unified directives to banks and financial institution operated in Nepal. That directive had included the directive related with capital adequacy. Following provisions are made in that directive.

'To develop a healthy capable and secured banking system for promoting economic growth of the country and to protect the interest of depositors, this directives in respect of maintenance of minimum capital fund by commercial banks had been issued on 14 September, 2001 by Nepal Rastra Bank (NRB, 2001). Major areas covered in capital adequacy directives issued by Nepal Rastra Bank are given below.

1. Maintenance of Minimum Capital Fund

On the basis of the risk-weighted assets, the banks shall maintain the prescribed proportion of minimum capital fund as per the following time-table.

Table No: 2.1
Regulatory Requirement of Capital Adequacy

Time Table	Required Capital fund on the basis of weighted risk assets (In percentage)	
For FY 2000/1	4%	8%
For FY 2001/2	4.5%	9.0%
For FY 2002/3	5.0%	10.0%
For FY 2003/4	5.5%	11%
For FY 2004/5*	*5.5%	*11%

* Revised by circulars of NRB

2. Definition of Capital

For the purpose of calculation of Capital fund, the capital of the banks is divided into the following two components and defined:

a) **Core Capital**

The amounts under the following heads shall be included in the Core Capital

(a) Paid up capital
(b) Share premium
(c) Non-redeemable preference shares
(d) General Reserve Fund
(e) Accumulated Profit and loss account

However, where the amount of Goodwill exists, the amount of goodwill shall be deducted for the purpose of calculation of Core Capital.

b) **Supplementary capital**

For the purpose of the calculation of capital fund, the amount under the following heads, subject up to one hundred percent of the core capital, shall be included under the supplementary capital.

(a) General Loan Loss Provision

Under this head, provision made only against the Pass Loan shall be included. This amount shall be limited up to 1.25 percent of the total Risk Weighted Assets.

However, loan loss provisioning on sub-standard and doubtful loans shall be available for inclusion under the supplementary capital during the period as follows:

Table No: 2.2
Loan Loss provisioning for Inclusion in Supplementary Capital

Time period	loan loss provisioning available for inclusion under supplementary capital
For FY 2001/2	Pass, sub standard and doubtful
For FY 2002/3	Pass, sub standard
For FY 2003/4	Pass*

- Up to 1.25 percent of Total risk weighted assets

(b) Exchange Equalization Reserve

(c) Assets Revaluation Reserve

The amount of Assets Revaluation Reserve can be included for the purpose of calculation supplementary capital subject up to 2 percent of the total supplementary capital, inclusive of the amount of the reserve.

(d) Hybrid Capital Instruments

This includes the following instruments that have the characteristics of both debt and equity:

(i) Unsecured, fully paid up instruments issued by the bank which are subordinated to priority of payment after) depositors and creditors, and available to absorb losses as well as convertible into ordinary capital.

(ii) Instruments, which are non-redeemable at the option of the holder except with the approval of Nepal Rastra Bank.

(iii) Perpetual or long-term preference stock (Shares) convertible into common stock if the profit and loss account becomes negative.

However, banks and financial institutions can not hold (purchase) Hybrid Capital Instruments issued by any bank of financial institution.

(e) Unsecured Subordinated Term Debt.

Unsecured and subordinated debt instruments (priority of payment after the depositors) issued by bank with a minimum maturity term of over five years and limited life redeemable preference shares. To reflect the diminishing value of these instruments, a discount (amortization) factor of 20 percent during the last five years shall be applied.

The issue of these instruments by banks shall not exceed 50 percent of their core capital.

(f) Other Free Reserves not allocated for a specific purpose

3. Total Capital Fund

Total Capital Fund is defined as the sum of core capital and supplementary capital.

4. Total Weighted Risk Assets

For the purpose of calculation of capital fund, the risk weighted assets has been classified into following two components:

(a) On balance sheet risk weighted assets
(b) Off-balance sheet risk weighted assets

5. Risk Weighted on Balance Sheet Assets and off-balance sheet items

(a) For the purpose of calculation capital fund, the on balance sheet assets are divided as follows with assignment of separate risk weight-age. Accordingly, for determining the Total Risk Weighted Assets the amount as exhibited in the balance sheet assets shall be multiplied by their respective risk weight-age and then added together. Risk weights for off balance sheet items are given in Appendix 2.

(b) Risk weighted off Balance Sheet items

(c) For the purpose of calculation Capital Fund, the Off-Balance Sheet Items are divided as follows with assignment of separate risk weight-age. Accordingly, for determining the total Risk Weighted Off Balance sheet assets, the amount of such transaction shall be multiplied by their respective risk-weights and then added together. Risk weights for off balance sheet items are given in Appendix 3.

6. Capital Fund Ratios

This ratio would measure the total capital fund on the basis of total risk-weighted assets. The capital fund ratio shall be determined as follows:

$$\text{Capital fund ratio} = \frac{\text{Core capital + Supplementary capital}}{\text{Sum of risk-weighted assets.}} \times 100$$

Sum of risk-weighted assets. = Total on balance sheet risk-weighted assets+ Total off balance sheet risk-weighted items.

7. Reporting Requirement of Capital Fund

Banks shall, at the end of Ashwin, Poush, Chaitra and Ashad of each fiscal year, prepare the statements of capital fund and other relevant statements on the basis of the financial statements as per the enclosed directives Form No. 1 and 2 and submit to the Banking operations Department and Inspection and Supervision Department of Nepal Rastra Bank within 1 (one) month from the end of each quarter.

In respect of FY 2058/59, such statement is submitted on half-yearly basis. In determining the capital fund, the un-audited quarterly net profit (or net loss) amount shall be exhibited separately in the balance sheet under profit and loss account and such net profit/loss amount may be included for the purpose of calculation of the capital fund.

8. Time period for fulfilling the shortfall in capital fund

In the event of non-fulfillment of capital fund ratio as mentioned under section 1 above in any quarter, the shortfall amount shall be fulfilled within next 6 (six) months. Until the fulfillment of such capital fund, banks shall not declare or distribute dividend to its shareholders under section 18 of commercial bank act, 2031. The shortfall in the capital fund may be rectified:

(a) by issuing new shares.
(b) by reallocating assets.

9. Actions for not complying the directives relating to capital fund.

Where any bank does not fulfill the minimum capital fund within the period specified in clause (8) above, any of the following actions may be initiated:

(a) Suspension of declaration or distribution of dividend (including bonus shares)
(b) Suspension of opening new branch.
(c) Suspension of access to refinancing facilities of Nepal Rastra Bank.
(d) Restriction on lending activities of the bank
(e) Restriction on acceptance of new deposits.
(f) Initiation of any other actions by exercising the authority under Section 32 of Nepal Rastra Bank Act, 2012.

2.2.4 Playing Factors in the Provisions for Capital Adequacy in Commercial Banking Sector in Nepal as per On-Site Inspection Manual of Nepal Rastra Bank

Capital adequacy shows the condition of having sufficient permanent resources to continue operations despite financial losses or non-availability of external funding. Capital adequacy cannot be determined wholly on the basis of a numeric formula or

calculation of a ratio. The following factors come into play when considering the sufficiency of capital for the banks/non banks.

a. Competent and Effective Management

The competence and effectiveness of management including the board of directors, is a key determinant of capital adequacy. A competent and effective management team would chart the proper course of operations and establish efficient systems with effective internal controls to guide the bank towards growth and a planned asset/liability structure. By so doing, the bank should retain sufficient reserves to cover unanticipated losses and reduce the probability of capital erosion.

The board of directors must decide on the financial objectives and strategies to be pursued in the longer term, as well as make sure that the bank/non bank has a competent management team to carry out day-to-day operations in accordance with the business plan. It is critical that the board and management work together as a team. However, each must also understand their separate, distinct roles and responsibilities. The directorate bears the ultimate responsibility for the conduct of the bank's affairs and provides independent checks and balance over the activities of the management team.

b. Growth Trends and Operating Targets

Capital needs depend upon a great deal on the volume and size of the bank's operations. In order to maintain adequate capital, asset growth should be supported by capital growth. Fixed assets and the long-term infrastructural investments of the bank/nonblank should be supported by capital or long term loans (preferably subordinated debt) rather than deposits. Growth that outpaces the bank/non-bank's ability to maintain a sufficient level of capital means that the bank/nonblank is highly geared and depends too much on less permanent funds as deposits are sometimes quite volatile. Such dependence is unsafe and imprudent. Therefore, banks/non-banks should not only target asset growth but should also plan adequately for their additional capital needs.

c. Earnings Performance and Expectation

Profitability is a fundamental component of capital adequacy. Profits contribute to the accumulation of revenue reserves that constitute the main ingredient of capital growth.

A trend of sustained profitability may be a sign of well-managed operations and may be a reflection of competent and efficient management. However, the components of profits should be analyzed to determine the quality of earnings. That is profits should be separated into operating profits and extraordinary profits. Obviously, profits from a stable source of operational earnings provided a better defense against losses than the occasional sale of assets or opportune gains from investments.

d. Balance Sheet Composition

The asset/liability mix as reflected in the balance sheet is a good indicator of the bank/non-bank's long term financial stability. The components of the balance sheet and the proportion of each category of assets and liabilities should be consistent with the objective and targets of the bank/nonblank. Furthermore, the balance sheet composition should also be fairly consistent over time, thereby reflecting a conscious effort to pursue good asset/liability management.

Assets and liabilities inconsistent with the usual operations of the bank reflect a shift in business emphasis. Significant fluctuations in the asset/liability mix over time may indicate that the bank/non-bank lacks clear, long term objectives and is pursuing poor operational strategies that may put the bank/non-bank at greater risk of loss.

e. Assets Quality and Risk Estimations

Although the overall risk-mix inherent to assets appearing on the balance sheet is important in evaluating capital adequacy, possible weakness attached to individual assets are essential to consider. An indicator of asset quality problems is the amount of credit that has been classified and the relative severity of these classifications in relation to capital. Delinquency and foreclosure trends, the level of non-accrued interest or non

performing loans, and the decline in the market value of securities are also signals with respect to asset quality. Consideration must be given to signs of deterioration in asset quality and its potential impact on the ban/non-bank's capital.

f. Off Balance Sheet Exposures

Off-balance sheet activities should be examined along with on balance sheet activities to determine the overall level of risk within a ban/nonblank. Off-balance sheet activities can be a source of instability. Each activity must be viewed in the light of its contribution to risk and the ability of management to administer it. The major risks include: credit risk, interest rate risk, country risk, and foreign exchange risk. Currently, the risk basked capital adequacy ratio only considers capital requirements in relation to credit risk. It is important, therefore, for management to implement controls and procedures to identify, monitor, and manage all risks relating to the activities of the banks/non-banks.

2.2.5 Present Effort for the Development of Prudential Directives in Capital Adequacy

After the successful implementation of 1988 capital accord in more than 100 countries, the Basel Committee on Banking Supervision reached an agreement on a number of important issues for promoting prudential and uniform banking practices as well as setting standards and guidelines for supervisory functions. Realizing the fact, In January 2001, it has developed a new comprehensive framework for capital requirements based on the various risk exposures of the banking business, which is also popularly known as Basel–II. It will replace the current 1988 Capital Accord. The proposal is based on three mutually reinforcing pillars that allow banks and supervisors to evaluate properly the various risks that banks face. The Basel–II has been introduced basically for the protection of depositor's interest by preserving the integrity of capital of Banks. It is expected that the Basel–II will be a milestone in the global banking history.

Key Elements of the New Accord

The New Accord consists of three re-enforceable pillars:

(1) Minimum capital requirements,

(2) Supervisory review process and

(3) Market discipline.

The proposals comprising of each of the three pillars are summarized below:-

1) Pillar 1: Minimum Capital Requirements

In new capital accord 2005 also, the definition of eligible regulatory capital, as outlined in the 1988 Accord11 is eligible for inclusion in Tier 1 (Core Capital) and in Tier II (Supplementary Capital) except in exceptional cases.

The current accord is based on the concept of a capital ratio where the numerator represents the amount of capital a bank has available and the denominator is a measure of the risks faced by the bank and is referred to as risk-weighted assets. The resulting capital ratio may be not less than 8%.

"Likewise, risk-weighted assets are determined by multiplying the capital requirements for market risk and operational risk by 12.5 (i.e. the reciprocal of the minimum capital ratio of 8%) and adding the resulting figures to the sum of risk-weighted assets for credit risk"(International Convergence of Capital Measurement and Capital Standards, 2005:5).

The current accord explicitly covers three types of risks in the definition of risk-weighted assets:

(1) credit risk
(2) market risk, and
(3) operational risk

A major innovation of the proposed Basel–II is the introduction of three distinct options for the calculation of three types of risk. It is not feasible or desirable to insist upon a one-size-fits-all approach to the measurement of either risk. Instead, for credit, operational and market risk, there are three approaches of increasing risk sensitivity to allow banks and supervisors to select the approach or approaches that they believe are most appropriate to the stage of development of bank's operation and of the financial market infrastructure. The following table identifies the three primary approaches available by risk type.

1. Credit Risk

    a. Standardized Approach
    b. Foundation IRB Approach
    c. Advanced IRB Approach

2. Operational Risk

    a. Basic Indicator Approach
    b. Standardized Approach
    c. Advanced Measurement Approaches (AMA)

3. Market Risk

    a. Variance Co-variance Approach
    b. Monte Carlo Simulation Approach
    c. Historical Simulation Approach

Credit risk

A bank always faces the risk that some of its borrowers may renege on timely repayments of loan, interest on loan or meet the other terms of contract. This risk is called credit risk, which varies from borrower to borrower depending on their credit quality. Basel–II requires banks to accurately measure credit risk to hold sufficient capital to cover it.

Factors affecting credit risk can be summarized by the following formula:

Expected Loss (EL) on a loan = Exposure at default (EAD) X Loss

given default (LGD) X Probability of Default (PD).

The bank can also suffer losses in excess of expected losses, say, during economic downturns. These are called unexpected losses. Ideally, a bank should recover expected loss on a loan from its customer through loan pricing. The capital base is required to absorb the unexpected losses, as and when they arise.

