

# CHAPTER - I

## INTRODUCTION

### 1.1 Background of the Study

Innovation, Deregulation and Globalization in banking sector have contributed to making banking business more complex and potentially riskier. This has presented new challenges to bank supervisors with respect to the structuring of their ongoing supervision. In response, supervisors have developed new methods and processes for monitoring and assessing banks on an ongoing basis. Particular attention is being paid in this regard to improving the quality of bank examinations and to the development of systems that can assist supervisors and examiners in identifying changes, particularly deterioration, in banks' financial condition as early as possible. Amongst the various new initiatives that have been taken or are being taken in this respect are the development of more formal, structured and quantified assessments not only of the financial performance of banks but also of the underlying risk profile and risk management capabilities of individual institutions. The ability to monitor financial sector soundness presupposes the existence of valid indicators of the health and stability of financial systems. These macro prudential indicators (MPIs) allow for assessments to be based on objective measures of financial soundness. If MPIs are made publicly available, they enhance disclosure of key financial information to the markets. In addition, if the indicators are comparable across countries they facilitate monitoring of the financial system, not only at the national but also at the global level. The latter is crucial in view of the magnitude and mobility of international capital, and the risk of contagion of financial crises from one country to another.

Hilbers, Krueger & Moretti (September 2000) in their publication recommended CAMELS framework as one commonly used framework for analyzing the health of individual institutions, which looks at six major aspects of a FI: capital

adequacy, asset quality, management soundness, earnings, liquidity, and sensitivity to market risk. has shown that certain macroeconomic trends have often preceded banking crises. Assessments of financial soundness, therefore, need to incorporate the broad picture-particularly an economy's vulnerability to capital flow reversals and currency crises.

On November 13, 1979, Federal Financial Institutions Examination Council (FFIEC), USA, adopted an internal rating system, the Uniform Financial Institutions Rating System (UFIRS). UFIRS is used by the Federal supervisory agencies and State supervisory agencies of USA for evaluating the soundness of FIs on a uniform basis and for identifying those institutions requiring special supervisory attention or concern. Explaining the importance of UFIRS, the FFIEC Federal Register Press Release Notice (December 1996) states that UFIRS takes into account of evaluation of managerial, operational, financial, and compliance performance factors common to all institutions and provides a means for the supervisory agencies to monitor, the types and severity of problems that institutions may be experiencing. The Federal Register Press release further affirms in its introduction text of the revised UFIRS that it has over the years proven to be an effective internal supervisory tool for evaluating the soundness of FIs on a uniform basis and for identifying those institutions requiring special attention or concern. The press release reasons number of changes, have occurred in the banking industry and in the Federal supervisory agencies' policies and procedures, for the revision of 1979 rating system. The revisions to UFIRS with inclusion of the sixth component addressing sensitivity to market risks will be in effect from January 1, 1997.

The direct public beneficiaries of private supervisory information, such as that contained in CAMELS ratings, would be depositors and holders of banks' securities. Small depositors are protected from possible bank default. Rather than

evaluating a bank's solely on its performance to date or focusing on areas of minimal risk, it is imperative to evaluate both bank's performance and management's ability to identify, measure, monitor, and control risk.

Nepal Rastra Bank (NRB), the Financial Institutions' regulatory authority in Nepal, directed this concept vide circular Bai. Bya. Pa.Pa.66/057 dated 26-04-2001 by implementing minimum capital requirement standard in Nepal.

The purpose of this research is to focus on to identify and monitor current and potential areas of risk in one of the major FIs of Nepal.

## **1.2 Focus of the Study**

In Nepal, NRB uses the CAELS (Capital, Assets, Earnings, Liquidity, Sensitivity) system for assessing the financial soundness of commercial banks and accordingly for the first time ranked the banks based on the statistics of 3<sup>rd</sup> -quarter of the FY 2061/62. However, the Office of Inspector General's (OIG) Audit report, USA (September 2002) replaced CAEL with SCOR for review program of the FDIC-Supervised Banks. SCOR uses quarterly Reports of Condition and Income (Call Reports) to rate institutions.

The research study is focused on assessing the financial condition and performance of Nepal Investment Bank and Nepal Bangladesh Bank by using descriptive and analytical research design, prescribed by UFIRS and in accordance to BASEL accord. The study encompasses all the six components of CAMELS and carried out with annual Reports of Condition and Income. More specifically, the study focuses on the trend analysis of Capital Adequacy ratio, Non Performing Loan composition, Total Expenses to Revenues ratio, earning per employee, return on equity, return on assets, net interest margin, earning per share and liquidity with respect to NRB standard and industrial averages during the period of past five years starting from FY 2005/06 to 2009/2010.

### **1.3 Statement of the Problem**

The main objective of a Financial Institution (FI) is to increase its returns for its owners which often come, however, at the cost of various increased risk: Credit Risk, Liquidity Risk, Interest Rate Risk, Interest, Market Risk, Off-Balance Sheet Risk, Foreign Exchange Risk, Country Risk, Technology Risk, Operational Risk and Insolvency Risk. The government owned banks in Nepal are almost running in loss. It is also very difficult to call the private sector banks sound though they are earning profit since they may be exposed to aforesaid risks. Questions are being raised over the validity of their balance sheet and profit & loss account. Should the suspicion come true, it will prove very costly to the depositors, creditors and national economy as a whole. In view of this it is important that FIs manage these risks and have appropriate policies, processes, or practices in place that management follows and uses.

The elementary problem of this research is to scrutinize the financial condition of NIBL in the framework of CAMELS and is an attempt to come back with the following research questions:

- ) How NIBL is managing its Capital Adequacy? Is it in line with the regulated minimum capital requirement?
- ) What is the level, trend of Asset Composition and Risk Weighted Assets of NIBL and what is the bank's quality of Loans and Loan provision mix?
- ) How NIBL is managing their expenses with respect to revenues? What control and monitoring mechanism are maintained in the bank?
- ) What are the level, trend and stability of NIBL's earnings?
- ) Is the NIBL's liquidity position adequate in consideration of the current level and prospective sources of liquidity compared to funding needs?
- ) How changes in interest rates can affect each bank's earnings?

#### **1.4 Objectives of the Study**

The national and international economy has undergone through drastic changes over a decade and abruptly since last 5 years. The threats imposed by Nepalese economy, have made it imperative to search for opportunities in order to curb any hindrances to the economical development. Because of the importance and relevance of banks in shaping the economy, it has become important to review the banking industry and its business strategies.

In line with the statement of problem, the main objective of this study is to analyze the financial condition of NIBL and following are the objectives on specific terms:

- )] To analyze Capital Adequacy & Liquidity Position of NIBL and compare with regulatory minimum capital requirement.
- )] To analyze quality of assets and evaluate Risk Weighted Assets of NIBL.
- )] To evaluate the level, trend and stability of NIBL's earning.

#### **1.5 Significance of the Study**

Apart from aiming to gain knowledge, research itself adds new to the existing literature. The significance of this study lies mainly in identifying problem or deteriorating FI, as well as for categorizing institution with deficiencies in particular component areas. Further, it assists in following safety and soundness trends and in assessing the aggregate strength and soundness of the financial industry. The research is prepared in order to supplement present examination procedures applicable to FIs of Nepal. As such, the study assists the stakeholders in fulfilling their collective mission of maintaining stability and public confidence. It would helpful for the senior management involved in day-to-day operations. Bankers, and Examiners, alike can use this report to further their understanding of a banks financial condition. As CAMELS has little been researched in the context of Nepal , the scholars will find it a literature for their future research works.

## **1.6 Limitation of the Study**

The research is conducted to fulfill the academic requirement of Master of Business degree. The evaluation made herein is taken of only two sample units. It is focused on the financial analysis of the study unit in the frame work of the six components of CAMELS system. The study remains largely in the realms of Offsite Monitoring System. The proxy financial tools are used to measure the qualitative factors like the Management component. The bank's audited annual reports of condition for the period 2005/06 to 2009/10 are the primary source of information and treated as authentic.

## **1.7 Organization of the Study**

This study has been organized into five chapters, each devoted to some aspects of the study of analysis of financial structure and performance evaluation. The titles of each of these chapters are as follows:

**Chapter I:** It contains the introductory part of the study where the general background of the study, the major issues to be investigated and the objectives of the study are presented.

**Chapter II:** It is directed towards the review of literature of related studies. It contains conceptual framework, major studies in general, and review of major studies in Nepal.

**Chapter III:** It describes the research methodology employed in the study. It includes research design, nature and sources of data, method of analysis, statistical tools used and definition of the key terms.

**Chapter IV:** It deals with the presentation and analysis of data. Tabulation and interpretation of the data are major part of the chapter. Various statistical tools are

used to analyze the data. Charts are used and interpret as per the requirement of research study.

**Chapter V:** It states summery and conclusion of the study. This chapter presents the major findings as well.

## **CHAPTER - II**

### **LITERATURE REVIEW**

This chapter is concerned with review of literature on to the financial performance analysis of commercial banks. So, this chapter highlights upon the literatures that are available in the area of financial performance and commercial banking sector. This chapter is divided into two parts: conceptual framework and review of related studies.

#### **2.1 Conceptual Review**

This sub-chapter presents the theoretical aspect of the study. It includes the concept of commercial bank, functions of commercial banks, historical development of commercial bank in Nepal, concept of financial performance analysis.

##### **2.1.1 Concept of Commercial Bank**

The financial institutions in Nepal can be broadly classified into two basis of banking and non-banking financial institutions. Commercial banks are the banking institutions which creates demand deposits, that is, deposit account which is subject to withdrawal by the owner on demand as subject transfer to a third party by means of a cheque. In that respect, it differs from all other financial institutions. Moreover, deposits in a commercial bank circulate as money, while deposits in other financial institutions do not. In fact, the greater part of money supply is the direct consequence of the profit-seeking or money-creating activities of commercial banks.

A commercial bank is a legally formed financial institution, which operates for profit. Like other industrial or commercial enterprise, a bank too, seeks to earn



maximum income through the suitable employment of its resources. It is a financial – sort of an intermediary between people with surplus funds and people in need of funds. It accepts deposits for the purpose of lending or investment and thereby hopes to make a profit-profit, which are adequate to enable the bank to pay interest at the prescribed rates to its depositors, meet establishment expenses, build reserves, pay dividend to the shareholders, etc. In general, commercial banks are those financial institutions, which work as financial intermediary in collection and disbursement of funds from surplus unit to deficit unit. Banking and financial institutions act (2061 B.S.) of Nepal has defined commercial bank as organization which exchange money, accepts deposits, grants loans and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industrial for such specific purpose.

Upadhaya and Tiwari (1998) stresses that the commercial bank is established with view to provide short term debt necessary for trade and commerce of the country along with other ordinary banking business such as collecting the surplus in the form of deposit, lending debts by discounting bills of exchange, accepting valuable goods in security, acting as an agent of the client etc. In the same way, Abrol and Gupta (2002) explain that principally a commercial bank accepts deposits and provides loans primarily to business firm. On the other hand, the broad concept of commercial bank holds that the commercial bank is a banking institution other than central bank. The commercial bank is the only institution other than central bank permitted to accept demand and time deposits (Crosse, 1963).

### **2.1.2 Historical Development of Commercial Bank in Nepal**

All countries have the logical historical order of the development of financial structure and has gone through different stages. In Nepal, The first stage starts from rudimentary economy in which the commodity money such as gold and

silver coins generally accepted as a means of payment. At the end of 14<sup>th</sup> century, we further came across the term “Tanka Dhari”, meaning money dealer, which is one of the sixty-four caste classified basis of occupation. In historical order of development of the market is seen only in this stage. The establishment of the “Tejarath Addha” during the year 1877 A.D. was fully subscribed by the government of Kathmandu valley, which played a vital role in banking system. The Tejarath Adda distributed credit facilities to the public especially on the collateral of gold and silver. Hence, the establishment of Tejarath Adda could be regarded as pioneer foundation of banking in Nepal.

The history of the modern banking began only after the establishment of Nepal Bank Limited in 1937A.D. as a semi-government organization, without existence of a central bank. It was established under special Banking Act 1936 having elementary functions of a commercial bank. It laid the foundation of modern banking system in Nepal. Because of the non-existence of a central bank in the country, the commercial bank had to act as its own Central bank, and keep enough resources in hand for meeting emergencies. At that time, Nepalese economy was characterized by the prevalence of dual currency system. There were great fluctuations in the open market rate of exchange of the Nepalese rupees against the India currency, which provided a great hindrance to the economic stability as well as development of the country. Thus, there was an immediate need of central bank. As a result, Nepal Rastra Bank Act 1955 with objectives of supervising, protecting and directing the functions of commercial banks activities. It had authorized capital of Rs.10 million fully subscribed by the government. It was empowered by act to have direct control over financial institutions within the country. It started issuing currency in 1959 A.D. Another commercial bank fully owned by the government, named as the ‘Rastriya Banijya Bank’ got established in 1966 A.D. With a view of providing financial assistance for agriculture, Agriculture

Development Bank of Nepal (ADB/N) was established in the government sector in 1967 A.D (NRB, 2001).

In 1980 A.D., government introduced “Financial Sector Reforms” which facilitated the establishment of different private sector financial institutions in Nepal. Besides Nepal Bank Limited and Rastriya Banijya Bank, other commercial banks did not come into existence until 1984 A.D. The commercial banking act 1974 was amended in 1984 A.D. to increase the competition between commercial banks. As per the provision made in this act, private sector (including foreign investment) was given freedom in opening commercial bank. The entry barriers placed on commercial bank were eliminated. However, foreign participation in the financial sector is only allowed with the collaboration with domestic partners. The establishment of joint venture banks gave a new horizon to the financial sector of the country.

Consequently, Nabil Bank Limited (as decided by the annual general meeting held on 12 August 2001 the bank has been renamed as Nabil Bank limited, before this it was called Nepal Arab Bank Limited) was established in 1984 A.D. as a first joint venture bank in Nepal. Likewise Nepal Indo-Suez Bank Limited (Later it has been called Nepal Investment Bank Limited), Standard Chartered Bank Limited were established under joint venture in 1986, 1987 and 1988 A.D. respectively.

After the restoration of democracy in 1990 A.D., NRB adopted more liberal policy in establishing the commercial banks. As a result, a number of commercial banks increased dramatically viz. Himalayan Bank Ltd., Nepal SBI Bank Ltd., Everest Bank Ltd, Bank of Kathmandu Ltd. Etc. Since April 2007 in Nepal, 20 commercial banks, 70 finance companies, 29 development banks and 11 rural development banks, 19 cooperative societies and 47 non-government organizations are working under the Banking and Financial Institution Ordinance

2061. Out of these 20 commercial banks, three banks are public sector and seventeen are private sector banks.

### **2.1.3 Functions of Commercial Banks**

Commercial bank performs different functions such as core function and support function to the business world as well as general people. Core functions included two types of functions- fund based and non-fund based functions. Similarly, support functions are those functions carried out to fulfill core functions. American Institute of banking (1972), has fixed out four major functions of commercial bank, receiving payments, handling payments, making loans and investment and creating money by extension of credit. Similarly, Upadhya & Tiwar (2037) have argued that there are three major functions of commercial bank. They are **primary functions** (accept deposits and provide loan & advances); **agency functions** (sales & purchase of securities, working as an agent & trustee of customer, transfer of funds and provide financial information) and **general functions** (safe custody of valuable assets, issue of credit instruments, dealing with foreign exchange and compilation of trade information & statistics).

#### **2.1.3.1 Primary Functions**

The primary function includes the following:

##### **i. Accepting Deposits**

This is the oldest functions of a bank and the banker used to charge commission for keeping the money in its custody when banking was developing as an institution. Now a day a bank accepts three kinds of deposits from its customers. The first is the 'savings' deposits on which the bank pays interest relatively at low rate to the depositors who are usually small savers. Depositors are allowed to at low rate to the depositors who are usually small savers. Depositors are allowed to withdraw their money by cheque up to a limited amount during a week or a year. Businesspersons keep their deposits in current accounts. They can withdraw any

amount standing to their credit in current deposits by cheque without notice. The bank does not pay interest on such accounts but instead levies service charges to its customers. Current accounts are known as demand deposits. A bank accepts fixed or time deposits. Savers who do not need money for a stipulated period from 6 months to the longer periods ranging up to 10 years or more are encouraged to keep it in fixed deposits. However, there is always the maximum limit of the interest rate on fixed deposit.

## **ii. Advance and Loans**

One of the primary functions of a commercial bank is to advance loans to its customers. A bank lends a certain percentage of the cash lying in deposits at a higher interest rate than it pays on such deposits. This is how it earns profit and carries on its business. The bank advances loans in the following ways:

**Cash Credit:** The bank advance loans to businesspersons against certain specified securities. The amount of the loan is credited to the current account of the borrower. In case of a new customer, a loan account for the sum is opened. The borrower can withdraw money through cheques according to his requirements but pays interest on the full amount.

**Call Loans:** There are very short-term loans advanced to the bill brokers for not more than fifteen days. They are advanced against first class bills or securities. Such loans can be recalled at a very short notice. In normal times, they can also be renewed.

**Overdraft:** A bank often permits a businessperson to draw cheques for a sum greater than the balance lying in his current account. Bank provides the overdraft facility up to a specific amount to the businessperson. However, bank charges interest only on the overdrawn amount.

**Discounting Bills of Exchange:** If a creditor holding a bill of exchange wants money immediately, the bank provides the money by discounting the bill of exchange. It deposits the amount of the bill in the current account of the bill holder after deducting its rate of interest for the period of the loan, which is not more than 90 days. When the bill of exchange matures, the bank gets its payment from the banker of the debtor who accepted the bill.

### **iii. Credit Creation**

Credit creation is one of the most important functions of the commercial banks. Like other financial institutions, its aim at earning profits. For this purpose, its accept deposits and advance loans by keeping small cash in reserve for day-to-day transactions. When a bank advances a loan, it opens an account in the name of the customer and does not pay him in cash but allows him to draw the money by cheque according to his needs. By granting a loan, the bank creates deposit.

#### **2.1.3.2 Agency Functions**

Commercial bank performs number of agency functions. A bank acts as an agent of its customers in collecting and paying cheque, bills of exchange, drafts, dividends etc. It also buys and sells shares, securities, debentures etc. for its customers. Further, it pays subscriptions, insurance premium, rent, electricity and water bills and other similar charges on behalf of its clients. It also acts as a trustee and executor of the property and will of its customers. Moreover, the bank acts as consultants to its clients. It also remits money from one place to another by means of cheques, drafts, wire transfer etc. For some of these services, the bank charges a normal fee while it renders others free of charge.

#### **2.1.3.3 General Functions**

Besides the above noted services, the commercial bank performs a number of other general functions. It acts as the custodian of the valuables of its customers by

providing those lockers where they can keep their jewelry and valuable documents. It issues various forms of credit instruments, such as cheque, drafts and travelers' cheque etc., which facilitate transactions. The bank also issues letters of credit and acts as a referee to clients. It underwrites shares and debentures of companies and helps in the collection of funds from the public. Moreover, it provides statistics on money market and business trends of the economy. A commercial bank finances foreign trade of its customers by accepting foreign bills of exchange and collecting them from foreign banks. It also transacts other foreign exchange business buying and selling of foreign currency.

#### **2.1.4 Supervisory and Monitoring System of the Nepal Rastra Bank**

Principally, the central bank has the liability and obligation to maintain fair and healthy environment of the economic activities of the nation. For it, the necessary acts, rules and regulations are enacted and developed. Thus, the act of checking whether the related official and banks have honestly complied with the policy, regulation and provisions enacted by the controlled financial system, itself is called inspection. As a central bank, the Nepal Rastra Bank has been discharging such serious and sensitive task.

Before the establishment of the Nepal Rastra Bank, the function of the inspection and supervision used to be carried out by the official by His Majesty Government or Auditor General. This practiced was continued until the enactment of the Commercial Bank Act 2020 B.S.; After the introduction of this Act, the function of inspection and supervision for the commercial Bank was given to the Nepal Rastra Bank and this right more strengthened by the Nepal Rastra Bank Act and the introduction of the Commercial Bank Act 1974. The Nepal Rastra Bank has been discharging the task of inspection from the FY 2056 B.S. But in the FY 2042/43 B.S., a separate department of inspection and supervision, was established

to regulate and carry out an on site inspection of the banks and the financial institutions.

The system of inspections and supervision of the banking and the non-banking financial institutions is to be followed on a certain standard norm. In this regard, the Bank for International Settlement (BIS) has formulated an important standard, which is called CAMELS system. The evaluation of financial institutions is done based on it. In the case of Nepal, the Nepal Rastra Bank, adopting this system, has made it the main basis of the on site and off site supervision.

### **2.1.5 Approaches to Supervision**

Effective supervision is prerequisite for growth and stability of financial system. The supervision facilitates the detection of frauds, malpractices, abuses of power by management and undesirable trends and imprudent practices such as deterioration in the quality of loan portfolio and insider lending. Due to the fast growth of financial institutions, a separate department for supervision of financial institution was established in 1998, which was named as Financial Institution Supervision Department (FISD). Therefore, at present, all the commercial banks are supervised by Bank Supervision Department and all other financial institutions are supervised by the FISD (NRB Annual Report, 2001/02). The FISD carry out on-site examination of financial institution by sending examination team to the institutions. The most common supervisory tools used by the regulatory agencies in promoting safety and soundness are on-site supervision and off-site supervision. Both on-site and off-site supervision (inspection reports) helps to discourage the unnecessary delays.

**On-site Supervision:** The on-site supervision is a regular full scope corporate level examination. Supervisors rely principally on regular on-site examinations to assess the condition of financial institutions. On-site examination is the most



effective tools for constraining financial institution's risk. On-site inspection is performed based on on-site inspection manuals. The manual covers the areas of capital adequacy, loan portfolio management, treasury operation, management information system, and internal control system and information technology. This manual provides guidelines to examiners for preparation of inspection report.

Generally, 15 days before, the concerned financial institutions are informed to prepare the necessary documents by the FIRD. Then only on-site examination is done. After the completion of on-site inspection, the supervisors (NRB Annual Report, 061/62) do CAMELS rating of financial institutions. Therefore, the on-site examination ratings like CAMELS are useful in the analysis of the firm at the time of the examination

**Off-site Supervision:** An off-site supervisory approach undertakes an assessment of the soundness of financial institutions based exclusively on an analysis of information obtained from statutory returns submitted by the institutions than actual on-site field examination. Then monitors the financial health of supervised institutions and analyzed the reports and conditions. The off-site review and analysis deal with capital, liquidity, which can be quantified, but is less well suited to qualitative issues such as management strength and operational risks. Besides, off-site supervision is taken as early warning system to identify potential problems in financial institutions as well as for the compliance of applicable provisions. This support and strengthen quality of on- site examination.

### **2.1.6 Financial Performance Analysis**

Innovation, deregulation and globalizations in banking sector, banks today are under great pressure to perform – to meet the objectives of their stockholder, employees, depositors, and borrowing customers, while somehow keeping government regulators satisfied that the bank's policies, loans, and investments are

sound. As banking organizations have grown in recent years, more and more of them have been forced to turn to the money and capital markets to raise funds by selling stocks, bonds and short-term instruments. This development has placed management under great pressure to set and meet bank performance goals. Bankers have been called upon to continually reevaluate their loan and deposit policies, review their plans for expansion and growth, and assess their returns and risk in light of this new competitive environment. In addition, there is the added problem of bank failures. Many of these failures have been associated with management mistakes, outright fraud, and a more volatile and uncertain economy that demands new standards for bank management.

Financial statements contain a wealth of information, which if properly analyzed and interpreted, can provide valuable insights into firm's performance and position (Chandra, 1992). Analysis of financial statements is of interest to lenders, investors, security analysts, managers and others. It generally begins with the calculations of a set of financial ratios designed to reveal the relative strengths and weaknesses of a company as compared to other companies in the same industry, and to show whether the firm's position has been improving or deteriorating over time (Western and Copeland, 1991). Financial analysis is a process of identifying the financial strengths and weaknesses of the firm by properly establishing relationship between the item of balance sheet and the profit and the loss account (Pandey, 1999).

### **2.1.7 Concept of "CAMELS" Bank Rating System**

Federal Reserve Bank of New York (1997) has defined the component of CAMEL as rating system which produces a composite rating of an institution's overall condition and performance by assessing five components: Capital adequacy, Asset quality, Management administration, Earnings, and Liquidity, the CAMEL was latter updated with inclusion of sixth component, sensitivity to market risk, now is

referred to as the CAMELS rating system. In 1997, the rating became CAMELS with the addition of a market sensitivity rating. Nepal Rastra Bank (NRB) has used the CAMELS methodology since 2062/2063 for analysis and rating the soundness of banks and financial institutions. This analysis methodology may not capture the full range of governance risks in a bank and financial institutions. Rating agencies have also followed a similar framework for rating banks and financial institutions. The rating methodologies employed by central banks, rating agencies creditors and investors do not appear to include explicitly the analysis of governance risks. SEBO Journal (September,2004) points out that a key factor contributing to bank failure in Asia, was due to lack of adequate bank governance systems and it may be worthwhile to expand the rating methodology to include governance as a key risk factor. The **CAMELSG** refers to seven components namely **Capital Adequacy, Assets Quality, Management Quality, Earnings Quality, Liquidity, Sensitivity to Market Risks and Governance.**

CAMEL was originally developed by the Federal Deposits Insurance Corporation (FDIC) for the purpose of determining when to schedule an on-site examination of a bank (Theomson, 1991, Whalen and Thomson, 1988). The FFIEC is revised in January 1997, the UFIRS, which is commonly referred to as the CAMEL rating system, This system was designed by regulatory authorities to quantify the performance and the financial condition of the banks which it regulates.

The CAMELS rating system is subjective. Benchmarks for each component are provided, but they are guidelines only, and present essential foundations upon which the composite rating is based. They do not eliminate consideration of other pertinent factors by the examiner. The uniform rating system provides the groundwork for necessary supervisory response and helps institutions supervised the groundwork for necessary supervisory response compared and evaluated. Ratings are assigned for each component in addition to the overall rating of bank's

financial condition. The ratings are assigned on a scale from 1 to 5. The CAMELS rating are commonly viewed as summary measures of the private supervisory information gathered by examiners regarding banks' overall financial conditions, although they also reflect available public information. In Nepal, the NRB plays the supervisory role for evaluating bank's financial condition though rating the banks' in accordance to CAMELS is still initial phase.

### **Composite Rating**

The FFIEC press release, USA (1996) describes the composite rating and defines the six components ratings. According to the press release, Composite ratings are based on a careful evaluation of an institution's managerial, operational, financial, and compliance performance. The six key components used to assess an institution's financial condition and operations are: capital adequacy, asset quality, management capability, earnings quantity and quality, the adequacy of liquidity, and sensitivity to market risk. The rating scale ranges from 1 to 5, with a rating of 1 indicating: the strongest performance and risk management practices relative to the institution's size, complexity, and risk profile; and the level of least supervisory concern. As 5 rating indicates: the most critically deficient level of performance; inadequate risk management practices relative to the institution's size, complexity, and risk profile; and the greatest supervisory concern. The composite ratings are defined are as follows:

**Composite 1:** FIs in this group are sound in every respect and generally have components rated 1 or 2. Any weaknesses are minor and can be handled in a routine manner by the board of directors and management. These FIs are the most capable of withstanding the vagaries of business conditions and are resistant to outside influences such as economic instability in their trade area. These FIs are in substantial compliance with laws and regulations. As a result, these FIs exhibit the strongest performance and risk management practices relative to the

institution's size, complexity, and risk profile and give no cause for supervisory concern.

**Composite 2:** FIs in this group are fundamentally sound. For a FI to receive this rating, generally no component rating should be more severe than 3. Only moderate weaknesses are present and are well within the board of directors' and management's capabilities and willingness to correct. These FIs are in substantial compliance with laws and regulations. Overall risk management practices are satisfactory relative to the institution's size, complexity, and risk profile.

**Composite 3:** FIs in this group exhibit some degree of supervisory concern in one or more of the component areas. These FIs exhibit a combination of weaknesses that may range from moderate to severe; however, the magnitude of the deficiencies generally will not cause a component to be rated more severely than 4. FIs in this group generally are more vulnerable to outside influences than those institutions rate a composite 1 or 2 additionally; these FIs may be in significant noncompliance with laws and regulations.

**Composite 4:** FIs in this group generally exhibit unsafe and unsound practices or conditions. There are serious financial or managerial deviancies that result in unsatisfactory performance. The problems range from severe to critically deficient. The weaknesses and problems are not being satisfactorily addressed or resolved by the board of directors and management. FIs in this group generally are not capable of board of directors and management. There may be significant noncompliance with laws and regulations. Risk management practices are generally unacceptable relative to the institutions. Risk management practices are generally unacceptable relative to the institution's size, complexity, and risk profile. Close supervisory attention is required. This means in most cases, formal enforcement action is necessary to address the problems. Institutions in this group

pose a risk to the deposit insurance fund. Failure is a distinct possibility if the problems and weaknesses are not satisfactorily addressed and resolved.

**Composite 5:** FIs in this group exhibit extremely unsafe and unsound practices or conditions; exhibit a critically deficient performance; often contain inadequate risk management practices relative to the institution's size, complexity, and risk profile; and are of the greatest supervisory concern. The volume and severity of problems are beyond management's ability or willingness to control or correct. Immediate outside financial or other assistance is needed in order for the FI to be viable. Ongoing supervisory attention is necessary. Institutions in this group pose a significant risk to the deposit insurance fund and failure is highly probable.

### **2.1.8 CAMELS Components**

Each of the component rating descriptions in the FFIEC Press release (1996) is divided into three sections: an introductory paragraph; a list of the principal evaluation factors that relate to that component; and a brief description of each numerical rating for that component. Some of the evaluation factors are reiterated under one or more of the other components to reinforce the interrelationship between under one or more of the other components to reinforce the interrelationship between components. This listing of evaluation factors for each component rating is in no particular order of importance. The descriptions of the CAMELS components are made as under.

#### **2.1.8.1 Capital Adequacy**

Bank capital performs several important functions. Most importantly they are:

##### **Absorbs Losses**

Capital allows institutions to continue operating as going concerns during periods when operating losses or other adverse financial results are experienced.

### **Promotes Public Confidence**

Capital provides a measure of assurance to the public that an institution will continue to provide financial services even when losses have incurred, thereby helping to maintain confidence in the banking system and minimize liquidity concerns.

### **Restricts Excessive Asset Growth**

Capital, along with minimum capital ratio standards, restrains unjustified asset expansion by requiring that asset growth be funded by commensurate amount of additional capital.

### **Provides Protection of Depositors**

Placing owners at significant risk of loss, should the institutions fail, helps to minimize the potential "moral hazard" and promotes safe and sound banking practices.

Capital is necessary for the bank to operate. While many areas of a bank are important and subject to scrutiny, capital adequacy is the area that triggers the most regulatory action. This action is largely based on the three major ratios used in the assessment of capital adequacy, which are:

- ) The Tier 1 Risk-Based Capital Ratio.
- ) The Total Risk-Based Capital Ratio.
- ) The Tier 1 Leverage Ratio.

The capital adequacy of an institution is rated based upon, but not limited to, an assessment of the following evaluation factors:

- ) Size of the bank.
- ) Volume of inferior quality assets

- )] Bank's growth experience, plans and prospects.
- )] Quality of capital Retained earnings.
- )] Access to capital markets.
- )] Non-Ledger assets and sound values not shown on books (real property at nominal values, charge-offs with firm recovery values, tax adjustments).

The FDIC Improvement Act of 1991, which created a link between enforcement actions and the level of capital held by a bank. This supervisory link is commonly known as Prompt Corrective Action (PCA) and aims to resolve banking problems early and at the least cost to the bank insurance fund. PCA has classified the banks as:

### **Well-capitalized**

To be considered well-capitalized, a bank will meet the following conditions:

- )] Total risk-based capital ratios is 10 percent or more,
- )] Tier 1 risk-based capital ratios is 6 percent or more, and
- )] Tier 1 leverage ratios is 5 percent or more.

In addition to these ratio guidelines, to be well capitalized a bank cannot be subject to an order, a written agreement, a capital directive or a PCA directive.

### **Adequately Capitalized**

To be considered well capitalized, a bank will meet the following conditions:

- )] Total risk-based capital ratios are at least NRB minimum capital adequacy ratio requirement.
- )] Tier 1 risk-based capital ratio is at least NRB minimum tier 1 capital ratio requirement.
- )] Tier 1 leverage ratio is at least 4 percent or more.



## **Undercapitalized**

To be considered undercapitalized, a bank will meet the following conditions:

- ) Total risk-based capital ratio is less than 8 percent,
- ) Tier 1 risk-based capital ratio is less than 4 percent,
- ) Tier 1 leverage ratio is less than 4 percent.

## **Significantly Undercapitalized**

To be considered significantly undercapitalized, a bank will meet the following conditions:

- ) Total risk-based capital ratio is less than 6 percent,
- ) Tier 1 risk-based capital ratio is less than 3 percent,
- ) Tier 1 leverage ratio is less than 3 percent.

## **Rating Capital Component**

1. A rating of 1 indicates a strong capital level relative to the institution's risk profile.
2. A rating of 2 indicates a satisfactory capital level relative to the FI's risk profile.
3. A rating of 3 indicates a less than satisfactory level of capital that does not fully support the institution's risk profile. The rating indicates a need for improvement, even if the institution's risk profile. The rating indicates a need for improvement, even if the institution's capital level exceeds minimum regulatory and statutory requirements.
4. A rating of 4 indicates a deficient level of capital. In light of the institution's risk profile, viability of the institution may be threatened. Assistance from shareholder or other external sources of financial support may be required.

5. A rating of 5 indicates a critically deficient level of capital such that the institution's viability is threatened. Immediate assistance from shareholders or other external sources of financial support is required.

A FI is expected to maintain capital commensurate with the nature and extent of risks to the institutions and ability of management to identify, measure, monitor, and control these risks. The effect of credit, market, and other risks on the institution's financial condition should be considered when evaluating the adequacy of capital. The types and quantity of risk inherent in an institution's activities will determine the extent to which it may be necessary to maintain capital at levels above required regulatory minimums to properly reflect the potentially adverse consequences that these risks may have on the institution's capital.

### **BASEL Capital Accord**

The Basel Committee on Banking Supervision (BCBS) is a committee of banking supervisory authorities that was established by the central bank governors of the Group of ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, where its permanent Secretariat is located (BIS, November 2005).

Starting with its publications of "International Convergence of Capital Measurement and Capital Standards" in July 1988, popularly known as Basel I Capital Accord, BCBS set out a minimum capital requirement of 8% for banks. Prior to that, the committee introduced 25% core principles on effective banking supervision. In 1996, the committee incorporated market risk in the 1988 capital

accord. With a major revision of the 1988 accord, there followed by the revised publication of the Committee's first round of proposals for revising the capital adequacy framework in June 1999 popularly known as Basel II Capital Accord. Since then, it is revised in January 2001, April 2003 and released its final revised framework updated in November 2005. In this accord, the concept and rationale of the three pillars (minimum capital requirements, supervisory review, and market discipline) approach was introduced, on which the revised framework is based. In the revised framework BCBS retains key elements of the 1988 capital adequacy framework, including the general requirement for banks to hold total capital equivalent to at least 8% of their risk-weighted assets; the basic structure of the 1996. Market Risk Amendment regarding the treatment of market risk; and the definition of eligible capital (BIS, 2005).