Market risk

Investment is risky because of the change in their prices due to market forces. This volatility in the value of a bank's investment portfolio is known as the market risk, as it is driven by the market forces. The change in the value of the portfolio can be due to changes in interest rate, fluctuation in exchange rate or the changes in the values of equity or commodities.

Operational Risk

Several events that are neither due to default by third party nor because of the volatility of the market mechanism are called operational risks and can be attributed to internal systems, processes, people and external factors.

2) Pillar 2: Supervisory Review Process

Pillar II ensures that not only do the banks have adequate capital to cover their risks, but also that they employ better risk management practices so as to minimize the risks. Capital cannot be regarded as a substitute for inadequate risk management practices.

This pillar requires that if the banks use asset securitization and credit derivatives and wish to minimize their capital charge they need to comply with various standard and control. As a part of the supervisory process, the supervisors need to ensure that the regulations are adhered to and the internal measurement systems are standardized and validated.

The supervisory review process is based on four principles:

Principle 1:

Banks should have a process for assessing their overall capital adequacy vis-à-vis their risk profile and a strategy for maintaining their capital levels.

Principle 2:

Supervisors should review and evaluate bank's internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

Principle 3:

Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

Principle 4:

Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

Given the kind of responsibilities, the supervisor's role assumes high importance in the Basel–II . Pillar II does not seek to harmonize supervisory processes across countries as they have different supervisory objectives, legal processes and authority of supervisors. It allows for sufficient national discretion but still it wants supervisors to maintain some degree of consistency in their approaches.

3) Pillar 3: Market Discipline

Banking operation is becoming complex and difficult for supervisors to monitor and control. Though supervisors try to indoctrinate corporate governance in banks, they can take indication from the market to strengthen their supervisory and monitoring activities. In this context, Basel Committee has recognized that market discipline is so important that it warrants being the third pillar of Basel–II norms. This market discipline is brought through greater transparency by asking banks to make adequate disclosures. The potential market participants of these disclosures are supervisors, bank's customers, rating agencies, depositors and investors.

With frequent and material disclosures, outsiders can learn about the bank's risk. Armed with this information, the outsiders can always protect themselves by ending their relationships with the bank.

Market discipline has two important components:

a. Market signaling is the form of change in bank's share prices or change in bank's borrowing rates

Responsiveness of the bank or the supervisor to market signals Seeing the importance of the impact that the market can have on banks, Pillar III provides a comprehensive menu of public and regulatory disclosures like disclosures related to capital structure (core and supplementary capital), capital adequacy, risk assessment and risk management processes to enhance the transparency in banking operations.

2.3 Capital and Capital Adequacy

Capital is a part of wealth or money or property which may be used for the production of more wealth and additional wealth. It consists of those kinds of wealth other than free gifts of nature which yield income. Capital is a stock resource that may be employed in the production of goods and services and the price paid for the use of credit or money, respectively.

Patheja has defined banks capital as common stock plus surplus plus undivided profits plus reserves for contingencies and other capital reserves. In addition since a bank's loan-loss reserves also serves as buffer for absorbing losses, a broader definition of bank capital include this account. (Patheja, 1994:224)

Verma & Malhotra has indicated that the general public is interested in the higher profitability and safety of the funds of a bank, because the public expects the shareholders to assume all the risks. Lower profitability of a bank fills the faith of the prospective depositors and al their incentive for investing t in the various deposit schemes.

The Basel Committee sets a standard for all the baking norms, which will be accepted by central bank of all big industrialist countries. The first Basel Capital Accord was issued in 1988 and was implemented by 1992. The committee gas now issued New Basel Capital Accord which will be implemented by 2006 to overcome the drawbacks of the current capital accord. Central banks of developing underdeveloped countries follow these standards Nepal Rastra Bank also follows these standards and accordingly sets standard for commercial banks in Nepal.

According to the directive issued by Nepal Rastra Bank, the bank capital has been categorized in to two par parts: core capital and supplementary capital. This categorized is also known as core capital for Tier-1 capital and supplementary capital for Tier-2 capital.

The Tier-1 capital consists of the following components:

1. Share Capital,
2. Share Premium,
3. Non- Redeemable Preference Shares,
4. General reserve Found, and
5. Accumulated Profit and Loss Goodwill amount to be deducted, if any.

The Tier -2 capital consists of the following components:

1. General Loan Loss Provision,
2. Exchange Equalization Reserve,
3. Assets Revaluation Reserve,
4. Hybrid Capital Instruments,

   Unsecured Subordinated Term Debt,

5. Interest Rate Fluctuation Fund, and
6. Other free Reserves

The total of Tier-1 and Tier-2 capital is considered for calculating capital adequacy ratio. The capital adequacy ratio is based on total risk-weighted assets (NRB Directives No.1, 2004:1-2).

Adequate capital is required to the efficient operating and functioning of the firm in the modern competitive environment, is always the matter of controversial debate. In one hand holding excess capital keeps the firm in low profit position, on the 4other hand inadequate capital limits the firm to meet the public demand of loan and low earning

capacity. Capital adequacy aims at setting minimum level of capital as a function of risks. Thus capital should be risk based.

"Capital is adequate either when it reduces the chances of future insolvency of an institution to some predetermine level of alternately when the premium paid by the banks to an insurer is 'fair', that is, when it fully covers the risks borne by the insurer. Such risks, in turn, depend upon the risk in the portfolio selected by the bank, on its capital and on term of the insurance w.r.t. when insolvency will be determined and what loss will be paid."(Maisel, 1982:302).

Clark has defined capital adequacy as legal requirement that a financial institution (such as a bank) should have enough capital to meet all its obligations and fund the services it offers (Clark, 1999:504).

The capital adequacy ratio is calculated using the following basic formula:

$$\text{Capital Adequacy Ratio} = \frac{\text{Total Capital Fund}}{\text{Total Risk - Weighted Asscets}} * 100\%$$

Total risk-Weighted assets (TRWA) = Assets held by a financial institution to which degree of risk have been assigned, so that adequate provision can be set aside.

2.3.1 Definition of Capital Fund for Commercial Banks

For the purpose of calculation of Capital Fund, the capital of the banks is divided into two components, Core Capital and Supplementary Capital.

Core Capital:

Core Capital of commercial banks includes:

- Paid up capital
- Share premium
- Non-redeemable preference shares

- General Reserve Fund
- Accumulated Profit and Loss Account

The amount of goodwill shall be deducted from; the; amount of core capital, if amount of goodwill exists at all.

Supplementary Capital:

Supplementary Capital of Commercial banks includes:

- General Loan loss provision:

Previously, total amount of loan loss provision made for all the six categories of loan used to be included in the supplementary capital but not with the new directives, the amount of general loan loss provision shall be included in the supplementary capital as per the following time table:

Time Period	Provision available for inclusion in the Supplementary capital
For FY 2001/02 (058/59)	Doubtful loans
For FY 2002/03 (059/60)	Sub-Standard and Doubtful loan
From FY 2003/04 (060/61)	Pass loan

The amount of general loan loss provision shall not exceed 1.25 percent of the total risk weighted asset

- Exchange Equalization Reserve
- Assets Revaluation Reserve

The asset revaluation reserve can be included in the supplementary capital but is limited only up to 2 percent of the total supplementary capital including this reserve amount

- Hybrid Capital Instruments

There are two types of instruments includes under this, they are:

- Unsecured, fully paid up instruments issued by the bank which are subordinated to (priority of payment after) depositors and creditors, not available to absorb losses as well as convertible into ordinary capital.
- Instruments which are non-redeemable at the option of the holder except with the approval of NRB
- Perpetual or long term preference stock (share) convertible into common shares if the profit and loss account becomes negative.
- Unsecured Subordinated Term debt

Unsecured and subordinated debt instruments (priority of payment after the depositors) issued by bank with a minimum maturity period of five years and limited life redeemable preference shares. In order to show the diminishing value of these instruments, banks are required to amortize the value of the instruments at the rate of 20 percent every year.

- Other free resources not allocated for a specific purpose.

(NRB Directives No.1, 2004:1-2)

2.3.2 Review of NRB Capital Adequacy Norms for Commercial Banks

With the objectives to build up a strong, capable and secured banking system for promoting economic growth of the country as well as to protect the interests of depositors, as provide under section 23 (1) of Nepal Rastra Bank Act 2012 relating to development and regulation of banking system. This directives is respects to maintenances of minimum capital fund by commercial banks has been issued in exercise of authority under section 14 (a) commercial banking Act, 2031.

Commercial banks need to maintain the prescribed proportion of minimum capital fund in the basis of the risk weighted assets. As per the directives issue by the Central Bank, the banks need to follow the following time table:

Time Table	Core Capital	Total Capital Fund
For FY 2058/59(2001/02)	4.5%	9.0%
For FY 2059/60(2002/03)	5.0%	10.0%
For FY 2060/61(2003/04)	5.5%	11.0%
From FY 2061/62(2004/05) Onward	6%	12.0%

Since, the capital of the bank is divided into two categories core and supplementary capital. Core capital is known as Tier-1 capital and Supplementary capital is known as Tier-2 capital. The core capital is the summation of share capital, share premium, non-redeemable preference shares, general reserve fund and accumulated profit/loss. Similarly supplementary capital has been defined to include general loan loss provision, exchange equalization reserve, assets revaluation reserve, hybrid capital instruments, unsecured subordinated term debt, interest rate fluctuation fund and other fee reserves.

The sum of Core and Supplementary capital is measured to be total capital fund. For the purpose of calculation of capital fund, the risk-weighted assets have been classified in two parts on –Balance Sheet Risk-Weighted Assets and Off-Balance Sheet Risk Weighted Items. As stated by the norms, the capital fund ratio would measure the total capital fund on the basis of total risk-weighted assets. The capital fund ratio shall be determined as follows:

$$\text{Capital Fund Ratio} = \frac{\text{Core Capital } \Gamma \text{ Supplementary Capital}}{\text{Sum of risk - weighted assets}} * 100\%$$

The sum of risk weighted assets is the sum of total no-balance sheet risk-weighted assets and total off-balance sheet risk-weighted items. The bank shall, at the end of Ashoj (mid October), push (mid January), Chaitra (mid April) and Ashad (mid July) of each fiscal year, prepare the statements of Capital Fund and other relevant statements on the basis of the financial statements as per the prescribed Form No. 1 and 2 and submit to the Banking Operations Department and Inspection and Supervision Department of this bank within one month from the end of each quarter. The prescribed form no. 1and 2 are illustrated in Appendix respectively. In the event of non-fulfillment of Capital Fund Ration in any quarter, the banks shall fulfill the shortfall amount within next six months.

If any bank does not fulfill the minimum Capital Fund within the specified periods, NRB may initiate any of the following actions:

1. Suspension of declaration/ distribution of dividend (including bonus share).
2. Suspension of opening new branch.
3. Suspension of access to refinancing facilities of Nepal Rastra Bank.
4. Restriction on lending activities of the bank.
5. Restriction on accepting new deposits.
6. Initation of any other actions by exercising the authority under Section32 of Nepal Rastra Bank Act, 2012. (NRB Directives No. 1, 2004:1-5)

2.3.3 Loan Classification and Provision

All financial Institutions are required to classify their loan and advances as per the maturity date. Total loan and advances will be classified in to the following four categories.

Pass loan - Loan matured up to 3 months (including restructured and Rescheduled loan)

Sub standard loan- Loan matured up to 6 month

Doubtful loan- Loan matured up to 1 year

Loss loan- Loan matured more then a year

Loan against Gold and Silver, Fixed deposit, NSB and credit card loan shall be categorized as pass loan irrespective of maturity.

Credit card loan matured for more than 90 days should be classified as loss loan.

Pass loan is categorize as performing loan and all other three categories are categorize as Non performing loan.

Additional condition for loss loans

- Any loan and advances not matured but if any of the following condition is prevailed, it will be classified as loss loan.
- Insufficient collateral.
- Borrowers become bankrupt.
- Whereabouts of the borrower is not known.
- If the loan is mis-utilized
- Six months after the auction process initiated.
- Loan provided to blacklisted parties.
- If the funded projects are not in existence.
- B\P and non funded loan if converted to funded and not settled within 90 days.

Loan on installment basis

If the loan is provided on installment basis, whole principle should be classified as per the maturity of installment.

Any loan provided for more than one year period must be in installment basis.

Loan loss provision Loan loss provision will be set a side for all categories of loan and advances as per the following percentages.

Pass	1%
Substandard	25%
Doubtful	50%
Loss	100%

Loan against personal guarantee

Loan and advances provided against personal guarantee needs details net worth of the guarantor and additional 20%provision. Personal guarantee taken on top of other collateral for additional security also have same treatment.

Current A\C overdrawn

Realization of interest and principle by overdrawing the current account and\or OD accounts not allowed, incase of such practiced is followed by the bank it should be classified one level down if it is not settled with in one month.

Restructuring and rescheduling

All restructured and rescheduled loans needs 12.5% loan loss provision.

There must be written proposal and sufficient collateral and projected cash flow for restructuring and rescheduling of loan.

At least 25% interest must be recovered for such restructuring. In case of loan classified as sick industry by the committee formed by Nepal government 12% interest recovery will be sufficient for restructuring but 25% provision is required. If such loan is regular for 2years, it can classify as good.

Provision for NBA

Non banking assets acquired on or before 2059\60 shall be make 100%provision within next three years providing equally during 2060\61, 2061\62and 2062\63. If the limit of maximum holding (i.e.7 years for banks and 5 years for Fls) is expiring during these periods, 100% provision shall be made irrespective of above mentioned 3 years grace period.

Non banking assets acquired after 2059\60 shall provide 100% provisions within 4 years in equal installment including the year of acquisition (i.e. 25% in each year)

If the NBA is sold provision set a side for such assets shall be adjusted in the year of sale.

Writing back of provision

Provision can be write back in the following circumstances only

If the loan is write off

If the loan is repaid

If the classification of loan is changed (surprisingly removed)

Change of classification due to restructuring and rescheduling of loan can not write back the provision already made at least for two years till the interest payment is regular.

Such written back provision cannot be utilized for distribution of dividend and bonus.

2.4 Review of Articles and Reports

Narayan Prasad Poudel (2053) in his article called 'Financial Statement Analysis' published in Nepal Rastra Bank Samachar on 2053 is reviewed. According to Mr. Poudel, Balance Sheet, Profit/Loss account and the accompanying notes are the most useful aspects of the bank. We need to understand the major characteristics of bank's balance sheet and profit and loss account. The bank's balance sheet is composed of financial claims as liabilities in the form of deposits and as assets in the form of loans. Fixed assets account forms a small portion of total assets. Financial innovations, which are generally contingent in nature, are considered as off balance sheet items.

Mr. Poudel further writes that, "Saving collection is another factor which is essential for banks to balance their operations and generate sufficient surplus in their cash-flows. In recent years growth rate of banks deposits has decline to about 16% compared against 23% of the past. Mobilization of internal resources in the country demands that banks attract more financial resources from the public". Another useful contribution made by

The users of the financial statements of a bank need relevant, reliable and comparable information, which assists them in evaluating the financial position and performance of

the bank and which is useful to them in making economic decision. According to Poudel, the principal objectives of analyzing financial statements are to identify:

-Financial adoptability (liquidity),

-Financial performance (profitability),

-Financial position of the bank (solvency)

According to Mr. Poudel, the other factors, to be considered in analyzing the financial statements of banks is to assess the capital adequacy ratio and liquidity position. In the line of the norms set by Bank for International Settlements, capital adequacy of a bank is assessed on the basis of risk-weighted assets. It indicated a bank's financial strength and solvency. Presently, the capital fund of a bank should not be less than 8% (at least 4% should be in the form of tier-1 capital or core capital) of its risk-weighted assets as capital fund. Banks facing with capital adequacy problem may increase capital or reduce assets or reallocate the existing assets structure in order to maintain the desired level of capital base (Poudel: 2053:26-31).

Surendra Pandey (2003) in his article called 'NRB's effort to reform commercial banks' published in The Rising on June 10, 2003 is reviewed. Mr. Pandey stressed that "one of the main objectives of a commercial bank is to safeguard the money of depositors. With the low capital adequacy rate, the banks were formerly lending from the money of the depositors because the capital comprised a very small portion of the total risk-weighted assets. However, the return of the shareholders or promoters were reaping was quite high. The risks of the depositors were too high. Pandey further put forward that a good banking system is, therefore a sine qua non for maintaining financial balance in the country and NRB's efforts in this direction are really worthy"(Pandey, 2003:4).

An article by B.N. Rimal (1998) entitled "policy issued and development in Nepalese banking system" conclude that central bank should instead drive for an approach towards indirect monetary control rather than loan on quantities individual bank ceilings. Indirect monetary policy through open market operations e.g. recent Treasury bill auctions and

opening up of inter bank market and targeting broad financial variables like net foreign assets of for that matter net domestic asset should ever out small irritants in the banking system (Rimal, 1998:10).

"The Basel Capital Accord of 1988 was an important first milestone in the regulatory treatment of collateralized transactions. Though, the role played by risk mitigating factors in this accord, such as the use of financial collateral, is still rather limited. The same holds for the European directives and national regulations derived from the Basel Accord. The regulatory treatment of collateral has recently entered a new phase, in the form of the proposed revision of the Basel Accord and banks will be able to choose either the comprehensive or the simple approach for the treatment of collateral. While the simple approach resembles the current Basel substitution, methodology in its treatment of collateral, the comprehensive approach is more innovative. It assigns a central role to collateral haircuts, which may be based on bank's own internal estimates of collateral volatility. By making a wider range of collateral available for credit risk mitigation and making the calculation of risk-weighted assets more risk- sensitive, the revision of the Basel Accord is intended further to align regulatory capita which banks must hold and their actual economic risk structure"(Keijser and Hass, 2001:55)

A latest publication of NRB supporting the recessionary economic trends highlights the performance of the economy in the first month of the current fiscal year (mid july1997-mid March 1998). Revenue collection grew by mere 4.3% while the non-budgetary and other receipts registered a decline in absolute terms. Thus, total resources fell by 2.3%. On the expenditure side, an overall increase of8.0% was observed. Development expenditure continued to stagnate whilst regular expenditure surged. Consequently, the fiscal deficit widened to USD 75.5 Million. Around 75% of the fiscal deficit was financed through foreign cash loans with the remainder being financed trough the sale of treasury Bills and borrowing from NRB (NRB Press Communication, 1998).

In an effort to fight the above economic slowdown of the country, NRB, during the month of April, 1998, lowered the Cash Reserve Ratio (CRR) by an average of 1.5%.Banks, which was earlier required to maintain 12% of their local currency deposits

as CRR, now have to maintain between 10 $11% depending on their deposits mix. Under the new arrangements, saving and current account with the banks will attract 11% CRR while the term deposits will attract CRR at the lower rate of 9%. The aim of this move was to reduce the cost of funds of the banks so that the benefit could be passed on to the industry and export related borrowers. The CRR reduction has released additional liquidity between NRP 1,000 million to NRP 1,500 million to the banks. As expected several banks have started to drop interest rates. The decision of NRB to cut CRR comes at a time when the Nepalese industry has been reeling under the recession. The cut in CRR and the resultant drop in the interest rates should contribute towards the recovery of the recession hit industry (NRB Press Communication, 1998).

Basel–II norms are expected to have far-reaching consequences on the health of financial sectors worldwide because of the increased emphasis on banks' risk-management systems, supervisory review process and market discipline. The new norms bring to front not only the issues of bank-wide risk measurement but also of active risk management.

The new capital adequacy framework (new capital accord) and its accompanying documentation constitute a very detailed set of proposals with something to say about every aspect of how banks originate measure and manage risk. This is quite fitting. Since the original Accord of 1988, every aspect of risk management in banking has changed and it is inevitable that regulators, as custodians of the financial system, should seek to leverage this transformation in banks' own methods. But instigating such wide-ranging, once and for all, change to the regulatory framework brings its own risks. In particular, the measurement of risks under Pillar I need to be as sensitive and flexibly formulated as possible – while supervisory review and market discipline need to be formulated to reinforce (Barclays, 2001:25).

Nepal Rastra Bank with support of commercial banks, is working for the selection of suitable model in Nepal regarding credit risk, operational risk and market risk. Accord implementation Group (AIG) which was formed under "New Capital Accord Implementation Preparatory Core Committee" has invited views of commercial banks regarding implementation of new accord and is in the stage of drafting, Nepal Rastra Bank's Concept Paper on New Capital Accord'. According to the program this draft paper shall be forwarded to all the commercial banks for comments and recommendations. Sample form is also developed so that commercial banks classify their exposures as per

the new approach, which shall be reviewed by the "Accord Implementation Group". There is no doubt that the new accord though complex carries a lot of virtues and will be a milestone in improving banks internal mechanism and supervisory process. It will be beneficial to the commercial banks, as it requires review and measurement of risk, which ultimately have effect of risk management approach to comply with the accord standards (NRB, 2006:15).

To reform of supervisory authorities' practices and measures to ensure that the national supervisory practices in different countries do not vary unnecessarily. Supervisory authorities related to the current capital adequacy regime require a considerable input of work and expense from banks. The proposed changes would increase the amount of information needed by the authorities concerning risks related to commercial banking activities, in particular. In order to avoid unnecessary effort and costs, the changes should be implemented in a way that would allow the systems and data currently used for banks' business management and supervision to be utilized as far as possible (NRB, 2006:26).

This new accord has examined possible approaches in relation to these risks. Furthermore, and more generally, capital ratios, judged in isolation, may provide a misleading guide to relative strength of banking industries. There may be differences between countries in the fiscal treatment and accounting presentation for tax purposes of certain classes of provisions for losses and of capital reserves derived from retained earnings may to some extent distort the comparability of the real or apparent capital positions of international banks (NRB, 2006:28).

An article by M. Lamsal (2001) entitled “NRB directives: Bankers plea for lighter structure” in Business Age on July 2001 conclude that the central bank rocked that commercial banks with seven directives issued in two installments asking banks to start complying with the new structures by mid-July 2001 or face grave consequences. NRB claims that these are based on the internationally accepted banking norms of Basel committee. He has opined that banks are expected to be disparate to meet the regret of capital adequacy norms since the consequences the banks have to face in case of non-compliance are very strict for this purpose they will have to issue additional shares, which is not possible for them in the short-run or they do not prefer to go for additional share issue simply because they will also have to pay the same dividend as the past to the

holders of shares so issued. This becomes the more difficult as the business is not going to expand commensurately. The difficult is understandable now when every banker is complaining of the lack of new investment projects (Lamsal, 2001:31-35).

An article by R. Heakal (2003) entitled 'what are central banks?' has written that the central bank has been described as "the lender of the last resort." This means that the central bank is responsible for providing its economy with funds when commercial banks cannot cover a supply shortage. In other words, the central bank prevents the country's banking system from failing. Though, the primary goal of central banks is to provide their countries currencies with price stability by controlling inflation. A central bank also acts as the regulatory authority of a country's monetary policy and is the sole provide and printer of notes and coins in circulation. Time has proven that the central bank can best function in these capacities by remaining independent from government fiscal policy and therefore uninfluenced by political concerns of any regime. The central bank should also be completely divested of any commercial banking interests (Heakal, 2003).

2.5 Review of Thesis

B.R Bohara, (1992), has conducted a research entitled *"Comparative study of the financial performance of NABIL and NIBL"*. The basic objectives of his study were highlighted the financial performance and role of joint venture banks in the liberalized Nepalese economy. His attempts of analyzing financial performance were concentrated in ratio analysis and he derived the strength and weakness of two major banks by calculating important ratio liquidity ratio and profitability ratio. After calculating the ratio, along with income and expenditure analysis and trend analysis, Mr. Bohara has come out with some valuable suggestions to the commercial banks, which are outlined below:

- Banks need to make balance between distributing of cash dividend and issuing of bonus shares.
- They need to increase their equity base to maintain the Capital Adequacy.

- They need to increase operational profit by concentrating in consistence earnings rather than fluctuating earnings.
- They need to maintain liquidity in the form of Cash Reserve Ratio as per the regulation of Nepal Rastra Bank.

Besides these suggestions, he has emphasized small Entrepreneurs' Development Program, branch expansion and mobilization of deposits in the productive sectors, transfer of expertise and skills and enhancement of foreign investment in the country (Bohara:1992).

Sharad Wagle (2000), in his thesis entitled- "*A Study on Trends of Saving, Investment and Capital Formation in Nepal*" has indicated that capital fund has significant and positive relation with both deposit and loans. That means increase or decrease in capital fund increase or decrease deposits as well as loans. However the degrees of relationship were different. But relation of capital with profit was positive and insignificant. That indicated less of increase or decrease in profit is due to capital fund or capital fund is least responsible in changing profit. Bank should increase capital fund to increase the capital fund ratio according to increase in deposit.

B. Karmacharya (2002), in his thesis entitled, '*Study on capital structure of joint-venture commercial banks and NRB directives issued'* has expressed that the financial soundness as well as its strength of the company depends upon the large extend on the composition of the capital structure and asserts. Capital structure of the company presents its resource capacity and ability of its present worthiness. He has found that the all the banks in his study following the requirements of NRB directives regarding capital adequacy. The capital structure of studied banks is highly leveraged. So, he has recommended that the proportion of debt and equity capital should be decided keeping in mind the effort of tax advantages and financial distress. The banks are required to maintain improved capital structure by increasing equity base i.e. issuing more equity capital, expanding general reserve and retaining more earnings. With this improvement, it will compromise among the conflicting factors of cost and risk. As mandated by NRB for the operation in all over Nepal, a commercial bank should have capital base of

Rs.500million.Hence the banks should raise its paid-up capital to Rs.500 million as soon as possible (Karmacharya, 2002).

R. Sapkota, (2002) in his study entitled '*A study of capital and assets structure management of Nepal Bank of Ceylon Ltd.'* has set up that the ratio of shareholders fund to total deposit ratio reveals that in the year 2053/54 it was highest. 101.40% and has been deceasing in the succeeding year. The average ratio is 35.69. Additionally, the ratio of shareholders' fund in relation to total assets shown that average ratio is 21.22%. It completed that's its ratio are found decreasing throughout the study period (Sapkota, 2002)

S. Pandey (2002), in his study entitled '*Nepal Rastra Bank directives, their implementation and impact on the commercial banks- A case study of HBL'* has set conclusion on the subject of the capital adequacy of HBL during his study periods, i.e., as of poush 2058 as the capital fund of HBL stands at Rs.1070 million comprising of Rs.756 million core capital and Rs.314 million of supplementary capital. For this, the bank has to try to increase its supplementary capital because the supplementary capital falls short by Rs.73 million even after contribution from the excess core capital. The total risk weighted assets of HBL is equal to Rs.12690.6 million. AS a result, the capital adequacy of the bank stands at 8.43% of total risk weighted assets. Core capital is 5.9% and the supplementary capital is 2.47% of total risk weighted assets. Core capital is 5.96% and supplementary capital is 2.47% of total risk weighted assets. Pandey has suggested that HBL should increase the capital base from Ts. 1070 million by least Rs.115 million to meet the capital adequacy ratio. For this, the bank should try to increase its supplementary capital as falls short by Rs.73 million. The bank should increase its core capital in order to expose itself to more credit risk. Supplementary capital can be fulfilled by the surplus in core capital (Pandey, 2002).

Samir Dhakal (2006), in his study entitled "*A comparative study of Capital Adequacy of Joint Venture Banks in Nepal especially of Nepal Arab Bank Ltd. and Nepal Investment Bank Ltd.*" concludes that the liquidity position of both the banks is below the normal standard of 2:1. Comparatively this ratio of NIBL is better on an average. Both the banks

are found to be efficient in utilizing most of their total assets. Capital structure is highly leveraged, capital adequacy ratio of NIBL is better than that of NABIL and the profitability position of both the banks is not recorded as satisfactory. Based on the findings of analysis, the research suggests finding out the root cause of weak liquidity position to improve the liquidity of both banks. Similarly, both the banks are suggested to maintain improve capital structure by increasing equity base, to extend loan and advances

to utilize more of the total deposits, to minimize operational expenses or to mobilize resources more efficiently and to extend their banking facilities even in the rural areas.