The new Basel capital accord (Basel II), shall be applicable to internally active banks all over the world with effect from end of 2006. Implementing the new accord in Nepal has been a challenging task for the supervisors as well as FIs. Hence, certain preparatory homework is needed to Nepalese financial system to implement BASEL II. NRB and FIs need to have coordinated effort efficiently in Nepalese banks and FIs to establish certain baseline for the effective implementation of BASEL II. In this regard, second interaction program was held in Nepal with the banks executives to make them aware of the new development. The commercial banks so far has shown positive attitude towards the implementation of Basel II. "New Capital Accord Implementation Preparatory Core Committee" was drafted "NRB's concept paper on New Capital Accord". According the program of New Capital Accord Implementation, concept paper was forwarded to all the commercial banks for comments and recommendations. A form was also developed so that commercial banks classify their exposures as per the new approach, which was reviewed by the "Basel-II Implementation Working Group". NRB has adopted Basel Core Principles for Effective

supervision as guideline for supervision of commercial banks. Core principle methodology adopted by BCBS provides a uniform template for both self-assessment and independent assessment. It involves four part qualitative assessment system: compliant, largely compliant, materially non-compliant, and non-compliant. For each principle essential and additional criteria are defined. To achieve a "compliant" assessment with a principle, all essential and additional criteria must be met without any significant deficiencies. A "largely compliant" assessment is given if only minor shortcomings are observed, and these are not seen as sufficient to raise serious doubts about the authority's ability to achieve the objective of that principle. A "materially non-compliant" assessment is given when the shortcoming are sufficient to raise doubts about the authority's ability to achieve compliance, but substantial progress has been made. A "non-compliant" assessment is given when no substantial progress towards compliance has been achieved.

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 and beneficial to the commercial banks.

### **Capital Adequacy Norms by NRB**

NRB has from time to time stipulated minimum capital fund to be maintained by the banks based on risk-weighted assets. The total capital fund is the sum of core capital and supplementary capital. According to the NRB unified directives for Banks and Non-banks FIs issue number (2062 BS), the capital funds of a bank comprise the following:

#### **Core Capital**

Core capital of a bank includes paid up equity, share premium, non-redeemable preference shares, general reserve and accumulated profit and loss. However,

where the amount of goodwill exists, the same shall be deducted for the purpose of calculation of the core capital.

### **Supplementary Capital**

Supplementary capital includes general loan loss provision, exchange fluctuation reserve, assets revaluation reserve, hybrid capital instruments, unsecured subordinated term debt and other free reserves not allocated for a specific purpose.

Banking and Financial Institutions Ordinance (BAFIO,2061) also assimilates the same things, which were included and explained in NRB Act 2058, in regard of bank capital. NRB Act is effective from first Shrawan 2058 (16 July 2001). According to the NRB directive, minimum paid-up capital requirement for establishment of commercial banks is as under:

- i. Rs.250 million to operate all over Nepal except Kathmandu Valley.
- ii. Rs.1000 million to operate all over Nepal.
- iii. All existing commercial banks are required raise capital base to Rs.1000 million by mid July, 2009 through minimum 10 percent paid-up capital increment every year.

Generally, the capital measurement tool is basically represented by a ratio of primary capital to assets (Estrella, et al., 1986; Martin, 1977). Estrella et al. (2000) utilized three measures of capital were relatively good explanatory power over short time horizons, while risk-weighted ratios provided relatively better explanatory power over short time horizons, while risk-weighted ratios provided relatively better explanatory power over longer horizons. Eeeher at al. (1996), Thomson (1991), Whalen (1991) and Sinkey (1978) employd an analogous ratio definition, but with a refinement to adjust for loan losses, which theoretically would account for some portion of related risk in the asset portfolio (Cantor, 2001).

### **2.1.8.2 Assets Quality**

Assets quality is one of the most critical areas in determining the overall condition of a bank. The primary factor effecting overall asset quality is the quality of the loan portfolio and the credit administration program. Loans are usually the largest items of the asset and can carry the greatest amount of potential risk to the bank's capital account. Securities can often be a large portion of the assets and have identifiable risks. Other items which impact a comprehensive review of asset quality are other real estate, other assets, off-balance sheet items and, to a lesser extent, cash and due from accounts, and premises and fixed assets.

Management often expends significant time, energy, and resources on their asset portfolio, particularly the loan portfolio. Problems within this portfolio can detract from their ability to successfully and profitably manage other areas of the institution. Examiners need to be diligent and focused in their review of the various asset quality areas, as they have an important impact on all other factors of bank operations.

### **Evaluation of Asset Quality**

The evaluation of asset quality should consider the adequacy of the Allowance for Loan and Lease Losses (ALLL) and weight the exposure to counter-party, issuer, or borrower default under actual or implied contractual agreements. All other risks that may affect the value or marketability of an institution's assets, including, but not limited to, operating, market, reputation, strategic, or compliance risks, should also be considered. Prior to assigning an asset quality rating, several factors should be considered. The factors should be reviewed within the context of any local and regional conditions that might affect bank performance. In addition, any systemic weaknesses, as opposed to isolated problems, should be given appropriate consideration. The following is not a complete list of all possible factors that may

influence an examiner's assessment; however, all assessments should consider the following:

- ) The adequacy of underwriting standards, soundness of credit administration practices, and appropriateness of risk identification practices,
- ) The level, distribution, severity, and trend of problem, classified, on accrual, restructured, delinquent, and non-performing assets for both on-and off-balance sheet transactions.
- ) The adequacy of the allowance for loan and lease losses and other asset valuation reserves,
- ) The credit risk arising from or reduced by off-balance sheet transactions, such as un-funded commitments, credit derivatives, commercial and standby letters of credit, and lines of credit,
- ) The extent of securities underwriting activities and exposure to counterparties in trading activities.
- ) The existence of asset concentrations,
- ) The adequacy of loan and investment policies, procedures, and practices.
- ) The ability of management to properly administer its assets, including the timely identification and collection of problem assets,
- ) The adequacy of internal controls and management information systems,
- ) The volume and nature of credit documentation exceptions.

As with the evaluation of other component ratings, the above factors, among others, should be evaluated according to not only the current level but also considering any ongoing trends. The same level might be looked on more or less favorably depending on any improving or deteriorating trends in one or more factors.

### **Rating the Asset Quality Factor**

The Asset Quality Rating definitions are applied following through evaluation of existing and potential risks and the mitigation of those risks. The definitions of each rating are as follows:

1. A rating of 1 indicates strong asset quality and credit administration practices. Identified weaknesses are minor in nature and risk exposure is modest in relation to capital protection and management's abilities. Asset quality in such institutions is of minimal supervisory concern.
2. A rating of 2 indicates satisfactory asset quality and credit administration practices. The level and severity of classifications and other weaknesses warrant a limited level of supervisory attention. Risk exposure is commensurate with capital protection and management's abilities.
3. A rating of 3 is assigned when asset quality or credit administration practices are less than satisfactory. Trends may be stable or indicate deterioration in asset quality. The level and severity of classified assets, other weaknesses, and risks require an elevated level of supervisory concern.
4. A rating of 4 is assigned to FIs with deficient asset quality or credit administration practices. The levels of risk and problem assets are significant, inadequately controlled, and subject the FI to potential losses that, if left unchecked, may threaten its viability.
5. A rating of 5 represents critically deficient asset quality or credit administration practices that present an imminent threat to the institution's viability.

### **Non-Performing Assets (NPAs)**

Either loan or advance of FIs needs to be serviced by the principal or the interest of the amount borrowed in stipulated time as agreed by the parties at the time of loan settlement. NRB unified directives (2062BS) for Banks and Non-Bank FIs, defines Non Performing Loans as loans classified as Substandard, Doubtful and



Loss or Loans which are past due by principal for more than 3 months. Dhungana (2006) states that the details and classification of standards of Non Performing Loans may vary from country to country depending upon the own banking system requirement norms. He further states that unlike Nepal, countries like Korea, Indonesia, Philippines, India have classified the loan into five categories on which normal and special categories are classified as performing loans whereas sub standard, doubtful and estimated loss categories are considered as Non Performing Loans. The study conducted by World Bank highlights that all commercial banks of South Asian countries except Nepal and Sri Lanka classify loans as non-performing only after it has been arrear for at least six months loans as non-performing only after it has been in arrear for at least six months (Pernia, 2004). NRB unified directives for Banks and Non-Banks FIs through directive (2062BS ) classifies NPL, according to international practice, into three categories depending on the temporal position of loan default. Substandard, Doubtful and Loss Assets are the categories on the basis of the time barred to repay either interest or the principal. The degree of NPA assets depend solely on the length of time the asset has been in the form of non-obliged by the loanee. The more time it has elapsed the worse condition of assets is being perceived and such assets are treated accordingly. However, the treatment of NPAs depends according to countries. No uniform rule seems to apply.

### **NRB Directives Related to Assets Quality**

NRB unified directive for Banks & Non-Bank FIs (2062BS) through directive requires the banks to classify outstanding loans and advances based on Principal amount. As per the directive, the Loans and Advances should be classified into the following four categories.

#### **Pass**

Loans and Advances whose principle amount are not past due over for 3 month included in this category. These are classified and defined as performing loans.

**Substandard**

All loans and advances that are past due for a period of 3 months included in this category.

**Doubtful**

All loans and advances, which are past due for a period of 6 months to 1 year, included in this category.

**Loss/ Bad**

All loans and advances, which are past due for more than 1 year and have least or thin possibility of recovery or considered unrecoverable shall included in this category. Besides this, any loan whether past due or not, in situations of inadequate security, borrower declared insolvent, no whereabouts of the borrower or misuse of borrowed fund, are to be classified as Loss category.

The directive further requires banks to provision for loan loss, based on the outstanding loans and advances and bills purchased classified as above. Loans loss provision set aside for performing loans is defined as General Loan Loss Provision and that set aside for non-performing loan as Specific Loan Loss Provision.

<u>Loan Class</u>	<u>Loan Loss Provision</u>
Pass	1%
Substandard	25%
Doubtful	50%
Loss/bad	100%

With the objectives of lowering the concentration risk of bank loans to a few big borrowers and to increase the access of small and middle size borrowers to the bank loans, NRB through directive number E.Pra.Ni.No 03/061/62 limits commercial banks to extend credit to a single borrower or group of related

borrowers up to 25% of its core capital for fund based credit facilities and not more than 50% of its core capital for Non fund based credit facilities like letters of credit, guarantees, acceptances, commitments.

### **2.1.8.3 Management Quality**

The capability of the board of directors and management, in their respective roles, to identify, measure, monitors and control the risks of an institution's activities and to ensure a FI's safe, sound and efficient operation in compliance with applicable laws and regulations is reflected in this rating. Depending on the nature and scope of an institution's activities, management practices may need to address some or all of the following risks: credit, market, operating or transaction, reputation, strategic, compliance, legal, liquidity, and other risks. Sound management practices are competent personnel; adequate policies, processes and controls taking into appropriate audit program and internal control environment; and effective risk monitoring and management information systems. This rating should reflect the board's and management's ability as it applies to all aspects of banking operations as well as other financial service activities in which the institution is involved. The capability and performance of management and the board of directors is rated based upon, but not limited to, an assessment of the following evaluation factors:

- ) The level and quality of oversight and support of all institution activities by the board of directors and management.
- ) The ability of the board of directors and management, in their respective roles, to plan for, and respond to, risks that may arise from changing business conditions or the initiation of new activities or products.
- ) The adequacy of and conformance with, appropriate internal policies and controls addressing the operations and risks of significant activities.

- ) The accuracy, timeliness, and effectiveness of management information and risk monitoring systems appropriate for the institution's size, complexity and risk profile.
- ) The adequacy of audits and internal controls to: promote effective operations and reliable financial and regulatory reporting; safeguard assets; and ensure compliance with laws, regulations, and internal policies.
- ) Compliance with laws and regulations.
- ) Responsiveness to recommendations from auditors and supervisory authorities.
- ) Management depth and succession.
- ) The extent that the board of directors and management is affected by, or susceptible to, dominant influence or concentration of authority.
- ) Reasonableness of compensation policies and avoidance of self-dealing.
- ) Demonstrated willingness to serve the legitimate banking needs of the community.
- ) The overall performance of the institutions and its risk profile.

### **Rating the Management factor**

1. A rating of 1 indicates strong performance by management and the board of directors and strong risk management practices relative to the institution's size, complexity, and risk profile. All significant risks are consistently and effectively identified, measured, monitored, and controlled. Management and the board have demonstrated the ability to promptly and successfully address existing and potential problems and risks.
2. A rating of 2 indicates satisfactory management and board performance and risk management practices relative to institution's size, complexity, and risk profile. Minor weaknesses may exist, but are not material to the safety and soundness of the institutions and are being addressed. In general, significant

risks and problems are effectively identified, measure, monitored, and controlled.

3. A rating of 3 indicates management and board performance that need improvement or risk management practices that are less than satisfactory given the nature of the institution's activities. The capabilities of management or the board of directors may be insufficient for the type, size or condition of the institutions. Problems and significant risks may be inadequately identified, measured, monitored, or controlled.
4. A rating of 4 indicates deficient management and board performance of risk management practices that are inadequate considering the nature of an institution's activities. The level of problems and risk exposure is excessive. Problems and significant risks are inadequately identified, measured, monitored, or controlled and require immediate action by the board and management to preserve the soundness of the institution. Replacing or strengthening management or the board may be necessary.
5. A rating of 5 indicates critically deficient management and board performance or risk management practices. Management and the board of directors have not demonstrated the ability to correct problems and implement appropriate risk management practices. Problems and significant risks are inadequately identified, measured, monitored, or controlled and now threaten the continued viability of the institution. Replacing or strengthening management or board of directors is necessary.

Researchers construct various financial ratios to capture management quality. Meyer and Pifer (1970) state that "Managerial ability is like Lord Action's elephant difficult to define but easy to identify. Over a period of time differences between good and poor management will be systematically reflected by the balance sheet and income and poor management will be systematically reflected by the balance sheet and income data, and analysis of such data should enable

prediction of failures." Graham and Homer (1988) evaluate the factors that contributed to the failure of 162 national banks in USA and conclude that more than 60 percent of failed banks experienced poor management, measured by such variables as poorly followed loan policies, inadequate problem loan identification systems, and non-existent or poorly followed asset/ liability management .

Barr and Siems (1993) provide the only direct measurement of management quality, using Data Envelopment Analysis (DEA) to quantify the quality of management. They concluded that the predictive performance of their failure-prediction model improves markedly with the inclusion of the DEA efficiency variable.

Sinkey (1975) reported that a specific ratio representative of management is difficult to identify, but his view was that many ratios are proxies. Often, researchers (Tam and Kiag, 1992; Espahbodi, 1991; West, 1985) have not attempted to include a variable to represent management quality. Thomson (1991) and Whalen (1991) employed the ratio of overhead expense to total assets as representative of management operating efficiency. As none of the ratios from previous research exhibited significance.

#### **2.1.8.4 Earning Quality**

Under the UFIRS, in evaluating the adequacy of a FI's earnings performance, consideration should be given to:

- ) The level of earnings, including trends and stability,
- ) The ability to provide for adequate capital through retained earnings,
- ) The quality and sources of earnings,
- ) The level of expenses in relation to operations,
- ) The adequacy of the budgeting systems, forecasting processes and management information systems in general,

- J The adequacy of provisions to maintain the ALLL and other valuation allowance accounts.
- J The earnings exposure to market risk such as interest rate, foreign exchange, Price risks.

From a bank regulator's standpoint, the essential purpose of bank earnings, both current and accumulated, is to absorb losses and augment capital. Earnings are the initial safeguard against the risks of engaging in the banking business, and represent the first line of defense against capital depletion resulting from shrinkage in asset value. Earnings performance should also allow the bank to remain competitive by providing the resources required to implement management's strategic initiatives.

### **Evaluation of Earnings Performance**

An analysis of earnings comprise of examiner reviewing each component of the Earnings Analysis Trial and Ratio Analysis. Generally, the analysis of earnings begins with the examiner reviewing each component of the earnings analysis trial. The earnings analysis trial provides a means of isolating each major component of the income statement for individual analysis. The earnings analysis trial consists of the following income statement components: net interest income, non-interest income, non-interest expense, provision for loan and lease losses, and income taxes. Each component of the earnings analysis trial is initially reviewed in isolation. Typically, ratios are examined to determine a broad level view of the component's performance. The level of progression along the analysis trial will depend on a variety of factors including the level and trend of the ratio(s), changes since the previous examination, and the institution's risk profile.

## **Earning Ratio Analysis**

Several key ratios used in the earnings analysis are used as shown below:

- J Net Income to Average Assets Ratio [Return on Assets (ROA) ratio]
- J Net Interest Income to Average Asset Ratio.
- J Net Interest Income to Average Assets Ratio.
- J Non-Interest Income to Average Assets Ratio.
- J Non-Interest Expenses to Average Assets Ratio.
- J Provision for Loan and Lease Losses (PLLL) to Average Assets Ratio.
- J Realized Gains/ Losses on Securities to Average Assets Ratio (s)

Earnings quality is the ability of a bank to continue to realize strong earnings performance. It is quite possible for a bank to register impressive profitability ratios and high volumes of income by assuming an unacceptable degree of risk. An inordinately high ROA is often an indicator that the bank is engaged in higher risk activities. For example, bank management may have taken on loans or other investments that provide the highest return possible, but are not of a quality to assure either continued debt servicing or principal repayment. Seeking higher rates for earnings assets with higher credit risk will boost short-term earnings. Eventually, however, earnings may suffer if losses in these higher-risk assets are recognized.