Uttam Kandel (2006), in his study entitled "*Capital Adequacy of Commercial Banks in Nepal especially of Nepal Bank Limited, Himalayan Bank Limited and Nepal Investment Bank Limited*." concludes that After detail analysis of capital adequacy directives issued by Nepal Rastra Bank based on Capital Accord 1988, International practices on capital adequacy, the compliance status on capital adequacy by selected commercial banks and their management effort to built strong capital base, following conclusions are drawn:

During this time, the operating environment of the banks has changed radically, and their risk management systems have also improved. In the new conditions, the calculation of capital charges under the current regime has proved insufficient because it covers only credit risk.

Accordingly, a revision of the capital adequacy framework is justified in order to capture the various factors affecting banks' risk exposure. However, the proposed changes make the assessment of capital adequacy a significantly more complex procedure than under the current framework.

Since, there are the provisions for supervisory/regulatory authorities and the banks themselves would be granted more discretionary power on the application of the provisions. When the changes are implemented, it is therefore of great importance that uniform application of the provisions should be ensured for all banks subject to the new Basel II issued on November, 2005 (latest revision). For this, Nepal Rastra Bank should

be serious to develop new capital adequacy framework timely in order to implement it timely.

About 25% commercial banks (4 numbers) out of total numbers commercial banks (17 numbers) are unable to fulfill capital adequacy norms based on core capital to risk weighted assets. Out of which Nepal Bank Limited is also unable to maintain adequate core capital based on RWA based on average data of last three years. Himalayan Bank Limited and Nepal Investment Bank Limited are successful in this regard. 9 commercial banks had not complied regulatory requirement in the maintenance of capital fund out of 17 commercial banks.

Again, Nepal Bank Limited is not able to fulfill the regulatory requirement on capital fund to risk weighted assets based on average data of last three years. Himalayan Bank Limited and Nepal Investment Bank Limited are successful in this regard.

There is continuous growth in core capital, capital fund. The risk-weighted asset was fluctuating in HBL. Average growth rate of capital fund, core capital, RWA, % of capital fund to RWA, % of core capital to RWA were 6.79%, 7.84%, 5.95%, 18.24%, 17.31% respectively in HBL. There is continuous growth in core capital, capital fund and risk weighted assets of NIBL. Average growth rate of capital fund, core capital, RWA, % of capital fund to RWA, % of core capital to RWA were 34.93%, 28.13%, 37.29%, 15.93%, 13.32% respectively in NIBL. There is continuous decrement in core capital, capital fund and risk-weighted assets of NIBL. But, risk weighted assets was begun to increase in FY 2004/5. Average growth rate of capital fund, core capital, RWA, % of capital fund, % of core capital to RWA were -72.25%, -16.64%, 3.39%, -27.94%, -35.63% respectively.

HBL has surplus core and supplementary capital by Rs 772.83 million and Rs 489.64 million in FY 2004/5 and in all the years the bank is successful to maintain capital adequacy requirement. In NIBL, there was surplus core and supplementary capital by Rs 421.66 million and Rs 78.14 million in FY 2004/5 and in all the years the bank is successful to maintain capital adequacy requirement except FY 2002/3. In NBL, there is deficit core capital and capital fund by Rs -24559.02 million and Rs -27614.92 million in

FY 2004/5 and in all the years, the bank was failed to maintain capital adequacy requirement.

Nav Raj Timsina (2008), in his study entitled "*A study on capital adequacy of commercial banks in Nepal*," and following conclusions were drawn on the basis of quantitative and qualitative analysis on the selected commercial banks (Standard Chartered Bank Nepal Limited, Nepal Investment Bank Limited and Rastriya Banijya Bank Limited)

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 weighed 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 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 weighed asset 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 Rastriya Banijya Bank Limited was fluctuating. The bank had Rs 51508 million (98%) of on balance sheet risk assets and Rs 796 million (2%) of off balance sheet risk assets in average. majority of risk weighed asset is composed by loan and advance and bills and purchase (22%) and by other assets (46%) in total risk weighted assets.

Rastriya Banijya Bank Limited has not focused on off balance sheet transactions (2% of total risk weighted assets) in its business to increase profitability in comparison to Standard Chartered Bank Nepal Limited (18.5%) and Nepal Investment Bank Limited (13.5%) of off balance sheet risk weighted assets based on total RWA. Net profit and capital fund of SCBNL and NIBL are in increasing in each year in comparison to last year. But, in case of RBB, capital fund of RBB is continuously decreasing up to FY 2004/05 and began to improve slightly from FY 2005/06. RBB has been incurring loss from FY 2001/02 to 2003/04 but then, the loss RBB is able to earn profit.

Two variable relationships: There is positive correlation between capital fund and net profit but negative relationship between capital fund and non-performing loan in SCBNL and NIBL. All those relationship were significant in SCBNL and NIBL. But in case of RBB, there is negative correlation between capital fund and net profit, capital fund and GDP, capital fund and NPL. Relationship of capital fund to net profit was significant but relationship of capital fund to non-performing loan was insignificant. Multiple regression for SCBNL: There is positive relationship (r=97.49%) of capital fund among net profit, NPL and it was significant in SCBNL. Multiple regression line of SCBNL shows that in each year, capital fund will increase with positive intercept 4.7% plus 0.74 percent of % of net profit increased minus 0.36% of % NPL increased. Multiple regression for RBB: There is positive relationship (r=99.53%) of capital fund among net profit, NPL and it was not significant in RBB. Multiple regression line of RBB (based on actual values) shows that in each year, capital fund (dependent variable) will decrease by 15103.8 million intercept plus 1.98 times of net profit plus 2.71 times of non-performing loan.

Percentage of pass loan to total loan is increasing each year in SCBNL and NIBL where as 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. In case of RBB, percentage of pass loan is fluctuating. The average percentage of pass loan and non-performing loan both was 50%. The percentage of non-performing loan was increasing up to FY 2003/04 and began to decrease from FY 2004/05. Since the level of NPL in RBB significantly higher in comparison to SCBNL and NIBL, there is high credit risk in RBB.

The amount of non-performing 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 was fluctuating. Percentage of non-performing loan was also fluctuating in RBB. Capital Fund of the RBB was continuously deteriorating till FY 2003/4 and began to improve from FY 2005/06 but the fund is still negative.

2.6 Research Gap

From the above literature, it can be concluded that capital adequacy is the pre-requisite for running commercial bank smoothly. Capital adequacy should be maintained for the welfare and benefit of the investors and bank itself. Previous researchers analyzed financial performance by using secondary source of information in terms of financial ratio. But actually speaking, capital adequacy can be determined by various factors. Among them, country's environment and fiscal policy in terms NRB directives and adequate fund may be the strong determinant for capital adequacy management in the commercial banks. Present study tries to define different accord and directives of central bank in Nepal by applying those various facts in the context of Nepalese commercial banks. It can be very useful or important in capital adequacy management. Thus, present study will be fruitful to those interested person, parties, scholars, professor, students, businessman and government for academically as well as policy perspective. Hope this study will help to others in future in the related field.

CHAPTER THREE
RESEARCH METHODOLOGY

Research is common parlance that refers to a search for knowledge. Research is a careful critical inquiry or examination on seeking facts and principles, diligent investigation in order to ascertain something. Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically (Kothari, 1990:35). A research methodology helps us to find out accuracy, validity and suitability. The justification on the present study can not be obtained without help of proper research methodology. For the purpose of achieving the objectives of study the applied methodology will be used. The following are the details of research Methodology used in the analysis.

3.1 Research Design

A research design is the arrangement of condition of collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. “Research design is a plan, structure and strategy of investigation concerted so as to obtain answer to research question and to control variance” (Kerlinger, 1993:300)

Keeping in mind the objectives of the study, descriptive cum analytical research design has been followed. The research design is basically focused on analytical study. The research examines the relationship of bank capital to various other stakes, like credits, deposits, etc. This study research attempts to analyze the capital funds of commercial banks taking the data and information of Kumari Bank Ltd., Everest Bank Ltd. and Machhapuchchhre Bank Ltd. Financial as well as statistical tools have been done for analyzing the research.

3.2 Population and Sample

A present 25 commercial banks have been working in Nepal. Since, it is difficult to study the entire population with this short period of time. Only three commercial banks have been selected. So, KBL, EBL and MBL have been selected for the case study. It is

assumed that these three samples can represent the basis financial characteristics of the remaining other commercial banks. So, Kumari Band Ltd, Everest Bank Ltd and Machhapuchchhre Bank Ltd. have been selected for the case study. Hence, the population of the study comprises of all these commercial banks and the samples are KBL, EBL and MBL researcher will take every precaution to avoid the sampling error and inaccuracies that may creep in during the process or collecting and analyzing the data.

While the research questionnaire, different responds of the respondents have been considered as sample for the study. Ten bank officials have been interviewed with a questionnaire.

3.3 Sources of Data

To conduct any research, data collection is a major task. This research is mainly based on the secondary sources of data and information. A. Major secondary sources are as follows:

i. Annual reports of sample commercial banks.
ii. Quarterly bank and financial institution statistics published by Nepal Rastra Bank.
iii. Annual reports of commercial banks published by Nepal Rastra Bank.
iv. Economic Survey published by Nepal Government, Ministry of Finance.
v. Statistical Year Book of Nepal published by Central Bureau of Statistics.
vi. Previous Research Studies and Articles on the subject.
vii. Various IMF, World Bank, UN Reports.

3.4 Data Collection Technique

Study is based on both primary and secondary data. For the secondary data and information, directives of Nepal Rastra Bank, annual reports of Kumari Bank Ltd., Everest Bank Ltd, and Machhapuchchhre Bank Ltd, various publications of Nepal Rastra Bank. A part from these various books, journals, seminar papers available in the library and relevant articles from the website has been used.

For primary data collection, opinion survey is conducted through interview, conversation and questionnaire distribution to the respondents. Primary data is basically aimed at observation of investor's trading strategies and opinion of financial executives and brokers. Such are accomplished by distribution of close end questionnaire to the respondent. Beside that unstructured interview and conversation with bank officials and bank account holders has been considered.

3.5 Data Analysis Tools

Generally different methodologies of data analysis have been adopted. However, in this study attempts have been made to apply some financial tools and statistical tools.

3.5.1 Financial Tools

The best tool for financial analysis is Ratio analysis. Ratio can be taken as expression of relationships between two items or group of items and may be calculated in any number and ways so far meaningful co-relation is obtainable. "Ratios are relationship, expressed in mathematical terms between figures which have a cause effect relationship or which are connected with each other in some other manners" (Grewal, 1974:102). The following ratios related to the banks are used to analyze the data:

a) Capital Adequacy Ratio

The capital adequacy ratio is one of the most significant ratios, used specially to assess the bank's strength of the capital structure of the adequacy of the capital. The fundamental objective of this research study is to examine capital adequacy of Kumari Bank Ltd., Everest Bank Ltd. and Machhapuchchhre Bank Ltd. Capital adequacy ratio is the primary tool to analyze the capital fund of a bank. It is based on total risk-weighted assets of the bank. Capital adequacy ratios are a measure of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposure.

To determine the adequacy of total capital fund:

$$\text{Capital Adequacy Ratio} = \frac{\text{Total Capital Fund}}{\text{Total Risk - Weighted Asscets}} * 100\%$$

Total risk-Weighted assets (TRWA) = Assets held by a financial institution to which degree of risk have been assigned, so that adequate provision can be set aside.

To determine the adequacy of core capital:

$$\text{Capital Adequacy Ratio} = \frac{\text{Core Capital}}{\text{Total Risk - Weighted Asscets}} * 100\%$$

b) Capital to Deposit ratio: The capital/deposit ratio is an important tool in measuring capital adequacy ratios of banks. Naturally, the function of a bank requires a lot of capita. It is known on the basis of deposit in the bank, whether a bank gas an adequate ownership capital or not. But this ratio cannot reflect the capital adequacy of a bank. The capital to deposit ratio is derived by the following method:

$$\text{Capital to Deposit ratio: } \frac{\text{Total Capital Fund}}{\text{Total Deposit Collected}} * 100\%$$

c) Credit/Deposit Ratio: The major tool to examine the liquidity of a bank is credit/ deposit ratio. It measures the ratio to fund that a bank has utilized in credit out of the deposit total collected. In other words, credit and deposit are the major function of commercial banks. The relationship between these two factors shows the efficiency, ability and idle resources of commercial banks. The ratio of credit and deposit declares by the effective utilization of collected resources. The credit /deposit ratio is derived by the following method:

$$\text{Credit/Deposit ratio: } \frac{\text{Total Credit}}{\text{Total Deposit Collected}} * 100\%$$

3.5.2 Statistical Tools

a) Karl Pearson Correlation (r)

Correlation analysis is the statistical tools that we can use to describe the degree to which one variable is linearly related to another. It does not tell us anything about causes and effect relationship. Correlation analysis helps us in determining the degree of relationship between two or more variable. “In business, correlation analysis enables the executive to estimate costs, sales, price and other variables. On the basis of some other series with which their costs, sales or prices may be functionally related. Some of the guesswork can be removed from decisions when the relationship between variables to be estimated and the one or more other variables on which it depends is closed and reasonably in variant.”(Gupta, 1991:556)

For the purpose of analysis of cash management in Nepalese commercial banks, the correlation analysis is applied in same related topics. In these topics it can be seen the correlation between dependent and independent variables of cash management. The formula of correlation is as follows:

$$r = X\frac{n\phi xy \; Z\phi x.\phi y}{\sqrt{n\phi x^2 \; Z(\phi x)^2}\sqrt{n\phi y^2 \; Z(\phi y)^2}}$$

Where

n=Number of pairs in observation

X=Product of the first variable

Y=Product of the second variable

To ease the calculation, a shortcut formula has been proposed which has been used in to calculate correlation coefficients in this thesis report. The shortcut formula is as follows:

$$r_{xy=}\frac{\phi XY}{\sqrt{\phi X^2 \phi Y^2}}$$

Where,

$X = \bar{X} Z \bar{X}$

$Y = \bar{Y} Z \bar{Y}$

$\bar{X}$ & $\bar{Y}$ are the arithmetic mean of X and Y values respectively.

b) Test of Hypothesis:

The reliability of the calculated value of correlation coefficient can be tested by using the

t-test.

To test the null hypothesis that the observed sample has been drawn from a population in which the considered variables are uncorrelated i.e.

Null hypothesis H_o: $\ell=0$

Alternative hypothesis, $H_1 \mid 0$

Under H_0, the test statistic,

$$t = \frac{r\sqrt{n Z 2}*}{\sqrt{1 Z r 2}}$$

Where,
r=observed correlation coefficient
n=total pairs of observations.
Decision: Null hypothesis is accepted if calculated value of t is less than tabulated value of t at5% level of significance with (n-2) d.f reject otherwise.

c) Trend Analysis:

"Trend analysis is an analysis of financial ratio over time used to determine the improvement of deterioration of its financial situation"(Weston & Bringham, 1992:297).

Trend analysis of ratios indicates the direction of change over a period of time. Trend analysis informs about the expected future return, future achievement of the bank, and future credit worthiness of the bank. Financial capability of the bank and much other information which would be helpful to concerned parties of the bank such as shareholders, professional bankers, depositors and borrowers. In this study, the method of least square is selected as a statistical tool for the analysis of selected commercial banks. The liner trend line for different variables according to line has been fitted.

The liner trend line equation is:

$y=b_0+b_1 t$……..(I)

Where,

y = considering variable

b_0 = y-intercept

b_1= measures the increasing or decreasing rate o of Y

t = tine period considered

The value of constants b_0&b_1 can be estimated by using the principle of least square method. The normal equations are:

$\phi y \; \mathrm{X} nb_0 \; \Gamma b_1 \phi t$ …….(II)

$\phi ty \; \mathrm{X} b_0 \phi t \; \Gamma b_1 \phi \, t^2$ …….(III)

But for simplification, if the time variable in measured as a deviation form its mean, i.e, mid point, is taken as the origin, the negative values in the first half of the series balance out the positive value in the second half so that $\phi t \; \mathrm{X} o.$The values of constant bo&b1 can easily be determined by using following formula:

$B_o = \phi y / N$

$B_1 = \phi ty / \phi \, t^2$

Beside the above mentioned analytical tool, graphical representation of the data is going to enhance the understandability at a glance.

CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation, analysis and interpretation of relevant data of MBL, KBL and EBL Which were collected from various sources, are changed into an understandable presentation using financial as well as statistical tools mentioned in the previous chapter i.e., Research methodology. This chapter is the heart of this study. This chapter will be of great relevance for this study, as all the findings, conclusions and recommendations are going to be derived from the calculations done in this section. The analyses of data consist of organizing, tabulating and performing financial as well as statistical analysis. This chapter is divided into following parts:-

1. Presentation of data
2. Ratio analysis
3. Statistical analysis
4. Impact of capital adequacy norms
5. Major Findings

4.1 Presentation of Data

In this section the collected data and information are presented, various tables, charts and graphs are used to best present the data. The data and information has been presented below:

4.1.1 Capital Fund

Capital fund of a bank consists of two types of components: tier-1 capital and tier-2 capital. Tier-1 capital is known as core capital and Tier-2 capital is known as supplementary capital. So, the total capital fund of a bank derived by adding these two components. The capital fund of MBL, KBL and EBL has been presented below:

4.1.1.1 Capital Fund of MBL

MBL has increasing its capital fund by Rs165 Million and reached Rs715 Million in 2007\08, the core capital at Rs 911 million. The capital fund of MBL over the period of last five years has been presented below:

Table No. 4.1
Capital Fund of MBL

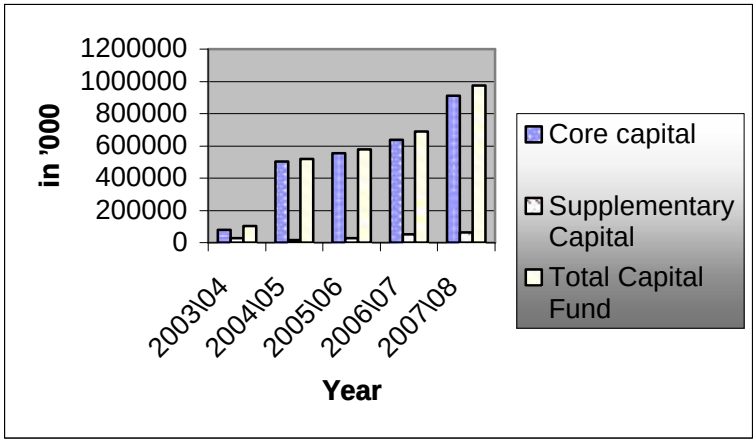
(Rs. in '000)

Fiscal Year	Core capital	Supplementary Capital	Total Capital Fund
2003\04	78425	26354	104779
2004\05	501706	16161	517867
2005\06	552869	26511	579380
2006\07	637739	51104	688843
2007\08	911543	64524	976067

Source: Annual Report of MBL.

The above table shows that the capital fund of MBL has been increasing throughout the review period. The core capital and supplementary capital has been significantly increased over the five years period. The total capital fund of MBL seems to be growing consistently. The capital funds of bank are largely depends upon share capital. The capital fund of MBL is presented in the figure below:

Figure No. 4.1
Capital Fund of MBL



4.1.1.2 Capital Fund of KBL

Issued and paid up capital of the bank increased by Rs. 150 million and reached Rs. 500 million.

Table No. 4.2
Capital Fund of KBL

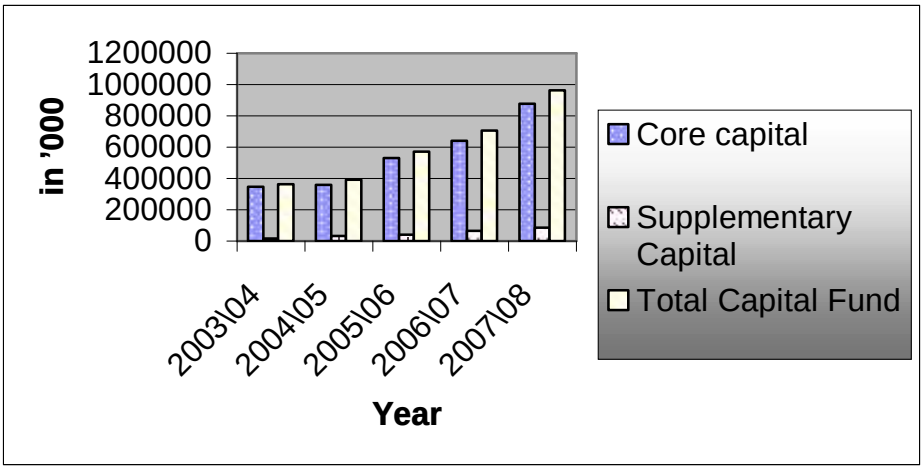
(Rs. in '000)

Fiscal Year	Core capital	Supplementary capital	Total Capital Fund
2003\04	347289	16180	363469
2004\05	359546	31367	390913
2005\06	529677	40469	570147
2006\07	641715	63813	705529
2007\08	876900	84800	961700

Source: Annual Report of KBL

The above table shows that the capital fund of KBL has been increasing. The core capital and the supplementary capital of KBL have been gradually increased over the five years period. Therefore, the total capital fund of KBL increased form 363 million to 961 million in the FY 2007\08.The capital fund of KBL has been presented in the figure below:

Figure No .4.2
Capital Fund of KBL



4.1.1.3 Capital Fund of EBL

EBL has increased its capital fund. The bank issued an unsecured subordinate term debt in the FY 2006\07 amounting at Rs 300 million to increase its supplementary capital. The bank has a plan to issue bonus share by 20% of its paid up capital. The capital fund of EBL over the period of last five fiscal years has been presented below:

Table No. 4.3
Capital Fund of EBL

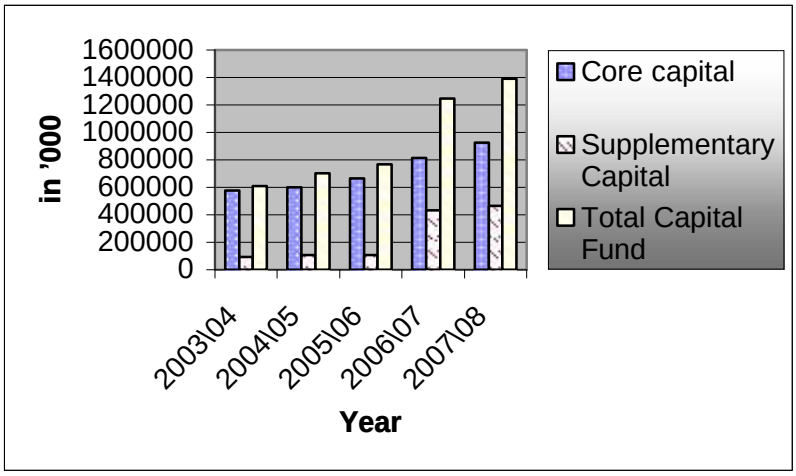
(Rs. in '000)

Fiscal Year	Core capital	Supplementary capital	Total capital Fund
2003\04	576600	93500	610200
2004\05	598200	105500	703700
2005\06	663269	106310	766879
2006\07	815567	431995	1247562
2007\08	927550	463789	1391339

Source: Annual Report of EBL

The above table shows that the capital fund of EBL has been increasing throughout the review period. The core capital and supplementary capital has been significantly increased over the five years period. The capital fund of EBL is presented in the figure below:

Figure No. 4.3
Capital Fund of EBL



4.1.2 Risk –Weighted Assets of MBL, KBL and EBL

Capital adequacy ratio deals with the asset side of the balance sheet of the banks. For this purpose, first the bank calculates the total weighted assets, both the on balance sheet assets and the off- balance sheets are considered for the purpose of calculation of total risk weighted assets. The assets are categorized into four types while assigning weight-age then NRB has assigned weight-age of 0%, 20%, 50% and 100% according to their nature of risk bearing which is based on the standard of bases committee. On the basis of the data collected from MBL, KBL and EBL the total risk-weighted assets have been presented below:

Table No. 4.4

Risk- weighted Assets of MBL, KBL and EBL

(Rs. in '000)

Fiscal Years	MBL	KBL	EBL
2003\04	980681	1356829	4267900
2004\05	2092014	2528767	5707000
2005\06	3250663	4449407	6928407
2006\07	6063130	6291843	9195588
2007\08	7631998	7606400	11291137

Source: Annual Report of MBL, KBL and EBL

4.2 Financial Analysis

Financial Analysis is a process of evaluating relationship between component parts of financial statements, i.e. balance sheet and profit and loss account to obtain a better understanding of the banks position and performance. It is based on up-to-date, reliable and comprehensive data, derived from Statistics of financial statements. The indicators will be helpful to serve as financial performance of individual bank. Such indicators show the overall financial position at a glance. The best tool for financial analysis is ratio analysis.

4.2.1 Ratio Analysis

The ratio analysis is the most powerful tool of the financial analysis and it is used in analyzing the financial information to indicate the operating and financial efficiency and growth of the bank. The following ratios are used to evaluate the financial statement of MBL, KBL and EBL in regard of the capital adequacy and capital fund.

4.2.1.1 Capital Adequacy Ratio of MBL, KBL and EBL

Capital adequacy ratio is the ratio of the total capital fund of the bank to the total Risk-Weighted assets (TRWA). NRB requires banks to maintain a certain capital adequacy ratio based on the total risk weighted assets in order to safe guard the money of the depositors against any possible loss. The first of the eleven different directives issued by NRB under the prudential norms to be followed by the banks contains detailed instructions with respect to the maintenance of capital adequacy ratio, its calculation and the possible penalties for its non compliance. Banks are required to maintain capital adequacy mainly in three different ways, the core capital adequacy ratio, the supplementary capital adequacy and the total capital adequacy ratio. The calculation of capital adequacy ratios of MBL, KBL and EBL has been presented in Appendix-I. The below table 4.5 shows the capital adequacy ratio for the period of five FY starting from 2003\04 to FY 2007\08.

Table No.4.5
Adequacy of Capital Fund on Risk –Weighted Assets

At the end of Fiscal Year	MBL Percentage of Total Capital	Percentage of Core Capital	KBL Percentage of Total Capital	Percentage of Core Capital	EBL Percentage of Total Capital	Percentage of Core Capital
2003\04	10.68%	7.99%	26.79%	25.60%	12.90%	12.10%
2004\05	24.75%	23.98%	15.46%	14.22%	13.10%	11.60%
2005\06	17.82%	17.01%	13.41%	12.50%	11.07%	9.58%
2006\07	11.36%	10.52%	11.21%	10.20%	13.54%	8.86%
2007\08	12.79%	11.94%	12.64%	11.53%	12.72%	8.59%

Details calculation shown in Appendix -I

The above table shows that the capital adequacy ratio of MBL, KBL and EBL are able to comply with the requirement of NRB. Since the prescribed proportion of minimum capital fund by NRB for the FY 2003\04 to 2007\08 were total capital fund at 9%, 10%, 11% and 12%. Core capital at 4.5%, 5%, and 5.5% on total risk weighted assets.

In FY 2003\04 to 2007\08 MBL has maintained the total capital fund at 10.68% to 12.79% and core capital 7.99% to 11.94% of total risk weighted assets. While required of norms directed by NRB was 9% to 12%. So, MBL have higher capital adequacy ratio than prescribed ratio.

KBL has maintained the total capital fund at 26.79% to and core capital 25.60% to of total risk weighted assets. So, KBL have higher capital adequacy ratio than prescribed ratio by NRB.

EBL has also maintained the total capital fund at 12.90% to 12.72% and core capital 12.10% and 8.59% of total risk weighted assets. So, EBL have higher capital adequacy ratio than prescribed ratio by NRB.

4.2.1.2 Capital to Deposit Ratio of MBL, KBL and EBL

The capital to deposit ratio is an important tool in measuring capital adequacy ratio of banks. It is assumed that the capital to deposit ratio should be 10%. If there is 8% capital of the total deposit of the bank it is considered good.