In addition, certain of the bank's adversely classified and non-performing assets, especially those upon which future interest payments are not anticipated, may need to be reflected on a non-accrual status, earnings will be overstated. Similarly, material amounts of troubled debt restructured assets may have an adverse impact on earnings.



An institution's assets quality has a close relationship to the analysis of earnings quality. Poor asset quality may necessitate increasing the PLLL to bring the ALLL to an appropriate level and must be reviewed for impact on earnings quality.

### **Rating the Earnings Factor**

1. Earnings rated 1 are strong. Earnings are more than sufficient to support operations and maintain adequate capital and allowance level after are given to asset quality, growth and other factors affecting the quality, quantity and trend of earnings.
2. Earnings rated 2 would be satisfactory and sufficient to support operations and maintain adequate capital and allowance levels after considerations is given to asset quality, growth, and other factors affecting the quality, quantity and trend of earnings. Earnings that are relatively static, or even experiencing a slight decline, may receive a 2 rating provided the institution's level of earnings is adequate in view of the assessment factors listed above.
3. Earnings rated 3 may need to improve. Earnings may not fully support operations and provide for the accretion of capital and allowance levels in relation to the institution's overall condition, growth, and other factors affecting the quality, quantity, and trend of earnings.
4. A rating of 4 indicates earnings that are deficient. Earnings are insufficient to support operations and maintain appropriate capital and allowance levels. Erratic fluctuations in net income or net interest margin, the development of significant negative trends, nominal or unsustainable earnings, intermittent losses, or a substantive drop in earnings from the previous years may characterize institutions so rated.
5. A rating of 5 indicates earnings that are critically deficient. A FI with earnings rated 5 is experiencing losses that represent a direct threat to its viability through erosion of capital.

### **2.1.8.5 Liquidity**

In evaluating the adequacy of a FI's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile. In general, funds management practices should ensure that an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner and to fulfill the legitimate banking needs of the community. Practices should reflect the ability of the institutions to manage unplanned changes in funding sources, as well as react to changes in market conditions that affect the ability to quickly liquidate assets with minimal loss. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue reliance on funding sources that may not be available in times of financial stress or adverse changes in market conditions. Liquidity is rated based upon, but not limited to, an assessment of the following evaluation factors:

1. The adequacy of liquidity sources compared to present and future needs and the ability of the institutions to meet liquidity needs without adversely affecting its operations or conditions.
2. The availability of assets readily convertible to cash without undue loss.
3. Access to money markets and other sources of funding.
4. The level of diversification of funding sources, both on-and off- balance sheet.
5. The degree of reliance on short-term, volatile sources of funds, including borrowing and brokered deposits, to fund longer-term assets.
6. The trend and stability of deposits.
7. The ability to securities and sell certain pools of assets.
8. The capability of management to properly identify, measure, monitor and control the institution's liquidity position, management information systems and contingency funding plans.

### **Rating the Liquidity Factor**

1. A rating of 1 indicates strong liquidity levels and well-developed funds management practices. The institution has reliable access to sufficient sources of funds on favorable terms to meet present and anticipated liquidity needs.
2. A rating of 2 indicates satisfactory liquidity levels and funds management practices. The institution has access to sufficient sources of funds on acceptable terms to meet present and anticipated liquidity needs. Modest weaknesses may be evident in funds management practices.
3. A rating of 3 indicates liquidity levels or funds management practices in need of improvement. Institutions rated 3 may lack ready access to funds on reasonable terms or may evidence significant weaknesses in funds management practices.
4. A rating of 4 indicates deficient liquidity levels or inadequate funds management practices. Institutions rated 4 may not have or be able to obtain a sufficient volume of funds on reasonable terms of meet liquidity needs.
5. A rating of 5 indicates level or funds management practices so critically deficient that the continued viability of the institutions is threatened. Institutions rated 5 require immediate external financial assistance to meet maturing obligations or other liquidity needs.

### **Theories of Liquidity Management**

There are apparent conflicts between objectives of liquidity, safety and profitability relating to commercial bank. Economist has tried to resolve these conflicts by laying down certain theories from time to time. These principles or theories, in fact, govern the distribution of assets keeping in view these objectives. They have also come to be known as the theories of liquidity management, which are discussed under:

### **The Real Bills Doctrine**

The real bills doctrine states that a commercial bank should advance only short-term self-liquidating productive loans to business firms. Self liquidating loans are those which are meant to finance the production, storage, transportation, and distribution. When such goods are ultimately sold, the loans are considered to liquidate themselves atomically. Such short-term self-liquidating productive loans pass three advantages. First, they possess liquidity that is why, they liquidate themselves automatically. Second, since they mature in the short run and are for productive purpose, there is no risk of their running into bad debts. Third being productive, such loans earn income for the banks

### **The Shiftability Theory**

H.G. Moulton who asserted that if the commercial banks maintain a substantial amount of assets that can be shifted on to the other banks for cash without material loss in case of necessity, then there is no need to rely on maturities propounded the shift ability theory of bank liquidity. According to this view, an asset to be perfectly shiftability must be immediately transferable without capital loss when the need for liquidity arises. But in a general crisis requires that all banks should possess such assets which can be shifted on to the central bank which is the lender of the last resort. This theory has certain elements of truth.

### **The Anticipated Income Theory**

H.V. developed the anticipated income theory in 1944 based on the practice of extending term loans by the USA commercial banks. According to this theory, regardless of the nature and character of a borrower's business, the bank plans the liquidation of the long-term loan from the anticipated income of the borrower. A term loan is for a period exceeding one-year and extending to less than five years. It is granted against the hypothecation of machinery stock and even immovable property. The bank puts restrictions on the financial activities of the borrower

while granting this loan. At the time of granting a loan, the bank takes into consideration not only the security but also the anticipated earnings of the borrower. Infact, the anticipated income is the main considerations. This theory is superior to the bills doctrine and the shiftability theory because it fulfills the three objectives of liquidity, safety and profitability.

### **The Liabilities Management Theory**

This theory was developed in the 1960s. According to this theory, there is no need for banks to grant self-liquidating loans and keep liquid assets because they can borrow reserve money in the money market in case of need. A bank can acquire reserves by creating additional liabilities against itself, from different sources. These sources includes the issuing of time certificates of deposit, borrowing from the other commercial bank, borrowing from the central bank, raising of capital funds by issuing shares, and by ploughing back of profits.

### **Techniques of Liquidity Management**

Techniques for liquidity assessment have evolved over the years with the significant changes in the monetary policy operating procedures. Despite the uncertainty in predicting liquidity conditions. Econometric models could be used to provide first indicative forecasts, given the estimated structure of inter-relationships based on past information. Various methods were identified to determine the long-term liquidity need including seasonal and cyclical trend, contingency forecasts, gap analysis and liquidity at risk. To provide for the short-term and long-term liquidity needs, the liquidity position must be managed actively. This will ensure that the right sources of funds are used for the liquidity need, thereby reducing the cost of funding. The treasury or fund manager of any banks and financial institutions should adopt following techniques for effective liquidity management.

## **Liquidity Planning**

The liquidity planning entails the accurate estimation of liquidity needs and the structuring of the portfolio to meet the expected liquidity needs. It is essential to minimize unanticipated large deposit outflows. The liquidity planning takes place on two levels, namely planning to manage the required reserve position and estimating liquidity needs that arise from seasonal and cyclical changes and growth prospect. To ensure that funds are available to meet the liquidity needs at the lower cost, the treasury manager of the banks and financial institutions must manage its money position to comply with the reserve requirement as well as managing its liquid sources.

## **Managing the Cash Position**

A cash position refers to the amount in the process of collection and currency, demand balances due from other banks and the central collection, and currency and demand balance due from other banks and the central bank. Numerous transactions that cause an inflow or outflow of cash during a day continually change the cash position of the banks and financial institutions. Because cash yields no income, cash holding must be limited to minimum. The treasury fund manager may invest any excess cash or may acquire additional cash sources from inter bank loans or from discount window at the central bank.

## **Managing the Liquidity Position**

Once the liquidity needs of the banks and financial institutions have been estimated, the treasury manager must decide how these needs are to be funded. The banks and financial institutions must choose between two general liquidity management strategies, namely, asset management and liability management. In the asset management, assets are sold to meet liquidity needs. In the liability management, money is borrowed to meet liquidity needs. A

combination of these strategies is normally employed and the factors dealing with matching liquidity sources and needs are applicable when choosing the liquidity management strategy. The following guidelines must be kept in mind the treasury manager when managing the liquidity position of the banks and financial institutions:

- ) The treasury manager must coordinate and keeps track of the activities and strategies of the funds-raising and funds-using departments within the banks and financial institutions.
- ) The treasury managers should know the timing of large withdrawals from big credit clients or depositors in order to plan.
- ) The priorities and objectives of liquidity management should be clear and properly communicated.
- ) The needs and decisions must be evaluated on a continuous basis to invest access liquidity and avoid liquidity shortages.

### **Controlling Liquidity Risk**

To assess how well the banks and financial institutions are managing its liquidity position, it only has to look at the market place. The management should be cautious on the following signals from the marketplace that indicate a pending liquidity problem:

- ) Public confidence in terms of withdrawal of deposits from the banks and financial institutions.
- ) Share price behavior, falling share prices indicate perceived liquidity problems.
- ) Risk premiums on money market borrowings.
- ) Losses because of the hasty sale of assets for liquidity purposes.
- ) Inability to meet the demands of new credit customers.
- ) More frequent and larger borrowings from the central bank.

Considering the aforementioned technique, the treasury manager must also consider the purposes of the liquidity need the length of time for which funds are needed, the access to liability markets, the costs and characteristics of various liquidity sources and interest rate forecast. It is revealed that the large banks have better access to liability liquidity sources due to the better quality assets and a broader capital base. The small banks have to rely more on assets for liquidity. Thus, an effective liquidity management is essential to reduce costs.

A liquidity ratio measures and entity's ability to pay its short-term obligations out of liquid assets. Liquidity (L) was generally represented in previous studies with a ratio of cash (with some adjustment for short-term liquid securities ) to total assets (Tam and Kiang, 1992; Espahbodi, 1991; Lane et al.; Marin, 1977; Sinkey, 1975).

### **Directives relating to Maintenance of Liquidity by Nepal Rastra Bank**

The Nepal Rastra Bank (2023 B.S.) had given the instruction to the commercial banks in to deposit the amount, ratio of 8 percent from their liability of deposit. A provision of fine also has made for failure to deposit, less money than the fixed money stock (balance). In the beginning of 2047 B.S. the increase in the quantity of internal credit was very high and began to show negative effect on economy. The deflation grew up to 21 percent. So, high liquidity appeared in economy, hence, control of the negative effect that may fall on economy to improve the growth of price rate and improvement of the position of loss of running account and the Nepal Rastra Bank second time prescribed liquidity ratio. It has made compulsory to invest 24 percent the amount of the total deposit of the commercial bank in the bond of Nepal Government. in treasury bills, or in the bond of the Nepal Rastra Bank. With some signs of improvement of economy appeared and the investment ratio has been revised accordingly, since Poush 2049 B.S. In this way, provision has been made for the commercial banks to deposit 4 percent in their own treasury 8 percent in the Nepal Rastra Bank's account. Since the



beginning of 2050 B.S. the sign of improvement began to appear in economy and the rate of deflation fall down to 8.8 percent. And, Nepal Government removed the provision of investing in the bond of Nepal Government in treasury bills or in the bond of Nepal Rastra Bank.

With effective from, 2054, Chaitra 31<sup>st</sup>, it has been provided, for commercial banks are to keep the balance with in NRB was 8 percent from the liquidity of current and saving deposit and 6 percent from deposit. They have to maintain cash stock, which is to keep in their own treasury, 3 percent from the total deposit. However, this type of provision also has been changed by NRB. To ensure adequate liquidity in the commercial banks to meet the depositor's demand for cash at any time to inject the confidence in depositor's regarding the safety of their deposit funds, following arrangements have been put into force by Nepal Rastra Bank effective from 22 July 2002 (2059/04/06).

**Prevailing directives with respect to maintenance of  
Cash Reserve Requirement (CRR)**

a.	Balance held with Nepal Rastra Bank	1. 7% of current ad savings deposit lines 2. 4.5% fixed deposits liabilities
b.	Cash in Vault	2% of total deposit liabilities

The compliance of liquidity maintenance, the NRB applies following procedures:

- a. The CRR maintained by the banks will be examined based on average weekly balance of deposit liability immediately preceding 4th week. A week shall comprise from each Sunday through Saturday.
- b. CRR will not be calculated for the week, which is fully off i.e. full holidays for the entire week.
- c. Weekly statement of deposit balances to be submitted to NRB inspection and supervision department within 15 days from the date of end of the week for

examining the balance held with NRB against the average weekly balance of deposit liabilities of preceding 4<sup>th</sup> week.

- d. Weekly average of Monday to Friday of total deposit, cash in vault and NRB balance is calculated by dividing by 5.
- e. In case of any holiday befalling in the week the balance of preceding day shall be considered as the balance of the day.

Penalty will be levied for failing to maintain the adequate liquidity as above under any of the following conditions:

- a. In the case of shortfall in maintenance of NRB balance but cash at vault is exactly 2%.
- b. In case of shortfall in NRB balance but cash at vault is more than 2% then up to 1% excess cash of total deposit is added in the balance with NRB then on such shortfall account (after adding up to 1% excess)
- c. In case of shortfall in cash in vault as well as shortfall in NRB balance then on total shortfall amount.

The applicable rate of penalty on shortfall amount is as follows:

First time shortfall = Equivalent to bank rate/highest refinance rate

Second time shortfall = Equivalent to 2 times of bank rate

Third time shortfall and all subsequent shortfalls = Equivalent to 3 times of bank rate.

For the purpose of application of bank rate, the highest refinance rate as prescribed by NRB shall be considered as the bank rate and penalty on shortfall amount shall be calculated at such highest refinance rate.

Penalty at existing rate on shortfall amount shall be on weekly basis. Such shortfall amount shall be on weekly basis. Such shortfall shall be multiplied by the

percentage of bank rate and divided by 52. NRB bank Act 2058 came into effect from January 30, 2002 and section 47 of the Act has provided for imposition of penalty as specified by NRB.

As per the macro economic indicators of Nepal January 2007, NRB research department statistics division, CRR over the years has been presented as below.

(Percent Per Annum)	Mid-July			
	2006	2007	2008	2009
Cash Reserve Ratio (CRR) With NRB	5.0	5.0	5.0	5.5
Cash in Vault	2.0	--	--	--
CRR is applied in commercial banks' total domestic deposit.				

Maintenance of CRR as per NRB directives is to maintain the liquidity of the commercial banks. In evaluating the adequacy of a FI's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile. In general, funds management practices should ensure that an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner and to fulfill the legitimate banking needs of its community. Practices should reflect the ability of the institution to manage unplanned changes in funding sources, as well as react to changes in market conditions that affect the ability to quickly liquidate assets with minimal loss. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue reliance on funding sources that may not be available in times of financial stress or adverse changes in market conditions.

### **2.1.8.6 Sensitivity to Market Risk**

The sensitivity to market risk component reflects the degree to which changes in interest rates, foreign exchanges rates, commodity prices or equity prices, can adversely affect a FI's earnings or economic capital. When evaluating this component, consideration should be given to: management's ability to identify, measure, monitor, and control market risk; the institution's size; the nature and complexity of its activities; and the adequacy of its capital and earnings in relation t its level of market risk exposure. For many institutions, the primary source of market risk arises from non-trading positions and their sensitivity to changes in interest rates. In some larger institutions, foreign operations can be a significant source of market risk. For some institutions, trading activities are a major source of market risk. Market risk is rated based upon, but not limited to, an assessment of the following evaluation factors:

1. The sensitivity of the FI's earnings or the economic value of its capital to adverse changes in interest rates, foreign exchanges rates, commodity prices or equity prices.
2. The ability of management to identify, measure, monitor, and control exposure to market risk given the institution's size,
3. Complexity and risk profile.
4. The nature and complexity of interest rate risk exposure arising from non-trading positions.
5. Where appropriate, the nature and complexity of market risk exposure arising from trading and foreign operations.

### **Rating the Sensitivity to Market Risk Factor**

1. A rating of 1 indicates that market risk sensitivity is well controlled and that there is minimal potential that the earnings performance or capital position will be adversely affected. Risk management practices are strong for the size, sophistication, and market risk accepted by the institution. The level of

earnings and capital provide substantial support for the degree of market risk taken by the institution.

2. A rating of 2 indicates that market risk sensitivity is adequately controlled and that there is only moderate potential that the earnings performance or capital position will be adversely affected. Risk management practices are satisfactory for the size, sophistication, and market risk accepted by the institution. The level of earnings and capital provide adequate support for the degree of market risk taken by the institution.
3. A rating of 3 indicates that control of market risk sensitivity needs improvement or that there is significant potential that the earnings performance or capital position will be adversely affected. Risk management practices need to be improved given the size, sophistication, and level of market risk accepted by the institution. The level of earnings and capital may not adequately support the degree of market risk taken by the institution.
4. A rating of 4 indicates that control of market risk sensitivity is unacceptable or that there is high potential that the earnings performance or capital position will be adversely affected. Risk management practices are deficient for the size, sophistication, and level of market risk accepted by the institution. The level of earnings and capital provide inadequate support for the degree of market risk taken by the institution.
5. A rating of 5 indicates that control of market risk sensitivity is unacceptable or that the level of market risk taken by the institution is imminent threat to its viability. Risk management practices are wholly inadequate for the size, sophistication, and level of market risk accepted by the institution.

### **Interest Rate Risk Measurement System Approaches**

Interest rate risk measurement systems use an earnings approach, an economic value approach, or a blend of those two approaches. NRB unified directive (2062BS) number requires the banks to classify the assets and liabilities based on

repayment maturity and conduct Gap Analysis of the maturity mismatch. The FDIC, Risk Management Manual of Examination policies (2005) states different approaches to measure the Interest Rate Risk discussed as under.

**The earnings approach** focuses on risks to reported earnings, usually over a shorter-term time horizon. Typically, earnings systems estimate risk for up to two years. In addition, estimating future earnings permits regulatory capital forecasts. The earnings approach traditionally focuses on net interest income. However, many systems now incorporate components that measures the price risk from instruments accounted for at market value or lower-of-cost or market value. Maturity gap analysis and simulation models are examples of earnings approaches to IRR measurement.

**The economic value approach** estimates the bank's Economic Value of Equity (EVE) for forecasted interest rate changes. EVE represents the net present value of all asset, liability, and off-balance sheet cash flows. Interest rate movements change the present values of those cash flows. This method assumes that all financial instruments will be held until final payout or maturity. The economic value approach might provide a broader scope than the earnings approach, since it captures all anticipated cash flows. The economic value approach best suits banks that mark most instruments to market. At banks that value most instruments at historical cost, economic value measurements can also effectively estimate interest rate risk. However, in those banks, EVE changes might be recognized over a longer period (through reported earnings). As a result, banks often blend the two approaches. Management may use an earnings approach to evaluate short-term performance and an economic approach to monitor the bank's long-term viability. Despite using view of interest rate risk exposures.

## Gap Analysis

Gap systems use an accrual approach to identify risk to net interest income. Typically, gap systems identify maturity and repricing mismatches between assets, liabilities, and off-balance sheet instruments. Gap schedules segregate rate-sensitive assets, rate-sensitive liabilities, and off-balance sheet instruments according to their repricing characteristics. Then, the analysis summarizes the repricing mismatches for each defined time horizon. Additional calculations convert that mismatch into risk to net interest income. Gap analysis may identify periodic, cumulative, or average mismatches. The most common gap ratio formula is:

$$\frac{\text{Risk Sensitive Assets} - \text{Risk Sensitive Liabilities}}{\text{Average Earnings Assets}}$$

Occasionally, average assets or total assets may be used in place of average earnings assets. However, those denominators can underestimate interest rate risk. The gap ratio can and should be used to calculate the potential impact on interest income for a given rate change. This is done by multiplying the gap ratio by the assumed rate change. The result estimates the changes to the net interest margin. For example, a bank has a 15% one-year average gap. If rates decline 2%, then the net interest margin will decline by 30 basis points ( $15\% \times 0.02$ ). This estimate assumes static balance sheet and an immediate, sustained interest rate shift. Gap analysis has several advantages. Specifically, it:

- ) Does not require sophisticated technology.
- ) May be relatively simple to develop and use.
- ) Can provide clear, easily interpreted results.

However, gap's weaknesses often overshadow its strengths, particularly for larger, more complex banks. For example, gap analysis:

- ) Generally captures only repricing risk.

- ) May not identify intra-period repricing risk.
- ) Does not measure EVE.
- ) Generally cannot analyze complex instruments.

Gap analysis may provide sufficient interest rate risk measurements for some banks. However, gap analysis may be ineffective for banks with complex structures, sophisticated activities, or significant exposures to embedded options.

### **Simulation Analysis**

Simulation analysis determines the effect of interest rate changes on short-term net interest income, net income, and in some cases, EVE. Simulation models generate results for a range of possible interest rate scenarios and exposures. Banks may vary simulations rate scenarios based on factors such as pricing strategies, balance sheet composition, and hedging activities. Simulation may also measure risk presented by non-parallel yield curve shifts. Any simulation system's accuracy, though, depends on the assumptions and data used. Inaccurate data or unreasonable assumptions render simulation results meaningless. Simulation models are often not "user friendly" and may require more data and expertise than other interest rate risk measurement systems.

### **Duration Analysis**

Duration is a measure of the percentage change in the economic value of a position that will occur given a small change in the level of interest rates. It reflects the timing and size of cash flows that occur before the instrument's contractual maturity.

**Macaulay Duration**, duration's simplest form, calculates the weighted average term to maturity of a security's cash flows.



**Modified Duration**, calculated from Macaulay duration, estimates price sensitivity for small interest rate changes. An instrument's modified duration represents its percentage price change given a small change in the level of interest rates. Thus, it serves as a proxy interest rate risk measure.

**Effective Duration**, estimates price sensitivity more accurately than modified duration for instruments with embedded options and is calculated using valuation models that contain option-pricing components. First, the user must determine the instrument's current value. Next, the valuation model assumes interest rate change (usually 100 basis points) and estimates the new instrument's value, based on that assumption. The percentage change between the current and forecasted values represents the instrument's effective duration.

## **2.2 Research Review**

This section deals with the review of journals, International and Nepalese along with Masters' dissertations. International journals have been accessed through the website [www.blackwell-synergy.com](http://www.blackwell-synergy.com) and [www.springerlink.com](http://www.springerlink.com). Similarly, Nepalese journals and Masters' dissertations have been accessed from Library of Shankar Dev Campus and Central Library T.U.

### **2.2.1 Review of Research and Work Papers**

This section provides a picture about what international and Nepalese scholars have done in similar subject. Those studies and issues that the researcher has found relevant to this study are presented below-

Jackson (1975) conducted a study on commercial bank regulation structure and performance. The study was carried out to identify the determinants of commercial banks allocation efficiency. Both theoretical and empirical microeconomics analysis has applied to examine the competitive effects of banking influences. As

a conclusion, the study showed that, the relatively desirable banking performance is associated with several traits including Bank asset size, non-bank competition, low cash holding, low about cost, state non-member basic status, multi bank company legislation, national bank status, low time deposits and low equity capitalization. Demand levels and temporal variations also significantly affect the banking performance. Further more, the study showed that the commercial banks regulation, structure and performance are interrelating with each other.

Hirschhom (1987) used a multi-factor market model to predict quarterly stock return for the 15 largest U.S. banks between 1979 and 1987. He included both contemporaneous CAMEL rating and lagged quarter-to-quarter changes in CAMEL ratlines as explanatory variables. Although the lagged CAMEL values were not useful for predicting stock returns, Hirschoom found that contemporaneous CAMEL ratings were significantly related to stock returns. These results suggest that exam ratings contain useful information, but that most of this information is not either private- market participants have independently inferred this information at the time of the exam, or this information has been leaked shortly after the exam was completed.

Barker and Holdsworth (1993) in respect to predicting bank failure, find evidence that CAMEL rating is useful, even after controlling for a wide range of publicly available information about the condition and performance of banks.

Cole and Gunther (1998) examine a similar question and find that although CAMEL ratings contain useful information, it decays quickly. For the period between 1988 and 1992, they find that a statistical model using publicly available financial data is a better indicator of bank failure than CAMEL ratings that are more than two quarters old.

Hirtle and Lopez (1999) examine the usefulness of past CAMEL ratings in assessing banks' current conditions. They find that, conditional on current public information, the private supervisory information contained in past CAMEL ratings provides further insight into bank current conditions, as summarized by current CAMEL ratings. The authors find that, over the period from 1989 to 1995, the private supervisory information gathered during the last on-site exam remains useful with respect to the current condition of a bank for up to 6 to 12 quarters (or 1.5 to 3 years). The overall conclusion drawn from academic studies is that private supervisory information, as summarized by CAMELS ratings, is clearly useful in the supervisory monitoring of bank conditions.

Dziobek, Hobbs, and Marston (2000) analyze the determinants of bank liquidity—defined as the degree to which a FI is able to meet its obligations under normal business conditions. Volatility in the depositor (and creditor) base depends on the type of depositor, insurance coverage, and maturity. Banks that rely on a narrow or highly volatile funding base are more prone to liquidity squeezes. Household deposits are typically more stable than, for instance, the deposits of institutional investors or corporate entities. Deposit concentration (i.e., fewer, larger-size deposits) can also be indicative of volatility. Deposit insurance increases the stability of the deposits it covers, with the important caveat that insurance schemes that are not credible may not have this effect. On the external front, foreign financing, for instance through commercial credit lines, and deposits of nonresidents (in either foreign or domestic currency) can become highly volatile in situations of distress and make the financial system vulnerable to external shocks or adverse developments in the domestic economy. As regards instrument maturity, the longer the time before the liability matures (in terms of remaining maturity), the more stable is the funding; however, in countries where banks are required to meet early withdrawal requests with only minor penalties, maturity may be less relevant to determining funding stability.

Gytan and Johnson (2001) have presented their work paper on a review of alternative methodologies for early detection of banking distress. The various methodologies proposed by different researchers, in the paper are aimed to the early identification of financial distress for countries without an important recent history of bank failure, but facing an unstable international environment. They evaluate several indicators and methodologies to measure financial distress such as qualitative indicators, the signal extraction approach, limited dependent estimation and finally duration models. In the Early Warning System (EWS) of Systemic Banking Crises section, they reviewed the literature aimed to predict crises of the complete banking system of a country. They also include some methodological approaches that have been used as early warning systems for currency crises, but have a potential application for the prediction of banking crises. The prediction of banking crises by statistical methods requires a sample in which the events have appeared repeatedly. Since there has not been so many repeated episodes in any given country, the estimation must rely on a sample of different countries that have suffered banking problems. According to them, the literature on indicators and EWS of systemic crises can be classified by their methodological approach: (1) Qualitative indicators, (2) Signal Extraction, (3) Limited Dependent Regression, (4) Other models.

Berger Davis, Flannery (2000). Comparing market & supervisory Assessment of bank performance. In this paper compare the timeliness and accuracy of (confidential) government assessment of bank condition against market evolutions of large U.S. bank holding companies. They find that supervisions and bank rating agencies both acquire same information that would help the other group forecast changes in bank condition: In contrast, supervisory assessment and equity market indicator are not strongly interrelated. Furthermore, supervisory assessment are generally less accurate than either stock or bond market indicator in predicting future changes in performance except when these assessments derive from a recent

on-site inspection visit. To some extent, these findings are consistent with the various parties differing incentives.

Gilvert, Mayer Vaughan (2004). This article examines the potential contribution to bank supervision of a model designed to predict which banks will have their supervisory ratings downgraded in future periods. This paper compares the ability of two models to predict downgrades of supervisory ratings to problem status: the Board staff model, which was estimated to predict bank failures, and a model estimated to predict downgrades of supervisory ratings. They find that both models do about as well in predicting downgrades of supervisory ratings for the early 1990s. Over time, however, the ability of the downgrade model to predict downgrades improves relative to that of the model estimated to predict failures. This pattern reflects the value of using a model for surveillance that can be re-estimated frequently. They conclude that the downgrade model may prove to be a useful supplement to the Board's model for estimating failures during periods when most banks are healthy, but that the downgrade model should not be considered a replacement for the current surveillance framework.

Derviz and Podpiera (2004) based their assessment of commercial banking performance on bank ratings and studied with respect to detecting situations with the potential for adverse development towards failure, and owing to the costly nature of frequent supervisory examinations. In this paper, they studied models of rating downgrades and consider a specific set of indicators that are suitable as determinants of a bank's rating. They found that the reliable predictors of a bank's S&P rating are Credit Spread, Capital Adequacy, and the Total Loans to Total Assets ratio. In the case of the CAMELS rating, they verified the Total Asset VAR, the ratio of Total Loans to Total Assets, and Capital Adequacy as reliable predictors. In addition, they found that the CAMELS rating do not yield itself easily to predictions within any horizon with the studied technique. On the

contrary, the S&P rating can be relatively precisely predicted one month in advance.

Baral (2005) examined the financial health of joint venture banks in the CAMEL framework for a period ranging from FY 2001 to FY 2004. The health checkup, which was conducted based on publicly available financial data, concludes that the financial health of joint venture banks is better than that of the other commercial banks. The study further indicates that the CAMELS component indicators of the joint venture banks are not much encouraging managing the possible shocks.

### **2.2.2 Review of Thesis**

Prior to this, several thesis works have been conducted by various researchers regarding different aspects of commercial banks like financial performance, capital structure, investment policy, interest rate structure, and resources mobilization. The excerpts from the findings of some of these research works are presented which are relevant for this study:

Shrestha (1990) conducted a research work on portfolio behaviors for commercial banks in Nepal. She has analyzed the debt to equity ratios of commercial banks in aggregated and Agriculture Development Bank from 1971 to 1990. She has found that the capital adequacy ratio explains the strength of the capital base of commercial banks. Higher the capital adequacy ratio, higher is its internal sources. Lower the value of capital adequacy ratio with regard to the standard value shows that the bank's ability to attract deposit from the surplus units and inter bank funds also be limited.

Bohara (1992) has done a study on financial performance of Nepal Arab Bank Ltd. (NABIL) and Nepal Indosuez Bank Lid. (NIBL). The basic objectives of this study were to highlight on the functions and policies of joint ventures banks and to

evaluate the comparative financial performance of NABIL and NIBL. The study has covered the five FY 1986/87 through 1990/91. In this study, financial tools along with statistical tools have been used. Different ratios- liquidity, activity, coverage, advantage, profitability and other indicators like earning per share, dividend per share, market value to book value ratio, have been used to evaluate the performance of NABIL and NIBL. In statistical tools, the least square method has been employed. The researcher has, based on different financial indicators, and concluded that performance of NABIL is better than that of NIBL. The researcher further concluded that bank performance could not be judged solely in term of profit as it may have earned profit by maintaining adequate liquidity and safety position. The researcher has recommended to NIBL to extend their banking facilities even in the rural areas by opening up branches besides the improvement in maintaining the adequate capital structure by increasing equity base.

Adhikari (1993) conducted a study on evaluation of the financial performance of Nepal Bank Ltd. The study has been limited of FY 2038/39 B.S. through FY 2046/47 B.S. The main indicators of financial performance used were financial ratios current loan to deposit, return on capital, return in net worth, return on total assets, earning per share, dividend per share, pay out and net worth per share vs. market price per share. The researcher concluded that the bank had not managed investment portfolio efficiently. Operational efficiency was not satisfactory. During the study period, except liquidity position not all other financial indicators were satisfactory.

Joshi (1993) conducted a study on commercial banks of Nepal with reference to financial analysis of Rastriya Banijya Bank. The objective of this study was to provide conceptual framework of commercial banks, and to analyze and quantitative performance basis. The study was based on the financial data of FY 2042B.S. through 2046B.S. Researcher has used various financial ratios like

current. Liquidity, funded debt to total capitalization, and funded debt to equity in this study. The researcher had drawn the conclusion that performance of RBB was not satisfactory during the study period. Further, the researcher concluded that bank had not been managed in true professional approach but had managed in bureaucratic approach to sustain with political environment rather than commercial environment.

Shakya (1995) performs a study on financial analysis of joint venture banks in Nepal. The objective of this study was to carry out the comparative financial performance evaluation of Nepal Arab Bank Ltd. (Nabil) and Nepal Grindlays Bank Ltd. (NGBL). This study has covered the time span of FY 1988/89 through 1993/94. In this study, he has financial ratios viz. liquidity, leverage, activity, profitability, growth and valuation, and statistical tools viz. Karl Person's correlation coefficient, student t-test, simple average, and index. The researcher has found that in spite of the increase in loans and deposits of both banks, their performance measured in terms of deposit utilization rate is not satisfactory. Further, the study showed that financial performance of Nabil is better than of NGBL.

Gurung (1995) conducted a research on, "A financial study of joint venture banks in Nepal," The objective of this study was to examine the financial strengths and weaknesses of Nepal Grindlays Bank Ltd. (NGBL) and Nepal Indosuez Bank Ltd. (NIBL). The study has covered the period of seven Fiscal years i.e. 1986/87 through 1992/93. In this study, he has used financial ratios viz. current, activity, profitability, capital structure and statistical tool viz. Karl Person's coefficient of correlation. The researcher has, based on different financial indicators; found that performance of NGBL is better than that of NIBL.



Thapa (2001) has conducted her study “A comparative Study on Investment Policy of Nepal Bangladesh Bank Ltd. And other joint ventures banks.” The researcher’s main objective of study was to evaluate the liquidity, assets management efficiency, profitability and risk position on NBBL in comparison NABIL and NGBL and to examine the fund mobilization and investment policy NBBL through off-balance sheet and on-balance sheet activities in comparison to other two banks. Through research, the researcher found that the liquidity position of NBBL is comparatively not better than of NABIL and NGBL. The liquidity ratios are moderately fluctuating which means the bank has not properly formulated stable policy. As per the study, NBBL is not in better position regarding its on-balance sheet as well as off-balance sheet activities in compare to NABIL and NGBL and it does not seem to follow and definite policy regarding the management of its assets. The researcher at the last suggested following a specific policy in investment and she further recommended to maintain the optimum level of relationship among deposit and loan and advances, outside assets and net profit and to maintain the adequate recovery rate.

Likewise, Deoja (2001) conducted study entitled “A Comparative Study of the Financial Performance between Nepal State Bank of India Limited and Nepal Bangladesh Bank Limited.” The researcher’s main objective of study was to evaluate the trend of deposits and loan and advances of NSBIL and NBBL and to evaluate the liquidity, profitability, capital structure, turnover and capital adequacy position of NSBIL and NBBL. Through research found that the cash and bank balance to current assets, saving deposit to total deposit etc. of NABIL are higher while fixed deposit to total deposits, loans and advance to current assets of NBBL are higher and NBBL has better turnover the NSBIL in terms of loan and advances to total deposits ratio and loan and advances to fixed deposits ratio. Through the study of the different ratios has concluded that both banks are highly leveraged.