The calculation of capital to deposit ratios of MBL, KBL and EBL are shown in Appendix- II. The table 4.6 shows that capital to deposit ratios for the period of five FY starting from FY 2003\04 to 2007\08.

Table No.4.6

Capital to Deposit Ratio of MBL, KBL and EBL

Fiscal Year	MBL	KBL	EBL
2003\04	10.5%	30%	11.2%
2004\05	29.1%	15.6%	10.5%
2005\06	21.02%	11.9%	9.5%
2006\07	12.3%	11.3%	12.4%
2007\08	12.4%	12.3%	10.1%

Calculations shown in Appendix-II

The above table shows that the capital to deposit ratios of MBL, KBL and EBL has been found satisfactory. It can be said that the capital to deposit ratios that the commercial banks presently maintaining are sufficient. Capital to deposit ratios of commercial banks is seemed to be adequate than want actually required.

4.2.1.3 Credit\ Deposit Ratio of MBL, KBL and EBL

The credit\deposit ratio is one of the most important ratios for commercial banks. The major tool to examine the liquidity of a bank is credit \deposit ratio. This ratio shows how effectively the banks have been using the fund they collected from depositors. If 75% of amount deposited by the customers are invested in various sectors, it is considered satisfactory. It is a good sign.

The calculation of credit\deposit ratio of MBL, KBL and EBL are shown in Appendix-III .The table 4.7 shows that credit\deposit ratios for the period of five FY starting from FY 2003\04 to FY 2007\08.

Table No.4.7
Credit \Deposit Ratio of MBL, KBL and EBL

Fiscal Year	MBL	KBL	EBL
2003\04	65.85%	95.48%	74%
2004\05	84.09%	85.06%	75.4%
2005\06	92.24%	76.91%	75.6%
2006\07	91.83%	90.62%	78.2%
2007\08	77.87%	89.8%	80.4%

Calculation shown in Appendix-III

The above table shows that credit to deposit ratio of MBL, KBL and EBL has been found satisfactory. The credit deposit to deposit ratio of MBL was 65.85% at the end of FY 2003/04 which is increased to 92.24% at the end of FY 2005/06. The C/D ratio of MBL is in between 65.85% to 92.24%, whereas KBL was 95.48% at the end of FY 2003/04 which is decreased to 76.91% at the end of FY 2005/06. The C/D ratio of KBL is in between 76.91% to 95.48%. Similarly EBL was 74% at the end of FY 2003/04 which is decreased to 80.4% at the end of FY 2007/08. The C/D ratio of KBL is in between 74%

to 80.4%. There is not any standard for credit\deposit ratio in Nepal, a ratio between 75% - 80% can be accepted to be adequate. As compare to three banks all three banks are somehow nearer to this standard.

4.3 Statistical Analysis

Under this analysis, some statistical tools are used to achieve the objectives of the study. Following statistical tools are used for this purpose.

4.3.1 Correlation Coefficient

Attempts have been made to measure the association between Deposit and Total Investment and between Capital and Credit using Karl Person's correlation coefficient. Correlation analysis is a measure of association that is based on numerical values of the two variables. It is preferred in this study to identify the relationship between variables whether the relationship is significant or not. The calculation of Deposit on Total Investment and Credit on Capital are shown in appendix IV-VI. The calculated value of correlation coefficient is presented below:

Table No. 4.8

Correlation Coefficient of Deposit Vs Investment and Capital Vs Credit

Correlation	MBL	KBL	EBL
Deposit and Total Investment	0.812(PE=0.102)	0.993 (PE=0.004)	0.61 (PE=0.184)
Capital and Credit	0.316(PE=0.27)	0.69 (PE=0.156)	0.68 (PE=0.158)

Detail calculation shown in Appendix –IV-IX

Since the calculated correlation coefficient between Deposit and Total Investment of MBL is 0.812, KBL is 0.993 and EBL is 0.61. Similarly, the calculated correlation coefficient between capital and credit of MBL is 0.316, KBL is 0.69 and EBL is 0.68.It can be said that Deposit and Total Investment and Capital and Credit of a bank are positive correlated. All the coefficients are near to 1 in case of deposit and investment which indicates that the correlations seem to be nearly perfectly positive. It is concluded that increase in deposit causes the increase in total investment. But in case of credit and capital there is moderate positive correlation which implies that increase in capital causes

increase in credit. Significance of correlation (r) is tested with probable error' of 'r'. Since r > PE (r) it is significant i.e., there is evidence of correlation. To test the significance of observed correlation coefficient, t-test has been used.

4.3.2 Test of Hypothesis

The calculated values of correlation coefficients presented in table 4.8 are tested by using t-test. The tests are shown in Appendix X-XV

Table No. 4.9
Hypothesis -1

Null Hypothesis (Ho)	Deposit and Total Investment of MBL are not correlated
Alternative Hypothesis (H_1)	Deposit and Total Investment of MBL are correlated
Correlation Coefficient (r_1)	0.812
Calculated value (t_{cal})	2.40
Tabulated value (t_{tab})	3.18
Degree of freedom (d.f)	3
Level of significance (1)	5%
Decision	Ho is accepted. So, Deposit and total investment of MBL are less correlated

Detail calculations shown in Appendix- X

Table No 4.10
Hypothesis- 2

Null Hypothesis (Ho)	Deposit and Total Investment of KBL are not correlated
Alternative Hypothesis (H_1)	Deposit and Total Investment of KBL are correlated
Correlation Coefficient (r_1)	0.993
Calculated value (t_{cal})	20.72
Tabulated value (t_{tab})	3.18
Degree of freedom (d.f)	3
Level of significance (1)	5%
Decision	Ho is rejected. So, Deposit and total investment of KBL are correlated

Detail calculation shown in Appendix-XI

Table No 4.11

Hypothesis- 3

Null Hypothesis (Ho)	Deposit and Total Investment of EBL are not correlated
Alternative Hypothesis (H_1)	Deposit and Total Investment of EBL are correlated
Correlation Coefficient (r_1)	0.61
Calculated value (t_{cal})	1.33
Tabulated value (t_{tab})	3.18
Degree of freedom (d.f)	3
Level of significance (1)	5%
Decision	Ho is accepted. So, Deposit and total investment of EBL are less correlated

Detail calculation shown in Appendix-XII

Table No. 4.12

Hypothesis- 4

Null Hypothesis (H_o)	Capital and Credit of MBL are not correlated
Alternative Hypothesis (H_1)	Capital and Credit of MBL are correlated
Correlation Coefficient (r_1)	0.316
Calculated value (t_{cal})	0.578
Tabulated value (t_{tab})	3.18
Degree of freedom (d.f)	3
Level of significance (a)	5%
Decision	Ho is accepted. So, Deposit and total investment of MBL are less correlated

Detail calculation shown in Appendix-XIII

Table No 4.13

Hypothesis -5

Null Hypothesis (H_o)	Capital and Credit of KBL are not correlated
Alternative Hypothesis (H_1)	Capital and Credit of KBL are correlated
Correlation Coefficient (r_1)	0.69
Calculated value (t_{cal})	2.28
Tabulated value (t_{tab})	3.18
Degree of freedom (d.f)	3
Level of significance (a)	5%
Decision	Ho is accepted. So, Capital and Credit of KBL are less correlated

Detail calculation shown in Appendix-XIV

Table No 4.14

Hypothesis- 6

Null Hypothesis (H_o)	Capital and Credit of EBL are not correlated
Alternative Hypothesis (H_1)	Capital and Credit of EBL are correlated
Correlation Coefficient (r_1)	0.68
Calculated value (t_{cal})	1.73
Tabulated value (t_{tab})	3.18
Degree of freedom (d.f)	3
Level of significance (1)	5%
Decision	Ho is accepted. So, Capital and Credit of EBL are less correlated

Detail calculation shown in Appendix -XV

The above table shows that there is a relationship between deposit and total investment and capital and credit of all three banks. So, it is concluded that the increase in deposit causes the increase in investment. Also increase in capital causes increase in credit.

4.3.3 Trend Analysis

The general tendency of the time series data to increase or decrease or stagnate during a long period of time is called simple trend. The trend ignores sudden or short term fluctuating. The movement may be slow or fast. Under this, following subtopics have been presented.

i) Trend analysis of total deposit and forecast for next 2 years.
ii) Trend analysis of total credit and forecast for next 2years.

4.3.3.1 Trend analysis of Total Deposit

Every commercial bank collects deposit from general public is the main function of commercial banks. The MBL, KBL and EBL have different policy to leers deposit from general public. Under this topic and effort has been made to calculate the trend analysis of MBL, KBL, EBL and Total national has been presented in Appendix-XVI

Table No. 4.15
Trend value of Total Deposit of MBL, KBL, EBL and Total National

Year	Trend Value of MBL	Trend Value of KBL	Trend Value of EBL	Trend Value of Total National
2003\04	280.7	1114.62	4809.05	179760.12
2004\05	2041.18	2814.32	6810.44	205837.13
2005\06	3801.66	4514.02	8811.83	231986.14
2006\07	5562.14	6213.72	10813.22	258099.15
2007\08	7322.62	7913.42	12814.61	284212.16
2008\09	9083.1	9613.12	14816	310325.17
2009\10	10843.58	11312.82	16817.39	336438.18
2010/11	12604.06	13012.52	18818.78	362551.19
2011/12	14364.54	14712.22	20820.17	388664.2
2012/13	16125.02	16411.92	22821.56	414777.21

Detail calculation shows in Appendix-XVI

Since, the calculated value ‘b’ is positive, it is found that the bank’s deposit is in increasing trend. If other things remain constant, the total deposit of MBL, KBL, EBL

and Total National will be Rs. 12604.06 million, Rs. 13012.52 million, Rs. 18818.78 million and Rs. 362551.19 million for 2010/11 respectively. The calculated trend values of total deposit of MBL, KBL, EBL and Total National are fitted in then trend line.

4.3.3.2 Trend analysis of Total Credit

Most of the amounts of deposit collected are used for credit lending. Being commercial banks, one of the main functions of MBL, KBL and EBL is credit lending. Under this topic, an effort has been made to calculate the trend values of credit of MBL, KBL, EBL and Total National are presented in Appendix -XVII.

Table No. 4.16

Trend value of Total Credit of MBL, KBL, EBL and Total National

Year	Trend Value of MBL	Trend Value of KBL	Trend Value of EBL	Trend Value of Total National
2003\04	3807719.6	869540.4	3445728.2	106066.52
2004\05	4090289.5	2399520.4	5135959.7	126662.33
2005\06	4372859.4	3929501.6	6826191.2	147258.14
2006\07	4655429.3	5459482.2	8516422.7	167853.95
2007\08	4937999.2	6989462.8	10206654	188449.76
2008\09	5220569.1	8519443.4	11896886	209045.57
2009\10	5503139	10049424	13587117	229641.38
2010/11	5785708.9	11579405	15277349	250237.19
2011/12	6068278.8	13109385	16967580	270833
2012/13	6350848.7	14639366	18657812	291428.81

Detail calculation shows in Appendix-XVII

Since, the calculated value ‘b’ is positive, it is found that the bank’s Credit is in increasing trend. If other things remain constant, the total credit of MBL, KBL, EBL and Total notional will be Rs. 5785708.9 thousand, Rs. 11579405 thousand, Rs. 15277349 thousand and Rs. 250237.19 million for 2010/11 respectively. The calculated trend values of total credit of MBL, KBL, EBL and Total National are fitted in then trend line.

4.4 Impact of Capital Adequacy Norms on MBL, KBL and EBL

4.4.1 Concept of Capital Adequacy

In general, Nepal Rastra Bank issues various directives including capital adequacy related directives. All the banks and financial institutions licensed by NRB should implement those directives. To see the compliance status, NRB also monitor and inspect those banks and prepares the reports of compliance status. 'Capital adequacy, loan classification and provisioning, ceiling on investment in share and debentures and other regulatory requirement as well as financial conditions of the commercial banks are regularly monitored through these reports (NRB, 2006:17).'

The Capital is the permanent fund supplied by the owners of the business. It is a fundamental resource. In accounting concept, capital is shareholder's equity reflected in the excess of total assets over total liabilities. In general, capital is made up of contributed capital, reserves, and other capital accounts.

"For banks/non-banks, capital should be maintained at a level sufficient to support the basic infrastructure of the business. First, bank/non-banks should strengthen their capital positions so that long-term fixed assets and infrastructure investments that don not directly generates cash flows can be funded. Then, aside from the capital used to meet the funding requirements for fixed assets and infrastructure investments that don not directly generates cash flows can be funded. Then, aside from the capital used to meet the funding requirements for fixed assets and infrastructure investments, it is used to absorb unusual losses and to continue to conduct business when resources are not available or have been withdrawn. The strength of the capital position is an important signal to the public as to the safety of their deposits. Therefore, capital strength is important not only for the individual bank/nonblank but also for the banking system as a whole (NRB, 2002:5)."

Nepal Rastra Bank had issued a revised capital adequacy directive in April, 2001. The revised regulation on capital adequacy requires the banks to maintain a capital ratio consistent with international standards. That is, all banks are required to observe the 8

percent risk weighted capital adequacy ratio proposed by Basle Committee by July 2001, 9 percent by July 2002, 10 percent by July 2003, and 12 percent by July 2004.

"The minimum capital adequacy ratio of 8 percent is considered a minimum level because the original capital adequacy framework is based on credit risk and does not incorporate interest rate risk of other forms of risk or other forms of risk. As a result, well managed banks typically operate with capital in excess of regulatory requirements so as to cover some of the risks not captured in Basle formula (NRB, 2002:5)."

In general, capital includes two types of capital, Tier I and Tier II capital. Tier I capital is popularly known as core and Tire II is supplementary capital. The aggregate of core and supplementary capital is known as the total capital fund. Accordingly, capital fund is segregated into core and supplementary capital while computing capital adequacy ratio.