Sharma (2005) in his paper on Capital Structure of Selected Commercial Banks of Nepal concludes with following key points:

- a. Paid up Capital of Nepalese Commercial Banks are increasing indicating banks maintaining the capital standards set by NRB.
- b. Total equity capital is growing as compared to total debt.
- c. The fluctuating interest coverage ratio of the Nepalese Commercial Banks indicates the earnings stream and interest expenses are inconsistent over the period of past five years. The debt servicing capacity of the Nepalese Banks is not highly satisfactory but it is sufficient to meet the interest expenses in all years and is continuously improving.
- d. The capital adequacy ratios of the banks are adequate against set norms of NRB indicating sound financial health and sufficient to meet on banking operation.
- e. The total capital fund and capital adequacy ratios are fluctuating which indicate fluctuating risk adjusted assets of the banks.
- f. Core Capital and supplementary capital ratios are in line with the NRB norms.

Bhandari (2006) used descriptive analysis in his research work of evaluating financial performance of Himalayan Bank in the framework of CAMEL during 1999 to year 2004 A.D. The analysis revealed adequate capital of the bank. The non-performing loans though in decreasing trend are still a matter of concern. The bank is still with better ROE however, it is in decreasing trend. The decreasing trend of net interest margin shows management stock monitoring over the bank's earning assets. The liquid funds to total deposit ratio to above the industrial average ratio. NRB balance and cash in vault to total deposit ratios are below the industrial average ratio during the study period.

Chand (2006) used descriptive analysis in his research work of evaluating financial performance of NABIL Bank in the frame work of CAMELS during

2001 to year 2006 A.D. The analysis revealed adequate capital of the bank. The non-performing loans though in decreasing trend are still a matter of concern. The bank is still with better ROE, which is in increasing trend. The increasing trend of net interest margin shows management was been able to control the interest spread and cost effective source of funds. The liquid funds to total deposit ratio is above the industrial average ratio. NRB balance and cash in vault to total deposit ratios are below the industrial average ratio during the study period.

Koirala(2007) used descriptive analysis in his research work of evaluating financial performance of NABIL Bank in th frame work of CAMELS during 2002 to 2007 A.D The ananalysis revealed adequate capital of the bank. The non-performing loans though in decreasing trend are still a matter of concern. The bank is still with better ROE, which is in increaing trend. The increasing trend of net interest margin shows management was been able to control the interest spread and cost effective source of funds. The liquid funds to total deposit ratio is above the industrial average ratio. NRB balance and cash in vault to total deposit ratios are below the industrial average ratio during the study period.

Khamcha(2008) conducted research on "Financial performance analysis of the joint venture commercials banks in nepal in the framework of CAMELS."during 2002 to year 2007 A.D. The specific objectives of the study were to analyze the capital adequacy, non-performing assets, loan loss reserve ratio, management quality, earning quality, liquidity position and sensitivity to market risk of sampled JVBS, the capital fund of joing venture banks are sound and sufficient to meet the banking operation as per NRB Standard. The non-performing loan to total loan of JVBS is below the industry avearge. The decreasing trend of total operating expenses to total operating revenue ratio shows that the bank operate efficiency, the banks were low sensitive to interest rate in the long horizon but highly sensitive to interest rate in short term horizon due to CGAP ratio to earning assets is high.

Baral (2009) conducted a research work on "financial structure analysis and performance evaluation of listed commercial banks." The objective of this study was to analyze the financial structure of Nabil Bank and Himalayan Bank on the basis of CAMELS framework. The study has covered the period of 5 years 2003 to 2008. Capital adequacy of both of the banks is sound and above NRB standard. NPA of both of the banks are below 5% which is below the international standard. ROE of Nabil Bank is above the universal benchmark but HBL's is in a decreasing trend. Net financial assets in short term are high which leads to high interest rate sensitivity.

### **2.3 Research Gap**

Efficient banking system is not only the output of the rules and regulations imposed by the regulators. Banks and financial institutions can do a lot by imposing self-governance rather than corporate governance. In this regard, this research has tried pretty much to reflect the self-governance practices adopted by Nepal Investment Bank Ltd. by means of CAMELS rating, which is quite new and challenging in itself. It is an opportunity to learn and identify the strength and weakness of the above-mentioned commercial bank. This research work is different than other researches carried out in this regard because of the new directives of NRB regarding the paid-up capital of commercial banks. NRB has directed all the banks and financial institutions to upgrade their paid-up capital to 2000 million by the year 2009. On one hand, most of the banks and financial institutions have already started to implement BASEL II by this year. On the other hand, this research work is probably the first one to reflect the capital adequacy, trend of asset composition, trend of earnings, risk-weighted assets and liquidity position of the sample commercial bank.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

The basic objective of the study is to analyze and evaluate the financial health of commercial bank namely Nepal Investment Bank Ltd. comprehensively. This chapter includes research design, justification for the selection of study unit, nature and sources of data, methods of data collection, data analysis tools and limitation of methodology.

#### **3.1 Research Design**

The evaluation of the performance is designed to reflect an assessment of the financial condition of Nepal Investment Bank based on CAMELS. Perspective prescribed by UFIRS/ UBPRS in line with the BASEL II accord. Hence, the research is conducted on historical and analytical case study basis. Therefore descriptive analytical research methodology has been followed, to achieve the desired objectives. In order to evaluate the financial health of NIBL, some financial and statistical tools and descriptive techniques are applied.

#### **3.2 Justification of Specification of the Study Unit**

Nepal Investment Bank Limited is one of the leading commercial banks. The region for its selection as study unit is due to its past performance and record of accomplishment. Being the second joint venture bank in Nepalese banking industry established in 2042 B.S., bank is growing well. Since 2059 B.S. the bank is running as domestic private commercial bank. In due course of its operation, NIBL has taken a leading and sensitive role in Nepalese financial intermediation. Thus in view of sensitive exposures taken by NIBL this study attempts to give the actual financial picture for prompt corrective actions which would lead to self regulation mechanism and problem solving.

### **3.3 Nature and Sources of Data**

Basically the research is based on secondary data. For the purpose of the study the annual reports of the bank are used as the major sources of data. Besides the annual reports of the bank required data and information have been collected for the purposes of regulatory data were collected from NRB directives and reports. The basic conceptual information was collected through BASEL, FDIC and NRB publication and work papers. The information related to the past and current works conducted in the research field were collected from the following sources.

- ) NRB reports and bulletins and its official website.
- ) Basel committee publications thoughts official website.
- ) Various research papers and Dissertation.
- ) Various articles published in journals and financial organizes.
- ) Nepal stock Exchange reports.
- ) Official website of NIBL.

Formal and informal discussions with the senior staff of the bank were held which was helpful in understanding and obtaining the additional information.

### **3.4 Data Collection Procedure**

The required information was collected by conducting visit to the NIBL , consulting library at Shankar Dev Campud net surfing and related text books. The annual reports of NIBL and LUBL for the study period were obtained from respective bank through personal approach and internet surfing to the bank's official website. NRB regulatory directives. Statistics of the commercial Bank of Nepal and other related publication was obtained through internet surfing to NRB's official website and periodicals. Existing literature on the subject matter was collected from various research papers placed in Shankar Dev Library. Likewise, the review of working papers conducted by various international

scholars on the related matter was done through internet surfing to various websites. The conceptual review was done through assistance of related text books by various writers and publications available in the library of Shankar Dev Library and Central Library.

### **3.5 Data Processing**

The financial data from the published documents and audited financial statements were manually extracted into the computer files of Microsoft Excel program which acted as master database file. The data was refined further into spread sheets to carry out financial ratio calculation and graphical illustration through mathematical functions and chart play grams of the Excel program.

### **3.6 Data Analysis Tools**

Financial ratios are the major tools used for the descriptive analysis of the study. In addition to the financial tools, simple statistical tools are also used.

#### **3.6.1 Financial Ratio Analysis Tools**

Financial Ratio Analysis tools are used to determine the performance of the banks in the framework CAMELS components. These ratios are categorized in accordance of the CAMELS components. Following category of key ratios are used to analysis the relevant components in terms of CAMELS.

#### **Capital Adequacy Ratio**

Capital adequacy ratio is the numerical relationship between total capital fund and total risk adjusted assets. It measures the adequacy of capital and financial soundness of a bank. Capital adequacy ratio is used to measure of capital in the banks. It is worked out by using the following model.

$$\text{CAR X} \frac{\text{Total Capital Fund}}{\text{Total Risk Adjusted Assets}} | 100 \dots \dots \dots (1)$$

Where,

CAR = Capital Adequacy Ratio

Total Capital Fund = Core capital + Supplementary Capital

Total Risk Adjusted Assets = On-balance sheet risk adjusted assets + off balance sheet risk adjusted assets (See appendix 5)

### **Core Capital Adequacy Ratio**

Core capital adequacy ratio shows the relationship between the total core capital or internal sources and total risk adjusted assets. It is used measure the adequacy of core capital and financial soundness from very close angle. It is calculated by using the following model.

$$CCAR = \frac{\text{Core Capital}}{\text{Total Risk Adjusted Assets}} \times 100 \dots \dots \dots (2)$$

Where,

CCAR = core capital adequacy ratio

Core Capital = Paid up capital + share premium + non-redeemable preference share + general reserve + cumulative profit - goodwill if any.

### **Supplementary Capital Adequacy Ratio**

Supplementary capital ratio is the expression of numerical relationship between supplementary capital and total risk adjusted assets of a bank. It measures the proportion of supplementary capital in total risk adjusted assets. Further more, it shows the absolute contribution of supplementary capital adequacy. The ratio is used to analyze the supplementary capital adequacy of the banks and determined by using the following model.

$$SCR = \frac{\text{Supplementary Capital}}{\text{Total Risk Adjusted Assets}} \times 100 \dots \dots \dots (3)$$

Where,

SCR = Supplementary Capital Ratio



Supplementary Capital = Loan Loss provision + exchange equalization reserve + assets revaluation reserve + hybrid capital instrument + unsecured subordinate term debt + interest are fluctuation fund + other free reserves.

### **Non- Performing Loan Ratio**

The non-performing loan ratio indicates the relationship between non-performing loan and total loan. It measures the proportion of non-performing loan in total loan and advances. The ratio is used to analyze the assets quality of the bank and determined by using the given model.

$$\text{Non-performing Loan Ratio} = \frac{\text{Non Zperforming Loan}}{\text{Total Loan and advances}} | 100 \dots \dots \dots (4)$$

Where,

Non-performing Loan = Loan not recovered with in the given the time frame either in the form of interest servicing or principal repayment.

### **Loan Loss Ratio**

The loan loss ratio is the expression of numerical relationship between loan loss provision and total loan and advances. It is used to appraise quality of assets in the bank. It measures the proportion of loan loss provision in total loan and advances. This ratio shows the possibility of loan default of the bank. Higher ratio implies higher portion of non-performing loan portfolio. For the purpose of this study following model is used to determine the loan loss ratio.

$$\text{Loan Loss Ratio} = \frac{\text{Loan Loss Provision}}{\text{Loan and Advances}} | 100 \dots \dots \dots (5)$$

### **Total Expenses to Total Incomes Ratios**

The total expenses to total income ratio is the expression of numerical relationship between total expenses and total incomes of the bank. It measures the proportion of total expenses in total revenues. A high or increasing ratio of expenses to total

revenues can indicate that financial institutions may not be operating efficiently. This can be, but is not necessarily due to management deficiencies. In any case, it is likely to negatively affect profitability (IMF, 2000). Following is the expression of total expenses to total revenues ratio.

$$\text{Total Expenses to Total Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Incomes}} | 100 \dots \dots \dots (6)$$

**Earning per Employee**

Earning per employee is the numerical relationship between net profit after taxes to total numbers of employee. Low or decreasing earnings per employee can reflect inefficiencies as a result of overstaffing, with similar repercussions in terms of profitability (IMF, 2000). It is calculated by using the following model.

$$\text{Earnings Per Employee} = \frac{\text{Net Profit After Taxes}}{\text{Total numbers of Employee}} \dots \dots \dots (7)$$

**Return on Equity (ROE)**

The return on equity indicates the relationship between net profit after taxes to total equity capital. It measure of the rate of return following to the bank's shareholders. Higher is the return on equity, higher the investment which the shareholders will undertake. For the purpose of the study following model is used to determine the return on equity ratio:

$$\text{Return on Equity: } \frac{\text{Net Profit After Taxes}}{\text{Total Equity Capital}} | 100 \dots \dots \dots (8)$$

**Return on Assets (ROA)**

Return on assets is the numerical relationship between net incomes after taxes to total assets of a bank. It is primarily an indicator of managerial efficiency; it indicates how capably the management of the bank has been converting the

institution's assets into net earnings (Rose, 1999). It is calculated by using the following model.

$$\text{Return on Assets: } \frac{\text{Net Income after tax}}{\text{Total Assets}} | 100 \dots \dots \dots (9)$$

**Net Interest Margin (NIM)**

Net interest margin is the expression of numerical relationship between net interest income and total earning assets of a bank. It measures how large a spread between interest revenues and interest costs management has been able to achieve by close control over the bank's earning assets and the pursuit of the cheapest sources of funding (Rose, 1999). For the purpose of the study following model is used determine net interest margin:

$$\text{Net Interest Margin} = \frac{\text{Net Interest Income}}{\text{Earning assets}} | 100 \dots \dots \dots (10)$$

Where,

$$\text{Net Interest Income} = \text{interest income} - \text{interest expenses}$$

$$\text{Earning Assets} = \text{Loan \& advances} + \text{investment on securities}$$

**Earning Per Share (EPS)**

Earning Per share provides a direct measure of the return flowing to the bank's owners – its stockholders- measured relative to the numbers of shares to the public (Rose, 1999). It gives the strength of the share in the market. Following is the expression of earning per share:

$$\text{EPS} = \frac{\text{Net Income after tax}}{\text{No.of shares of common stock}} \dots \dots \dots (11)$$

### **Total Liquid Fund to Total Deposits Ratio**

Total liquid funds to total deposits ratio is the expression of numerical relationship between total liquid funds and total deposits of a bank. It measures the proportion of total liquid funds in total deposits. Further more, it shows the overall short-term liquidity position. The higher ratio implies the better liquidity position and lower ratio shows the inefficient liquidity position of the bank. It is calculated by using the following model:

$$\text{Total Liquid Funds to Total Deposits Ratio} = \frac{\text{Total Liquid Funds}}{\text{Total Deposits}} | 100 \dots \dots \dots (12)$$

Where,

Total liquids funds = cash in hand + foreign currency in hand + balance with NRB + balance with domestic bank + balance held abroad + call deposits.

### **NRB Balance in Total Deposits Ratio**

NRB balance to total deposits ratio is the expression of numerical relationship between NRB balance and total deposits of a bank. It measures the proportion of NRB balance in total deposits. It shows whether bank is holding the balance as required by Nepal Rastra Bank. For the purpose of this study following model is used to determine the NRB balance to total deposits ratio:

$$\text{NRB Balance to Total Deposits Ratio} = \frac{\text{NRB Balance}}{\text{Total Deposits}} | 100 \dots \dots \dots (13)$$

Where,

NRB balance = balance with NRB

### **Cash in Vault to Total Deposit Ratio**

Cash in vault to total deposits ratio indicates the relationship between cash in vault to total deposits. It shows the percentage of total deposit maintained as vault. It is worked out by using the following model.

$$\text{Vault to Total Deposits Ratio} = \frac{\text{Cash in vault}}{\text{Total deposits}} | 100 \dots \dots \dots (14)$$

Where

Cash in vault = cash in hand + foreign currency in hand

### Interest Rate Sensitivity

Interest rate sensitivity is estimated by GAP Analysis. If  $\zeta R_{id}$  is the average interest rate change affecting assets and liabilities that can be repriced within  $i$ th maturity bucket, the effect on the bank's net interest income (NII) in the  $i$ th maturity bucket is calculated by (Saunders and Cornett, 2004):

$$\begin{aligned} \zeta NII_i &= \frac{\text{RSA}_i \text{ Z}}{\text{iZIDAY}} \text{ } \frac{\text{RSL}_i \text{ } \Gamma}{\text{iXIDAY}} \text{ } | \text{ } R_i \\ &= \text{GAP}_i \times \zeta R_i \end{aligned}$$

Where,

$\zeta NII_i$  = Change in Interest Income in the  $i^{\text{th}}$  maturity bucket.

$\text{GAP}_i$  = Rupee size of gap between book value of Rate Sensitive Assets (RSA) and Rate Sensitive Liabilities (RSL) in maturity bucket  $i$ .

Similarly Cumulative GAP (CGAP) of interest is the One-Year repricing gap estimated as:

$$\zeta NII_i = \text{CGAP}_i \times \zeta R_i$$

Where,

$$\begin{aligned} \text{CGAP}_i &= \frac{\text{RSA}_i \text{ Z}}{\text{iXIDAY}} \text{ } \frac{\text{RSL}_i \text{ } \Gamma}{\text{iXIDAY}} \text{ } \frac{\text{RSA}_i \text{ Z}}{\text{iX90 DAY}} \text{ } \frac{\text{RSL}_i \text{ } \Gamma}{\text{iX90 DAY}} \text{ } \frac{\text{RSA}_i \text{ Z}}{\text{iX180 DAY}} \text{ } \frac{\text{RSL}_i \text{ } \Gamma}{\text{iX180 DAY}} \text{ } \frac{\text{RSA}_i \text{ Z}}{\text{iX270 DAY}} \text{ } \frac{\text{RSL}_i \text{ } \Gamma}{\text{iX270 DAY}} \\ &= \frac{\text{RSA}_i \text{ Z}}{\text{iX271 DAY}} \text{ } \frac{\text{RSL}_i \text{ } \Gamma}{\text{iX271 DAY}} \end{aligned}$$

### Interest Rate Sensitivity

Interest Rate Sensitivity can be computed by expressing Cumulative GAP as a percentage of total risk sensitive assets (A) as: Interest Rate Sensitivity Ratio =

$$\frac{CGAP}{A} \times 100$$

### 3.6.2 Statistical Tools

**Average:** A simple arithmetic average is used to summarize the data as a representation of mass data. A simple arithmetic average is a value obtained by dividing the sum of the values by their numbers (Kothari, 1989). Thus, the average is expressed as:

$$\bar{X} = \frac{\sum x}{N} \dots \dots \dots (15)$$

Where,

$\bar{X}$  = Mean of the values,

N = Number of pairs of observation

During the analysis of data, mean is calculated by using the statistical formula 'average' on excel data sheet on computer.

### Standard Deviation

Standard deviation is the absolute measure of dispersion of the values and shows the deviation or dispersion in absolute term (Kothari, 1989). It is said that higher the value of standard deviation the higher the variability and vice versa. Karl Pearson introduced the concept of standard deviation in 1983. Here, the standard deviation is used to find out the deviation in absolute term. Standard deviation is determined in the following way:

$$S.D. = \sqrt{\frac{\sum f_x Z_{\bar{X}}^2}{n}}$$

$$= \sqrt{\frac{\sum x^2}{n} - Z \frac{\sum x}{n}^2} \dots \dots \dots (16)$$

Where,

- N = no. of observations
- x = individual value
- $\bar{X}$  = simple arithmetic mean

During the analysis of data, standard deviation is calculated by using the statistical formula 'stdev' on excels data sheet on computer.

### **Coefficient of Variation**

Coefficient of variation is the relative measure of dispersion based on the standard deviation (Kothari, 1989). It is most commonly used to measure the variation of data and more useful for the comparative study of variability in two or graphs or distribution. Symbolically, the coefficient of variation is defined as:

$$CV = \frac{\sigma}{\bar{x}} \times 100 \dots \dots \dots (17)$$

Where,

- $\sigma$  = standard deviation
- $\bar{X}$  = mean
- CV = Coefficient of variation

### **Least Square Trend Analysis**

Least square trend analysis has been used to find out the trend of ratios (Kothari, 1989). The general equation used for trend is given below:

$$\hat{Y} = a + bX \dots \dots \dots (18)$$

Where

- $\hat{Y}$  = Dependent Variables

- X = Coded Time in year (independent variable)
- a = Y- intercept
- b = slope of the trend line

In the above model,

$$b = \frac{\sum XY - \frac{\sum X \sum Y}{n}}{\sum X^2 - \frac{(\sum X)^2}{n}}$$

$$a = \bar{Y} - b\bar{X}$$

### 3.7 Limitation of the Methodology

The study is carried out within the framework of case study research design. So, it is difficult to eliminate the limitations of the case study research design, in which the study as well as the methodology is bounded. Only a single unit is taken for the study, therefore, the study may not be able to represent the whole scenario.

Different models and tools which are used for data collection in the research work are not completely free from the criticisms so, it also imposes to draw the line of limitation. Finally, the different tools are used to analyze the collected data, which are based on certain assumptions.



## **CHAPTER - IV**

### **PRESENTATION AND ANALYSIS OF DATA**

This chapter deals with the presentation of data collected from the different sources. The purpose of this chapter is to study evaluate and analyze the financial performance of Nepal Investment Bank Ltd. in the framework of CAMELS. The major findings from the analysis are made following the presentation.

#### **4.1 Data Presentation and Analysis**

The data collected from different sources has been refined and documented in Excel tables, which are further processed to analyze and arrive at the findings on the financial conditions of NIBL in terms of CAMELS framework.

##### **4.1.1 Capital Adequacy**

Capital Adequacy is a measurement of a bank to determine if solvency can be maintained due to risks that have been incurred as a course of business. Capital adequacy component analysis of NIBL is made based on the regulations and standard ascertain by NRB as to maintaining minimum risk based core and total capital standard and maximum risk based supplementary capital standard. The minimum risk based capital standard which includes a definition for risk based capital, a system for calculating Risk Weighted Assets (RWA) by assigning on and off balance sheet items to broad risk categories. Capital Adequacy Ratios (CAR) takes into account the most important financial risks-foreign exchange, credit and interest rate risks, by assigning risk weightings to the institution's assets. A bank must be able to generate capital internally, through earnings retention, as a test of capital strength.

#### 4.1.1.1 Core Capital Adequacy Ratios

Core (Tier I) Capital means the primary capital of a commercial bank. Core capital includes the paid up equity capital, share premium, dividend equalization fund, capital adjustment reserve, non-redeemable preference share, general reserve, accumulated profit and loss amount and good will deductible if any. In this way it is the amount of shareholders fund. It gives an assurance to the outsiders for smooth operation of a bank even in the time of economic crisis. Core capital adequacy ratio is also known as core capital to total risk adjusted assets ratio, which measures the adequacy of internal sources or shareholder's funds to support the banking activities.

It reflects the financial strength and soundness of a bank. Higher values of the ratio above the NRB standard show the adequacy of internal sources and higher security to creditors and depositors. The lower value of core capital adequacy ratio with regard to the NRB standard indicates the lower is its internal sources. Table 4.1 presents the observed value of core capital adequacy ratio of NIBL, during the period of past five FYs.

**Table 4.1**  
**Core Capital Adequacy Ratio**

(Amount in Million)

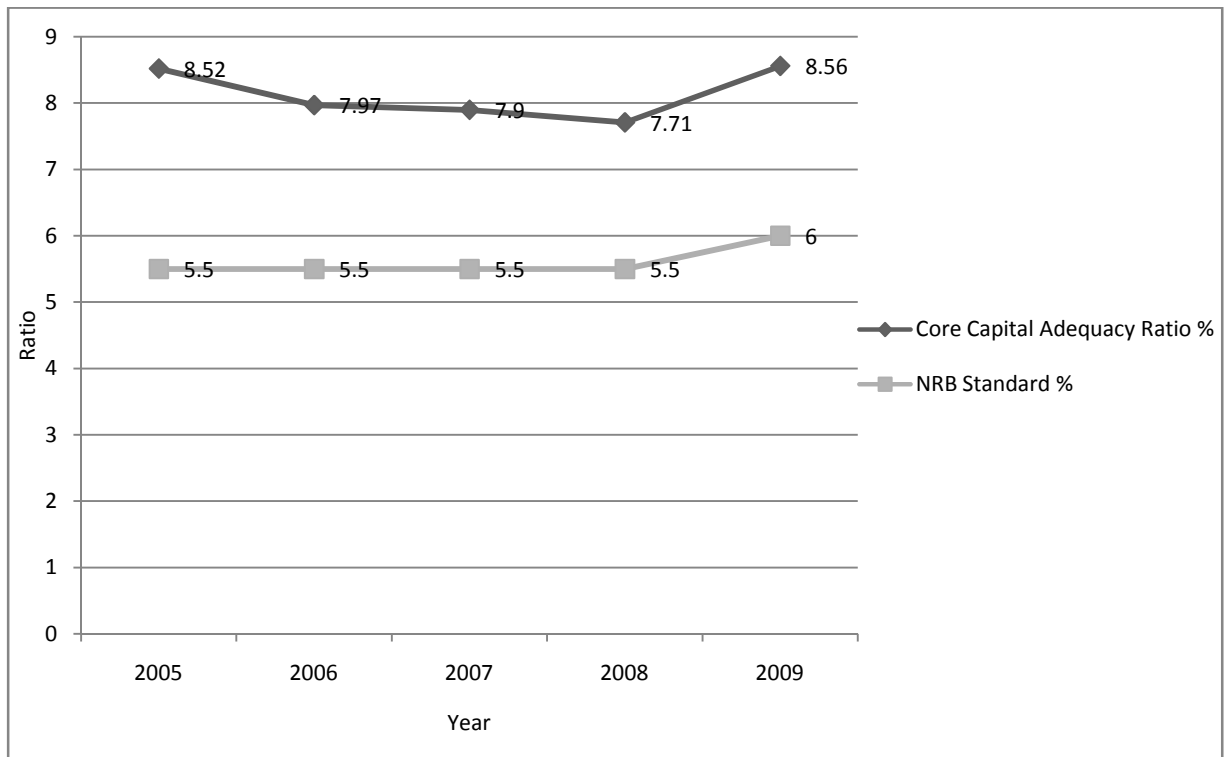
FY(As at mid July)	2005	2006	2007	2008	2009
Core Capital (Rs.)	1161.5	1393.3	1852.20	2658.92	3879.96
Total risk weighted assets (Rs.)	13632.9	17491.7	23435.64	34484.54	45312.26
Core Capital Adequacy Ratio (%)	8.52	7.97	7.90	7.71	8.56
Nepal Rastra Bank Standard (%)	5.50	5.50	5.50	5.50	5.50
Core Capital Ratio( Excess/Short) (%)	3.02	2.40	2.40	2.21	3.06

*Source: NIBL'S Annual Reports*

As shown in Table 4.1, the core (Tier I) capital ratio of NIBL is maximum of 8.56% in FY 2009 and minimum of 7.71% in FY 2008 with the average ratio of 7.86%. Thus it is clear that the core capital adequacy ratio of the bank is in increasing tendency in beginning FYs and thereafter, it is in the decreasing trend up to in final FYs. The ratio is in fluctuating trend. The changing pattern of the core capital adequacy ratio and regularly increasing trend of core capital provide the clear way for conclusion that the total risk adjusted assets of the banks is instable during the study period. However, the core capital adequacy ratio of the bank is greater than the NRB standard over the study period. The observed value of core capital adequacy ratio of the NIBL is shown with NRB standard in figure 4.1 below.

**Figure 4.1**

**Comparing Core Capital Adequacy Ratio with NRB Standard**



As shown in Figure 4.1, it is clear that the core capital adequacy ratio of NIBL is above the NRB standard during the study period. It means the bank is applying adequate amount of internal sources of shareholder's funds with significant over the study period.

#### 4.1.1.2 Supplementary Capital Adequacy Ratio

Supplementary (Tier II) capital is another component of bank capital. Supplementary capital means the amount of capital that are transferred in free reserve and collected by using the hybrid capital instruments, General Loan Loss Provision, Exchange Fluctuation Reserve, Assets Revaluation Reserve, Interest Spread Reserve, Subordinate Term Debt and Other Free Reserve. The ratio reflects proportion of supplementary capital components in total risk adjusted assets and relative contribution in the CAR. NRB regulates supplementary capital ratio by allowing supplementary capital not exceeding 100% of the core capital for CAR calculation.

**Table 4.2**  
**Supplementary Capital Adequacy Ratio**

FY(As at mid July)	2005	2006	2007	2008	2009
Supplementary Capital (Rs.)	417.2	700.9	999.43	1233.33	1215.38
Total Risk Weighted assets (Rs.)	13632.9	17491	23435.64	34484.54	45312.26
Supplementary Capital Adequacy Ratio (%)	3.06	4.01	4.26	3.57	2.68
NRB Standard (not more than core capital) (%)	8.52	7.97	7.90	7.71	7.50
Excess/Short (%)	5.46	3.96	3.64	4.14	4.81

*Source: NIBL'S Annual Reports*

As shown in Table 4.2, the supplementary capital ratio of the bank is ranges from a minimum of 3.07% in FY 2005 to maximum of 4.81% in FY 2009. The ratio of

NIBL is moving in the declining way till the FY 2005 and then increasing up to final FY 2007. Here the ratio of NIBL is unduly high in FY 2007 because of the bank is using the hybrid capital instruments as a supplementary capital and increasing proportion of total risk weighted assets. However, the supplementary capital ratio in the bank is within the boundary of NRB standard over the study period.

**Figure 4.2**

**Comparing Supplementary Capital Adequacy Ratio with NRB Standard**

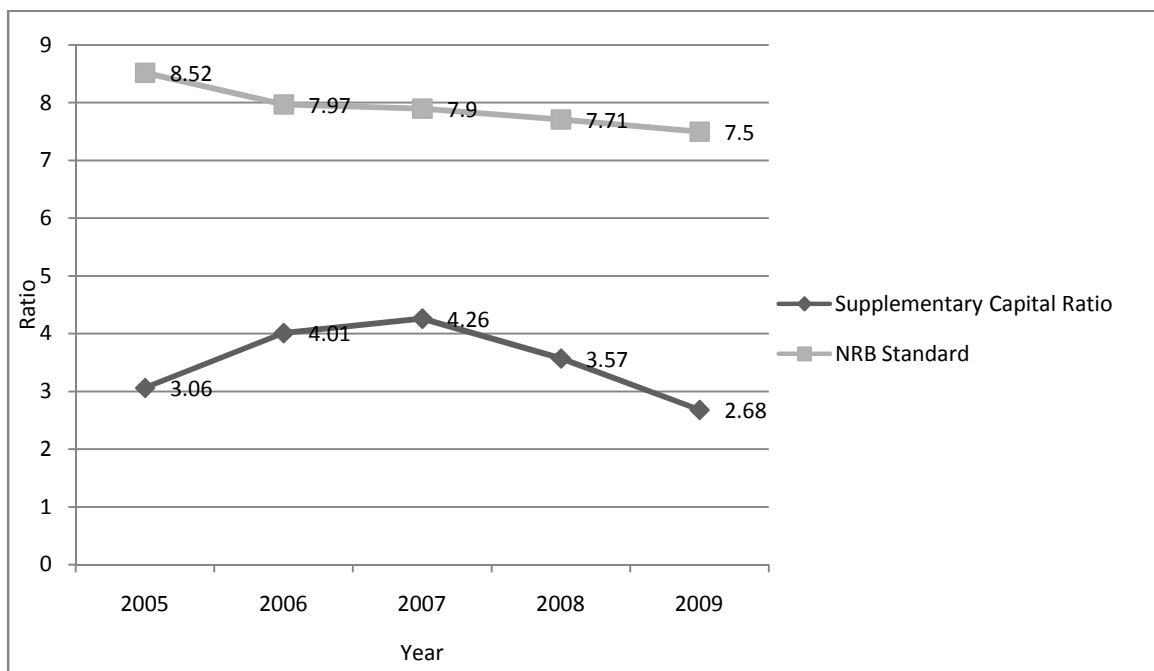


Figure 4.2 shows the observed supplementary capital adequacy ratios are within the standard of NRB, over the study duration. It means the supplementary capital of the bank is significant as per the NRB standards. The bank was able to maintain positive difference greater than 3% throughout the study period.

#### **4.1.1.3 Total Capital Adequacy Ratio**

Total capital fund means the amount invested by shareholders, creditors and the amount collects from the various free reserves maintained in a bank. Capital fund

includes the amount of core capital and supplementary capital. Strong capital base is the pre-requisite for the safety and soundness of any bank. (BASEL, 1988). Capital adequacy ratio above the NRB standard indicates adequacy of capital and signifies higher security to depositors, higher internal sources and higher ability to cushion operational and unanticipated losses. The lower value, on the contrary indicated lower internal sources, comparatively weak financial position and lower security to depositors.

**Table 4.3**  
**Capital Adequacy Ratio**

(Amount in Million)

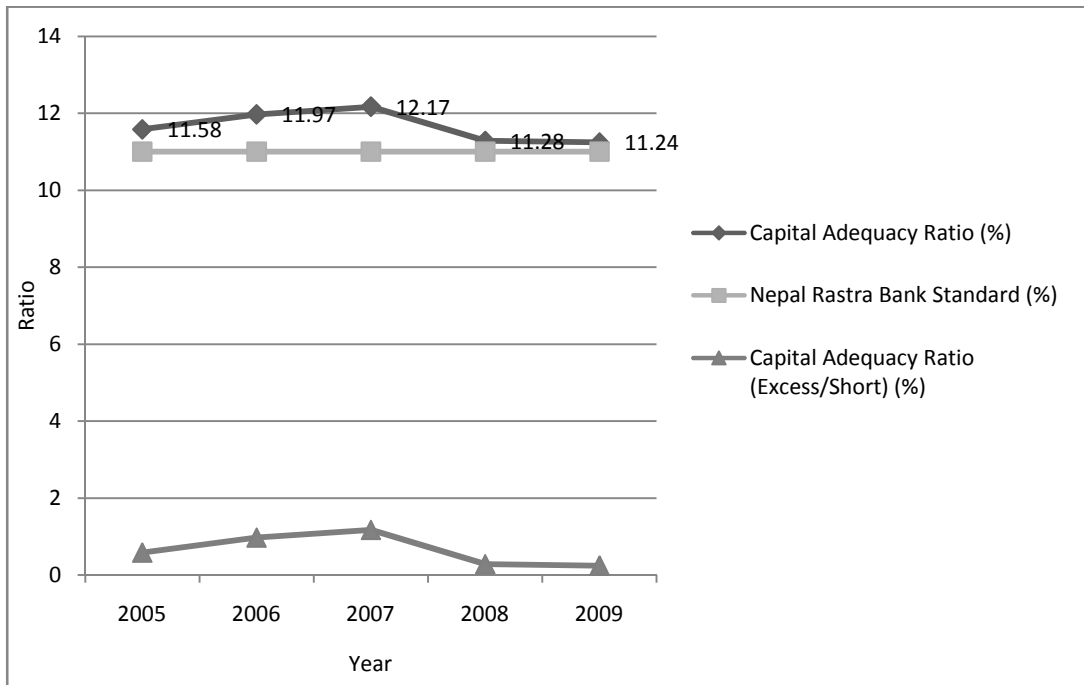
FY(As at mid July)	2005	2006	2007	2008	2009
Capital Fund (Rs.)	1578.7	2094.1	2851.62	3891.23	5095.35
Total Risk Weighted assets (Rs.)	13632.9	17491.7	23435.64	34484.54	45312.26
Capital Adequacy Ratio (%)	11.58	11.97	12.17	11.28	11.24
Nepal Rastra Bank Standard (%)	11	11	11	11	10
Capital Adequacy Ratio (Excess/Short) (%)	0.58	0.97	1.17	0.28	1.24

*Source: NIBL'S Annual Reports*

As shown in Table 4.3 the capital adequacy ratio of NIBL is distributed as minimum ratio of 11.28% in FY 2008 and a maximum ratio 12.17% in FY 2007. The ratio of the bank is in fluctuating trend throughout the study period. It means the ratios of the bank are increasing up to FY 2007 and decreasing in FY 2008 and 2009. Capital fund and total risk weighted assets are in increasing trend. The ratio is excess in all the years. Figure 4.3 exhibits the observed capital adequacy ratio of the NIBL is shown with NRB standard within the study period.