4.4.1.1Constituent of Core Capital

The core capital is the major part of capital for banks. It appears in balance sheet under the heading of Capital and Liabilities. Following items falls under core capital.

a. Paid Up Capital: Paid up capital includes an amount paid by the shareholders on ordinary shares only. It is made up of ordinary shares held by the promoters as well as by the general public. It also includes bonus shares issued from time to the existing shareholders out of profit earned by the bank.
b. Share Premium: Share premium is the excess of price over par value received by the bank that had issued shares.
c. Non-redeemable Preference Share: Non-redeemable preference share is that type of share, which gets fixed rate of preference dividend, and it can not redeemed unless it liquidates.
d. General Reserve: General reserve is an amount set aside out of profit for the future use or for the expansion of business. For commercial banks, banks should transfer at least 20% of net profit in such reserve account annually. Such reserve can be used only after getting approval from Nepal Rastra Bank.

e. Accumulated profit and loss account: Accumulated profit or loss is that amount of profit or loss which is transferred to the balance sheet after all other transfers to reserves etc for the year.

Detail core capitals to risk weighted assets of commercial banks during last three years are given in Appendix -XVIII

The regulatory requirement of core capital to risk weighted assets were 4.5%, 5%, 5.5% during FY 2001/2, FY 2002/3, FY 2003/4 respectively. The average percentage of core capital to RWA was 12.4%, 8.64%, 6.16% in those years. Considering all those three years, 17 commercial banks had complied regulatory requirement in the maintenance of capital and 8 commercial banks had not complied the requirement. Likewise, 17 commercial banks were above the average of 6.16% of core capital to RWA in FY 2006/7 and rest 8 banks were below the average in that year. So, regulatory compliance in respect of two state owned commercial banks including Nepal Bangladesh Banks and Nepal Credit and Commerce Banks were poor.

4.4.1.2 Constituent of Supplementary Capital

Supplementary capital is considered as supplemental to core capital because it can not provide the same degree of performance as a core capital cushion. For compliance with capital adequacy requirements, the amount of supplemental capital is limited to the total amount of core capital. Any excess of supplemental capital over core capital is ineligible for the calculation of the capital adequacy ratio. Following are the components of supplement capital.

a. General loan loss provisions: General loan loss provision is the provision made against the pass loans of bank. This amount is limited to 1.25% of total risk weighted assets.
b. Exchange fluctuation reserve: This reserve arises from the requirement that bank must transfer 25% of their foreign exchange revaluation gain for the year to the exchange equalization reserve in order to offset possible future revaluation losses.
c. Assets revaluation reserve: Assets are revalued from the historic cost to market value. If revaluation results gain, the excess amount is transferred to assets

revaluation reserve. Such reserve should not be more than 2 percent of total supplementary capital.

d. Hybrid capital instruments: These are such capital instrument which has both/combine characteristics of capital and debt. These instruments are unsecured, are not redeemable, participate in losses. It includes cumulative perpetual preferred shares, perpetual loan stocks, and mandatory convertible loan stocks approved by the NRB etc.
e. Subordinated term debt: These are redeemable preference shares and debentures, repayment period of which is 5 years or more. They are issued without any security.
f. Other free reserves: Those reserves, which should not be used for the purpose of meeting future liabilities. Such reserves are created from profit e.g. Contingency reserves, Dividend equalization reserves etc.

4.4.1.3 Types of Assets and Their Risk Assessment

In every investment, there is risk, so all assets are subject to risks. There are many different kinds of risks against which a bank's management needs to be on guard. The major risks for most banks are credit risk, investment risk, interest rate risk, country risk, operational risk and exchange rate risk. Currently, the risk based capital framework focuses on credit risk and country risk.

The risk based capital framework groups the banks' assets into 5 broad categories covering both on and off balance sheet items. For each category of asset held, a risk weight is attached to reflect the inherent risk of financial loss. The importance of security and collateral is taken into consideration to a certain extent in the risk weighting. A certain amount of discretion is allowed individual countries in assigning the risk weights. These risk weights have been kept as simple as possible; only 5 weights are used – 0 percent, 10 percent, 20 percent, 50 percent and 100 percent. Such assignment of risk has following benefits.

a. It provides a fairer basis for making international comparisons between banking systems whose structures may differ;

b. It allows off balance sheet exposure to be incorporated more easily into the measure and
c. It does not deter banks from holing liquid or other assets that carry low risk.

But in case of Nepal, the on balance sheet assets of banks are grouped into three categories with risk weights of 0%, 20% and 100% instead of five categories of 0%, ,10%, 20%, 50% and 100% as in capital accord. Details of risk weights of on balance sheet assets are shown in Appendix -XIX.

In case of Nepal, the off-balance sheet items of banks are grouped into five categories with risk weights of 0%, 10%, 20%, 50% and 100% instead of four categories with risk weights of 0%, 20%, 50% and 100% as in capital accord. The values of these items are multiplied by their appropriate risk weights as described below. Details of risk weights of off balance sheet items are shown in Appendix-XX.

4.4.1.4 Calculation of Risk Based Capital Ratio

In case of Basle regulatory framework, the risk based capital ratio is calculated using the following formula:

$$\text{Risk Based Capital} = \frac{\text{Tier I capital + Tier II capital}}{\text{Sum of risk weighted assets}} \times 100$$

Where sum of risk weighted assets = sum of (on balance sheet items x risk weights) + Sum of (off-balance sheet items x conversion factors x risk weights)

But in case of Nepalese regulatory framework, the risk based capital ratio is calculated using the following formula:

$$\text{Risk Based Capital} = \frac{\text{Tier I capital + Tier II capital}}{\text{Sum of risk weighted assets}} \times 100$$

Where sum of risk weighted assets = sum of (on balance sheet items x risk weights) + Sum of (off-balance sheet items x risk weights). Conversion factor is neglected for off balance sheet items in Nepalese context.

"The established standard target ratio established by the Basle Committee for industrialized countries is a risk based capital ratio of 8%, of which core (Tier I) capital must be at least 4%. The industry average for risk based capital ratios for the G-10

industrialized countries increased from 9.3% in 1988 to 11.2% in 1996. Since the banking environment in developing countries entails higher economic and market risks, 15% has been regarded as appropriate for these economies (Hennie and Sonja, 2000:116-117)." Following table was the time table for required capital adequacy ratio for commercial banks.

Table No: 4.17

Regulatory Requirement of Capital Adequacy Ratio for Commercial Banks

Time Table	Required Capital fund on the basis of weighted risk assets (In percentage)	
For FY 2000/1	4%	8%
For FY 2001/2	4.5%	9.0%
For FY 2002/3	5.0%	10.0%
For FY 2003/4	5.5%	11%

4.4.2 Change in Capital Fund of MBL, KBL and EBL

The capital adequacy norms have greater impact on changes in capital fund of commercial banks. In general, Nepal Rastra Bank issues various directives including capital adequacy related directives. All the banks and financial institutions licensed by NRB should implement those directives. The table 4.17 shows the raise of capital fund of MBL, KBL and EBL in the form of amount and percentage.

Table No. 4.18
Change in Capital Fund of the MLB, KBL and EBL

(Rs. In million)

Fiscal Year	MBL	Amount Increase\ decreased	Percentage Increase\ Decrease	KBL	Amount Increase \ decreased	Percentage Increase\ Decrease	EBL	Amount Increase\ decreased	Percentage Increase \ Decrease
2003\04	104.7	-		363.4	-	-	610.2	-	
2004\05	517.8	413.1	394.6	390.9	27.5	7.56	703.7	93.5	15.32
2005\06	579.3	61.5	11.9	570.1	179.2	45.8	766.8	63.1	8.96
2006\07	688.8	109.5	18.9	705.5	135.4	23.8	1247.5	480.7	62.68
2007\08	976.1	287.3	41.7	961.7	256.2	36.3	1391.3	143.8	11.52

Table 4.1 and Table 4.2 have already presented the components of capital that are included in capital fund of MBL, KBL and EBL respectively. The above table shows that MBL had total capital fund of Rs 104.7 million which has been increased up to Rs 976.1 million. The annual increments of MBL are 394.6%, 11.9%, 18.9% and 41.7% respectively. Therefore MBL increase their capital fund every year. Where as, KBL had capital fund of Rs 363.4 million which has been increased up to Rs 961.7 million by the end of FY 2007\08.The annual increment of KBL are 7.56%, 45.8%, 23.8% and 36.3% respectively. EBL had capital fund of Rs 610.2 million which has been increase up to Rs 1391.3 million. The annual increments of EBL are 15.3%, 8.96%, 62.68% and 11.52% respectively. In overall review period all three banks have been increasing their capital funds to meet their requirement. So, the capital adequacy norms have impact on commercial banks making them increase their capital.

4.4.3 Changes in Share Capital of MBL, KBL and EBL

The capital adequacy norms require that the core capital be at least 50 percent of the total capital base, the banks has been increasing the core capital accordingly. The following table shows that the raise of new capital of MBL, KBL and EBL.

Table No. 4.19
Changes in Share Capital of the MBL, KBL and EBL

(Rs. In million)

Fiscal Year	MBL	Amount Increase\ decrease	% increase\ decrease	KBL	Amount Increase\ decrease	% increase\ decrease	EBL	Amount Increase\ decrease	% increase\ decrease
2003\04	136	-	-	350	-	-	259	-	-
2004\05	544	408	300	350	-	-	315	56	21.6
2005\06	550	6	1.10	500	150	42.9	315	-	-
2006\07	550	-	-	500	-	-	315	-	-
2007\08	715	165	30				315	-	-

Since, the capital adequacy norms require that the core capital be at least 50% of the total capital base, the banks has been increasing the core capital accordingly. The above table shows that the raise of new capital of all three banks. The above table shows that the MBL had paid up capital of Rs 136 million which has increased to Rs 544 million in the

FY 2004\05, to Rs 550 million in the FY 2005\06 and FY 2006\07 to Rs 715 million in FY 2007\08. Where as KBL had paid up capital of Rs 350 million which has remain constant in FY 2004\05, in FY 2005\06 which has increased to Rs 500 million. In FY 2006\07 which has constant to Rs. 500 million.

EBL had paid up capital of Rs 259 million which has increased to Rs 315 million in the FY 2004\05, FY 2005\06 to FY 2007/08

4.4.4 Percentage of Pass, Doubtful, Bad Loan to Total Loan of Total Commercial Banks

There should be 1%, 25%, 50% and 100% provisioning for pass loan, substandard loan, doubtful loan and bad loan as per regulatory requirement. When pass loan increases and other loan decreases, the requirement of provisioning will be lower and it will increase the profitability due to low amount of provisioning. So, for increased amount of profitability, position of pass loan, sub standard loan, doubtful loan and bad loan are studied here.

Table No: 4.20

Percentage of Pass, Doubtful, Bad Loan to Total Loan of MBL

(Rs. in million)

Particulars	2003/04		2004/05		2005/06		2006/07		2007/08	
	Rs	**%**	**Rs**	**%**	**Rs**	**%**	**Rs**	**%**	**Rs**	**%**
Performing Loan	**401.3**	**90.5**	**550.2**	**90.7**	**1342.2**	**95.7**	**2090.7**	**93.2**	**3014.6**	**93.7**
Pass Loan	401.3	90.5	550.2	90.7	1342.2	95.7	2090.7	93.2	3014.6	93.7
Non performing Loan	**42.1**	**9.5**	**55.9**	**9.3**	**59.8**	**4.3**	**151.2**	**6.8**	**201.3**	**6.3**
Substandard	9.3	2.1	13.3	2.2	17.1	1.2	40.0	1.7	10.4	0.4
Doubtful	14.3	3.2	14.3	2.3	23.0	1.6	90.0	4.1	104.5	3.2
Bad	18.5	4.2	28.3	4.8	19.7	1.5	21.2	1.0	86.4	2.7
Total Loan	**443.4**	**100.0**	**606.1**	**100.0**	**1402**	**100.0**	**2241.9**	**100.0**	**3215.9**	**100.0**

Source: Reports of MBL

From above table, percentage of pass loan to total loan is increasing in each year of MBL where as 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 bank consist about more than 95% of total loan where as bad loan consists less than 2.5% of total loan.

Table No: 4.21

Percentage of Pass, Doubtful, Bad Loan to Total Loan of EBL

(Rs. in million)

Particulars	2003/04		2004/05		2005/06		2006/07		2007/08	
	Rest	%	Rs	%	Rs	%	Rs	%	Rs.	%
Performing Loan	**2270.6**	**91.7**	**3003.2**	**95.2**	**3905.3**	**98.0**	**4857.1**	**97.5**	**5877.4**	**97.3**
Pass Loan	2270.6	91.7	3003.2	95.2	3905.3	98.0	4857.1	97.5	5877.4	97.3
Non performing Loan	**205.5**	**8.3**	**151.4**	**4.8**	**79.7**	**2.0**	**124.5**	**2.5**	**163.1**	**2.7**
Substandard	47.4	1.9	18.9	0.6	15.9	0.4	5.0	0.1	6.1	0.1
Doubtful	134.1	5.4	3.3	0.1	3.9	0.1	44.9	0.9	36.2	0.6
Bad	24.0	1.0	129.2	4.1	59.9	1.5	74.7	1.5	120.8	2.0
Total Loan	**2476.1**	**100.0**	**3154.6**	**100.0**	**3985.0**	**100.0**	**4981.6**	**100.0**	**6040.5**	**100.0**

Source: Reports of EBL

From above table, percentage of pass loan to total loan is also increasing each year in EBL where as percentage of bad loan is decreasing each year except in FY 2006/7. Such management of loan in the bank will be helpful to reduce credit risk and to increase profitability of the bank. Pass loan of the bank consist about more than 95% of total loan where as bad loan consists about 2% of total loan.

Table No: 4.22

Percentage of Pass, Doubtful, Bad Loan to Total Loan of KBL

(Rs. in million)

	2003/04		2004/05		2005/06		2006/07		2007/08	
Particulars	Rs	%	Rs.	%	Rs	%	Rs	%	Rs.	%
Performing Loan	**591.8**	**95.2**	**748.4**	**96.9**	**1003.5**	**97.2**	**1635.2**	**98.4**	**2331.6**	**98.3**
Pass Loan	591.8	95.2	748.4	96.9	1003.5	97.2	1635.2	98.4	2331.6	98.3
Non performing Loan	**29.8**	**4.8**	**23.9**	**3.1**	**28.9**	**2.8**	**26.5**	**1.6**	**40.3**	**1.7**
Substandard	7.5	1.2	3.8	0.5	13.4	1.3	19.9	1.2	21.3	0.9
Doubtful	13.1	2.1	15.4	2.0	11.3	1.1	1.7	0.1	14.2	0.6
Bad	9.2	1.5	4.7	0.6	4.2	0.4	4.9	0.3	4.8	0.2
Total Loan	**621.6**	**100.0**	**772.3**	**100.0**	**1032.4**	**100**	**1661.7**	**100.**	**2371.9**	**100**

Source: Reports of KBL

In case of KBL, percentage of pass loan to total loan is also increasing each year where as percentage of bad loan is decreasing each year. Such management of loan in the bank will be helpful to reduce credit risk and to increase profitability of the bank. Pass loan of the bank consist about more than 97% of total loan where as bad loan consists about 0.5% of total loan..

4.4.5 Study of Responses of Officials of MBL, KBL and EBL

Regarding the impact of capital adequacy norms a questionnaire was developed as shown in Appendix. A total number of ten bank officials of MBL, KBL and EBL participated in the quarries. For each question, the responses where converted to percentage based on the total number of respondents so that percentage analysis can be made. The questionnaire revealed opinions of the bank officials towards the capital and capital adequacy. Accordingly, the following results were derived:-

It was found that 50% of the respondents of MBL felt that the maintenance of the capital adequacy enhances the financial strength of the bank and also help safeguards the money

of the depositors. As well as, 30% of the respondents believed that capital Adequacy assists in increasing the borrowing capacity of the bank and 20%of the respondents' view that capital adequacy protects the bank from bankruptcy.

Similarly, 50% of the respondents of KBL also felt that the capital adequacy enhances the financial strength of the bank and also help safeguard the money of the depositors. 20%believed that capital adequacy enhances the borrowing capacity of the bank and 30% are of the view that it protects the bank from bankruptcy.

It was fond that 40% of the respondents of EBL felt that the capital adequacy enhances the financial strength of the bank and also help safeguards the money of the depositors. 20% believed that capital adequacy enhances the borrowing capacity of the bank and 40% of the view that it protects the bank from bankruptcy.

All the officials of three banks agreed that the Nepal Rastra Bank should issue capital adequacy norms for commercial banks. 80% of the respondents of MBL answered that they can increase both the tiers of capital core as well as supplementary. 20% were of the view that one way of coping with the change in capital adequacy is to decrease the banks risk-weighted assets and some officials believe that at present it is not necessary to increase capital but in future they can increase both components of capital. While, officials of KBL and EBL opine that they can increase both components of capital to cope with the NRB requirements.

The respondents were asked about their views on the present capital adequacy ratio, 80% of the respondents of MBL believed that the ratios set by NRB are just OK. As well as, 20% of the respondents answered that it is more than required. 70% of the respondents of KBL answered that the capital adequacy ratio prescribed by NRB is perfect while remaining answered that it is high. It seems that the officials are not quite satisfied with the prescribed capital adequacy ratio.

While, 85% of the respondents of EBL believed that the ratios set by NRB is satisfied, 15% of the respondents are not quite satisfied with the prescribed capital adequacy ratio.

The respondents were asked about their view on risk-weighted assets, 50% of the respondents of MBL answered that the weight age on risk-weighted assets prescribed by NRB are just OK and 50% said that it should be revised.

Where as, 60% of the respondents of KBL view that the weightage prescribed by NRB on the On- and Off- balance sheets items are just ok and while others said that it should revised. 50% of the respondents of EBL view that the weightage prescribed by NRB on the On- and Off- balance sheets items are just OK and white others said that should revised.

In the question, the respondents were asked on who would be the most effected from the change made. It was found that 100% of the respondents of MBL, KBL and EBL view that the shareholders would be the most effected.

4.5 Major Findings of the Study

The thesis has been concentrated on the capital and capital relates items of MBL, KBL and EBL, certain findings based on the analysis conducted under the analytical section are going to be revealed in the following section:

It was found that the capital fund of MBL, KBL and EBL are largely depending upon share capital. Capital fund of MBL, KBL and EBL seems to be growing consistently. Capital fund of MBL is higher than that of EBL and KBL. MBL has total capital fund of Rs 136 million in FY 2003\04 which has been increased by 300%in the next year. The capital fund has been increased by 30% in FY 2007\08 making a total capital fund of Rs. 715 million. Whereas KBL has total capital fund of Rs.350 million in FY 2003\04which has been increased by 25% in FY 2007\08.The capital fund of EBL has Rs. 610.2 in FY 2003\04 which has been increased by 1391.3 in FY 2007\08.

The risk- weighted assets are derived by calculating the amount from the respective On- and Off- balance sheet items with the prescribed weightage. MBL had risk-weighted assets of Rs.980 million in FY 2003\04 which has been increased to Rs.209.2 million, 325.06 million, Rs.606.3 million and Rs.763.1 million in FY 2004\05 to 2007\08.

KBL had risk- weighted assets of Rs.135.6 million in FY 2003\04 which has been increased to Rs.252.8 million, 444.9 million 629.1 million and 760.4 million in FY 2004\05 to 2007\08. EBL had risk- weighted assets of Rs.426.7 million in FY 2003\04 which has been increased to Rs.570.7 million, Rs.692.8 million, Rs.919.5 million, Rs.1129.1 million in FY 2004\05 to 2007\08. EBL has large amount of risk-weighted assets than that of MBL and KBL.

Capital Adequacy ratio is the primary tool to analyze the capital fund of a bank. It is based on total risk-weighted assets of the bank. MBL, KBL and EBL are successful in maintaining capital adequacy as prescribed by NRB. In the FY 2003\04, all three banks have higher capital adequacy ratio than prescribed ratio i.e., MBL has capital adequacy ratio of 10.68%, KBL has 26.79% and EBL has 12.90% while the requirement of norms directed by NRB was only 9% .However, in the FY 2005\06 MBL has capital adequacy ratio of 17.82%, KBL has 13.41% and EBL has 11.07%while minimum requirement as per directives is 11%.All three banks are successfully maintaining their capital adequacy in every year.

The capital to deposit ratio is an important tool in measuring capital adequacy ratios of banks. The capital to deposit ratios of MBL, KBL and EBL seems to be adequate. It is assumed that the capital to deposit ratio should be 10%. However, the ratio of MBL has 10.5% 29.1%, 21.02%, 12.3%, and 12.4% in FY 2003\04 to 2007\08. KBL has 30%, 15.6%, 11.9%, 11.3% and 12.3% in FY 2003\04 to 2007\08. EBL has 11.2%, 10.5%, 9.5%, 12.4% and 10.1% in FY 2003\04 to 2007\08. It is accepted world wide than 8% to 10% capital to deposit ratio is safe. All three banks have been able to maintain the capital to deposit ratio.

The credit\deposit ratio is a major tool to examine the liquidity of a bank. The C/D ratio of MBL, KBL and EBL shows that their liquidity position is satisfy. This ratio shows how effectively the banks have been using the fund they collected from depositors. The C/D ratios of MBL are in between 70% to 90%. In FY 2003\04 C/D ratio is 65%which is lower than standard ratio. KBL has been maintaining C/D ratios are in between 75% to

95%.Whereas EBL has been maintaining C/D ratios are in between 70% to 80%.It is found that the C/D ratio of KBL is higher than MBL and EBL.

Nepal Rastra Bank issues prudential directives to all bank and financial institution licensed by it on various issues. Capital adequacy is on of the most important directives to strengthen the soundness and stability in the banking sector. For high degree of consistency in the application, uniform capital adequacy norms were developed for banks in a country with a view to diminish an existing source of competitive inequality among commercial banks. Capital adequacy directives implemented by Nepal Rastra Bank were based on the framework prescribed by Basle Committee in "International Convergence of Capital Measurement and Capital Standard 1998".

Basel Capital Accord 1988 is a capital adequacy framework developed by the Basel committee. In 1988, the Basel Committee decided to introduce a capital measurement system commonly referred to as the Basel Capital Accord which has provided for the implementation of credit risk measurement framework with minimum capital standard of 8% by end 1992 which is known as Basel I.

Basel II is also a capital adequacy related standard framed by Basel Committee. After the successful implementation of 1988 accord more than 100 countries, the Basel Committee on Banking Supervision reached an agreement on a number of important issues for promoting best and uniform banking practices as well as setting standards and guidelines for supervisory function. Following extensive interaction with banks, industry groups and supervisory authorities that are not members of the Committee, the revised framework was issued on 26 June 2004. The latest version on the framework was issued on November 2005.

The Basel II aims to replace Basel I and to make the capital framework more risk sensitive. Basel II has recommended major revision on the international standard on bank's capital adequacy, which requires bank to implement risk management policies that align capital adequacy assessment with underlying credit risk, market risk, and operational risk. Basel II has been introduced basically for the protection of depositor's interest by preserving the integrity of capital in banks.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

Financial institutions like banks are the replica of modernization of the society and play a vital role in the development of economic growth of the country. Commercial banks furnish necessary capital needed for trade and commerce for mobilizing the dispersed saving of the individuals and institutions. The primary functions of commercial banks are raise and utilization of funds. Commercial banks collect a large amount of deposit from general public capital is one of the most important components for an organization. Actually, no organization can exist without capital. Although the banks are the major source of capital, they also have to raise capital to run business. Especially, the bank capital has significant role to play as the banks have obligations to mass people, its depositors. Thus, the bank should hold an adequate capital secure the interest of depositors.

The study showed that the capital fund of MBL, KBL & EBL meet the requirement of the norms. Capital adequacy ratio shows the strength of a bank. Capital adequacy ratios have been calculated to check the adequacy as per the norms. The capital adequacy ratio of MBL, KBL & EBL shows that the all three banks are able to comply with the requirements of NRB. The capital to deposit ratio has a significant role in measuring capital adequacy ratios of banks. C/D ratios, which are key ratios of commercial banks, have also been checked. The relationship of capital fund with credit and deposit has been calculated. The correlation coefficients have been calculated to test the relationship between deposit and total investment and between credit and capital. The test of hypothesis showed the existence of relationship between deposit and total investment and capital and credit of MBL, KBL & EBL. The trend analysis has been presented to inform about the expected future return, future achievement of the bank. The trend analysis of total deposit and total credit has been calculated.

The thesis report also studies the responses of ten bank officials has been done through research interview. The financial statement of five years from 2001\02 to 2005\06 had been examined to fulfill the objective of the study.

5.2 Conclusion

After the summarizing the objective of the study, we will now go to the conclusion section. With some twenty three commercial banks operating in Nepal, the market seems over crowded and the banks are now finding a tough competition among themselves. Since the entry barriers are not so high due to the government liberal policy, this competition is expected to be more intense in the near future, as there is always the possibility of a new player entering this sectors. The commercial banks in Nepal are doing well but they are not giving satisfactory results due to some internal and external factors.

Commercial banks of Nepal are bound by the directives of NRB. The directives No. 1 has set norms on capital adequacy for commercial banks. Every commercial bank has to meet the requirement of capital adequacy as stated by the directives. Capital adequacy is the portion of capital fund in regard of risk-weighted assets that commercial banks hold. Capital adequacy is required to the money of the depositors as the banks are playing with the money they collected from the depositors.

Under the study, MBL, KBL & EBL are found to be successful to comply with requirement of capital adequacy norms. Well the banks are meeting the requirement. Capital adequacy ratio shows the strength of a bank.

The capital deposit ratios of MBL, KBL & EBL seems to be satisfied. The lack of policy in regard of these types of ratios caused to the relaxation of the banks not to meet the adequate rations.

The correlation coefficient between deposit and total investment and between capital and credit are found to be positive. The test of hypothesis revealed that the deposit and total

investment and capital and credit are correlated the trend analysis of total deposit and total credit are in increasing trend.

5.3 Recommendations

The recommendation of this study may be the important information for those who are very much concerned directly with the capital adequacy norms. Thus, following recommendation and suggestion can be outlined.

a) The capital fund of sampled commercial bank i.e. MBL, KBL and EBL are largely depend upon share capital. It is recommended to the commercial banks to follow optimal capital structure which maximizes the market value of the firm. The banks should use some sort of debt financing depending upon its viability. Still in Nepal, debt financing is an accustomed source of financing for commercial banks. But it is notable that MBL has already started the debt financing.
b) Capital to deposit ratio of MBL, KBL and EBL seems to be inadequate. It is less than what actually required. There is lack of standard on such type of ratio. So, NRB should set appropriate standard for capital to deposit ratio to be maintained by commercial banks. It is assumed that capital to deposit ratio should be in between 8% to 10%. So, sampled banks are suggested to keep the balance as required by NRB.
c) The credit to deposit ratios of MBL, KBL and EBL shows that their liquidity position is quite sound. The C/D ratios of MBL are comparatively less than that of KBL and EBL. This ratio shows how effectively the banks have been using the fund they collected from depositors. It is recommended to MBL that it should concentrate more on credit and investment. The bank shall expand its branches in rural areas and search investment opportunity there. The C/D ratios of KBL and EBL in nearer to this standard but overall point of view, KBL and EBL cannot relax with such C/D ratios. More credit flows are required to verge on the optimum C/D ratio.

d) MBL, KBL and EBL are quite successful in maintaining capital adequacy as prescribed by NRB. But as compared to sampled banks, EBL has higher capital fund than MBL and KBL. The supplementary capital for MBL, KBL and EBL is not good. It should be noted here that shortfall in the supplementary capital can be compensated by the use of the excess amount of core capital. Therefore, it is recommended that sampled banks should improve their supplementary capital.

e) The bank should increase its core capital in order to expose itself to more credit risk. With the reduction in the single obligor limit, there are only two choices for the bank to limit its clients within standards or to increase the core capital. While staying with the existing core capital, MBL, KBL and EBL are exposing to the risk of losing huge and good clients to other banks with huge amount of core capital that can withstand the loan exposure of such client. On doing this, MBL, KBL and EBL will on one way not be able to mobilize its deposits and on the other will have to stick to small client. The increase in the number of small client will take the operating costs of the bank up, thus decreasing the profitability.

f) While lending loans and advances, banks should keep in account that the fund they are going to lend is collected from public and hence should be carefully treated on behalf of the depositors to protect their interest.

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