**Figure 4.3**

**Comparing Capital Adequacy Ratio with NRB Standard**



As shown in Figure. 4.3, the capital adequacy ratio of NIBL is above the NRB standard in each FY from FY 2005 to FY 2009. Generally, the bank has maintained the ratio according with the NRB standard over the study period. The CAR from NRB standard requires bank to increase its capital fund either through internal sources or increase ability cushion operational and unanticipated losses in the coming future.

**4.1.2 Asset Quality Analysis**

Asset quality is one of the most critical areas in determining the overall condition of a bank. The primary factor effecting overall asset quality is the quality of the loan portfolio and the credit administration program. The extent of the credit risk depends on quality of assets held by an individual FI. The quality of assets held by an FI depends an exposure to specific risk, trends in non performing loans and the health and profitability of bank borrowers especially the corporate sector. NRB

uses composition of assets, nonperforming loan to total loan ratio and loan loss provisioning ratio are taken as the indicator to examine the asset quality of commercial banks. NRB has directed the commercial banks in regards to the concentration of the loan. Any licensed FI can grant the fund base loan to a single borrower or borrowers related to the same business group up to 25 percent of its primary capital. In the same vein, it can provide the non fund base loan up to 50 percent of its core capital (NRB, 2005). Similarly it was directed FIs to classify the loans into performing loan and non performing loans. The loans that are not due and 3 months past due fall in the class of performing loans/ performing assets and others do in the non-performing loans. Further non-performing loans are classified into three groups: substandard, doubtful and bad/loss assets requiring provisioning of 25 percent, 50 percent and 100 percent respectively (NRB, 2005).

In this study assets composition, non per forming loan and loan loss provision are taken and prove to measure assets quality of the bank.

#### **4.1.2.1 Assets Composition**

The assets portfolio of the bank is both complex and interesting. It represents more faithfully the varied nature and ramification of the bank function and investment policies. In fact the assets side of the balance sheet indicates the manner in which the funds entrusted to the bank are deployed. Usually every banker seems to arrange its assets in an ascending order of profitability and descending order of liquidity. Thus the structure of a balance sheet indicates assets appearing in the descending order of liquidity. The capital and liabilities of banks are invested in various assets in the form of cash and bank balance, placements, investments, bills purchase, loans and advances and fixed assets. Loans and advances contain the high proportion of potential risk to the bank's capital. Assets not only determine the soundness of a bank but also its capacity to earn profits.



**Table 4.4**  
**Assets Composition (in %)**

FY	2005	2006	2007	2008	2009	Mean
Cash & Bank Balance	8.24	10.96	8.69	9.5	10.23	9.52
Money at call	0.86	0.33	0.12	-	0.56	0.46
Investment	24.18	26.27	11.57	17.44	18.93	19.67
Loan & Advances	62.22	59.89	63.29	69.87	68.35	64.72
Fixed Assets	1.96	1.61	2.7	2.46	2.55	2.25
Other assets	2.54	0.94	0.86	0.73	0.91	1.19
Total	100	100	100	100	100	100

*Source: NIBL'S Annual Reports*

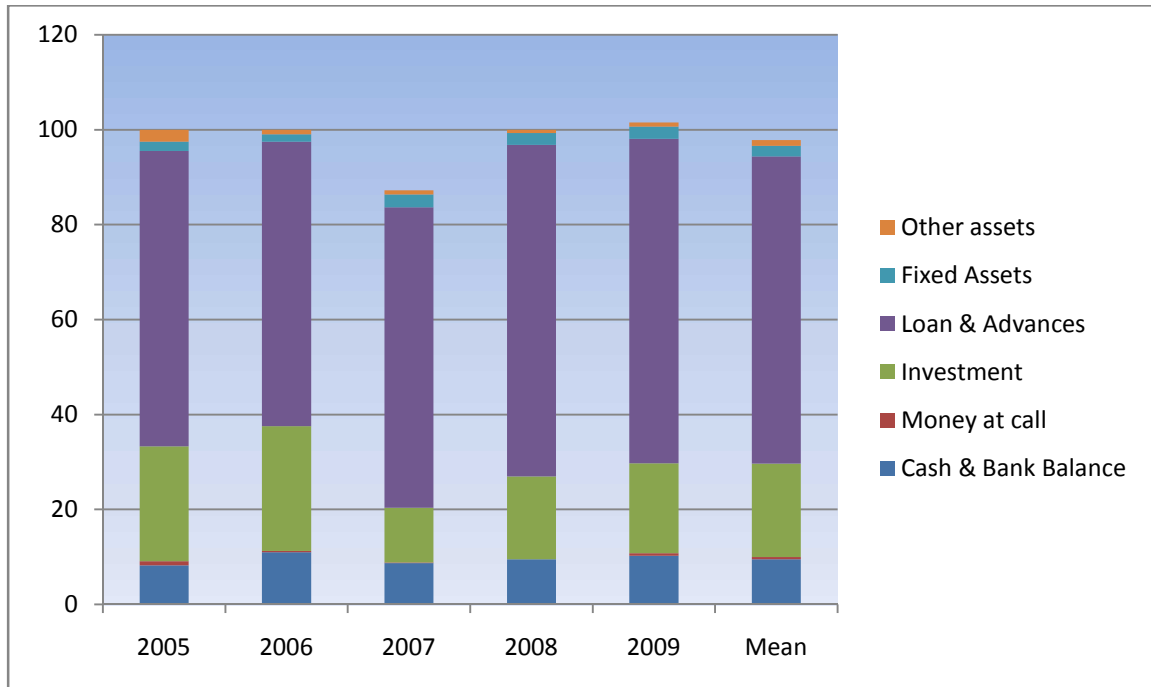
As shown in Table 4.4, % of cash and bank balance is increasing up to FY 2006 and then it decreased in 2007 and then again increased in FY 2008 and 2009. Thus the trend is fluctuating. So on money at call in percentage is significantly fluctuating over the entire study period. It means the ratio of money at call is fluctuating in the period of FY 2004 to FY 2008. Similarly, Investment in percentage is decreasing trend till FY 2008. Likewise loan and advances and fixed assets in percentage are slightly up and down during study period. Other assets is slightly decreasing trend up to FY 2006. The average percentage of cash and bank balance, money at call, investment, loans and advances, fixed assets and other assets were 8.84, 1.32, 29.02, 56.45, 1.5 and 3.51 percent respectively during study period.

Assets composition of the commercial banks remained largely same in last six financial FYs. Movement was observed in switch over the money at call into investment during last two FYs. The table given above major part of total assets as held in the form of loans and advances.

The Figure 4.4 shows the assets composition at the bank during the study period. It reveals that movement of money at call was observed in switch over into

investment during last two FYs. But approximately including money at call, cash and bank balance and investment remain same during the study period.

**Figure 4.4**  
**Assets Composition**



#### 4.1.2.2 Non-Performing Loan to Total Loan and Advances Ratio

Loan and advances usually represent the single largest assets of most banks. When the borrowers fail to pay the interest or even principles within the time frame the performing loan begins to start in non-performing loan (NPL). As per NRB directives (2061B.S.) all loans and advances must be classified in order of principle default aging into pass (past due up to 3 months), sub-standard (past due between 3-6 months), doubtful (past due between 6-12 months) and loss/bad (past due over 1 FYs). NPL forms an aggregate of substandard, doubtful and loss loans. The ratio of NPL to total loan and advances shows the percentage of NPL in total loan. The lower the ratio the better is the proportion of performing loans and risk of default.

**Table 4.5**  
**Non-Performing Loan Ratio**

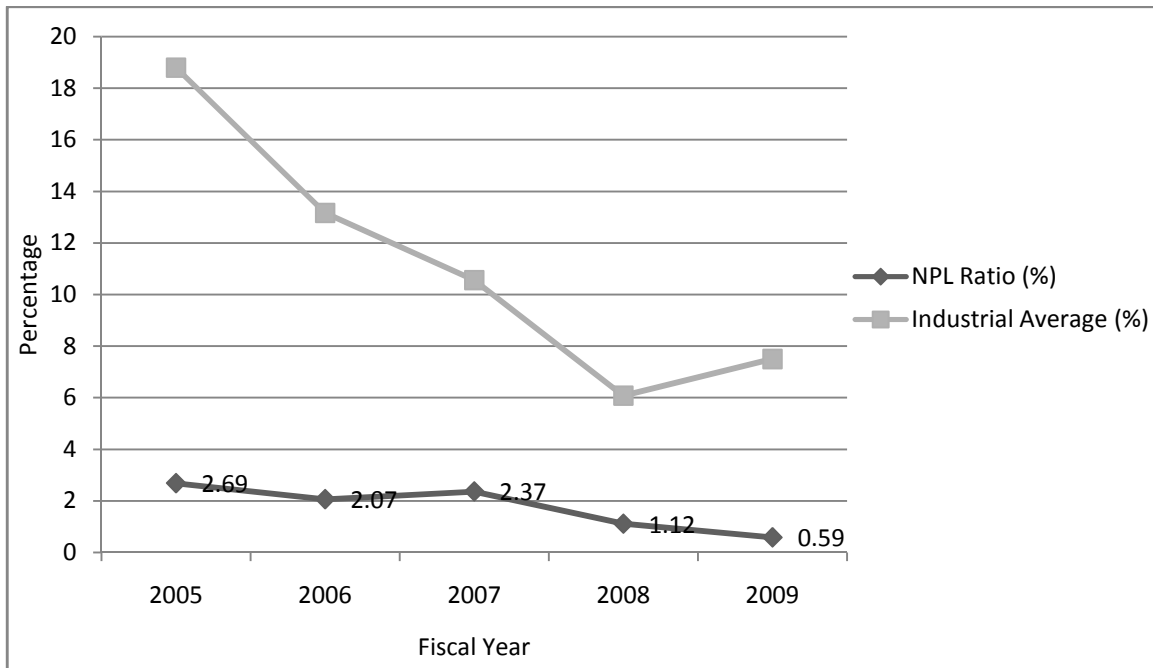
(Amount in Million)

FY	2005	2006	2007	2008	2009
Non-Performing Loan (Rs.)	280.87	327.249	421.97	309.47	213.90
Total Loan (Rs.)	10453.2	13178.1	17769.09	27529.30	36241.20
NPL Ratio (%)	2.69	2.07	2.37	1.12	0.59
Industrial Average (%)	18.79	13.16	10.56	6.08	7.50

*Source: NIBL'S Annual Reports \*Banking and Financial Statistics NRB*

Table 4.5 exhibits that the ratio of non-performing loan to total loan and advances ratio with comparing to industrial average for the study period. The ratio of the bank was decreasing trend with fluctuates over the FYs. The ratio range from 2.69% in 2005 to 0.59% in FY 2009 with an average of 1.76%. All the ratios are below the industrial average.

**Figure 4.5**  
**Comparing Non-Performing Loan Ratio with Industrial Average**



In Figure 4.5, the non performing loan ratio curve of the bank is below the industry average curve in all observed fiscal FYs. Due to the public sectors banks in Nepal have very high volume of non-performing loan so the industrial average is also came very high. Thus, this industrial average ratios can not taken as a bench mark for non-performing loan ratio. Generally, an internationally recognized non-performing loan ratio in a single digit is said to be acceptable.

#### **4.1.2.3 Loan Loss Ratio**

The loan loss provisioning ratio indicates adequacy of allowance for loans and trend in the collection of loan and the performance in loan portfolio. It is obtained by the ratio of loan loss provision to the total loan (Garden and Miller, 1988). Loan loss ratio previous useful insight into the quality of a banks loan portfolio and bad debts coverage and the adequacy of loan loss provisions. Greater loan loss provision is required to allow if high loss is expected. This ratio shows the possibility of loan default of a bank. It indicates how efficiently bank manages its loan and advances and makes effort for the loan recovery. Higher ratio implies higher portion of non-performing loan portfolio. The ratio of loan loss provision to total loans and advances describes the quality of assets that bank is holding. The provision for loans loss reflects the increasing probability on non-performing loans in the volume of total loans and advances. Loan loss provision on the other hand signifies the cushion against future contingency created by the default of the borrowers. The high ratio signifies the relatively more risky assets in the volume of loans and advances. The high provision for loan loss shows the recovery of loan to be difficult and irregular and the age of the loan is increasing. More delay the bank gets to collect the loan, the provision will be higher and the ratio will be higher. Altman and Sametz (1977) have identified few early warning variables based on the balance sheet data. The loan loss ratio is defined as the measure of prospective losses that are envisioned by the bank management in relation to the banks overall loan and investment.

**Table 4.6**  
**Loan Loss Ratio (%)**

(Amount in Million)

FY(As at mid July)	2005	2006	2007	2008	2009
Loan Loss Provision (Rs.)	325.18	401.94	482.67	526.73	422.39
Loan and Advances (%)	10258.2	13178.1	17769.0	27529.3	32568.2
Loan Loss Ratio (%)	3.13	3.05	2.71	1.91	1.21

*Source: NIBL'S Annual Reports.*

Table 4.6 exhibits that the loan loss ratio for the study period has fluctuating trend. The ratio ranges from 3.13 percent in FY 2005 to 1.21 percent in FY 2009 with an average of 2.72 percent and Standard deviation is 0.19 percent. The coefficient of variation between them is 10.44 percent, which indicates that the ratio is variable and not consistent with the decreasing trend.

**Figure 4.6**  
**Trend of Loan Loss Ratio**

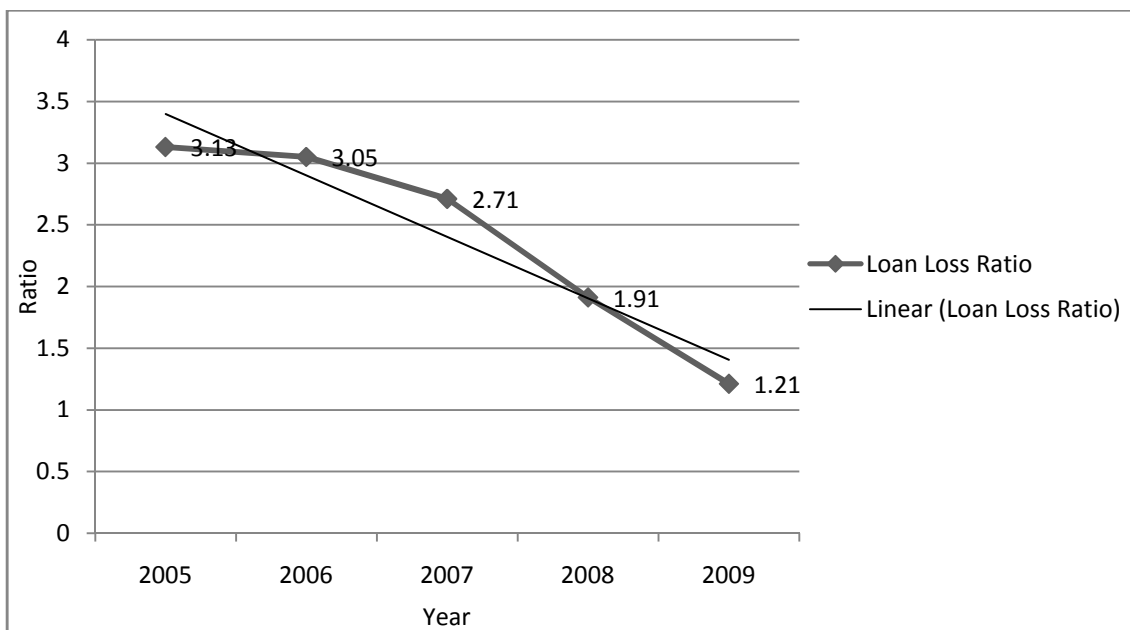


Figure 4.6 shows the observed value of loan loss ratio along with least square trend line. The ratio is moving up and down during the study period. The slope of the trend line is determined by the least square method is negative which indicates the trend of the loan loss ratio is decreasing over the study period.

### **4.1.3 Management**

Sound management is the key of financial institutions performance. The general management of the institution, human resource policy, governance, management information system, internal control, auditing, strategic planning and budgeting are distinct areas that reflect the overall quality of management.

While the others factors can be quantified fairly easily from current financial statements, management quality is some what being subjective and difficult to measure. There is one measure that is relevant to management is the ratio of total expenses total revenue. Assuming that how good the management is correlated with this ratio is use to represent the management. Another measure that is also relevant to management is the ratio of earnings per employee is used as a proxy of management quality.

#### **4.1.3.1 Total Expenses to Total Revenue Ratio**

The ratio of total expenses to total revenue is used as a proxy measure of the management quality. This ratio is calculated by dividing the total expenses by total revenues. A high level of expenditures in un-productive activities may reflect an inefficient management. A high or increasing ratio of expenses to total revenue may give indication of inefficient operation. This can be, but necessarily due to management deficiencies. In any case, it is likely to negatively affect profitability (IMF, 2000).

Commercial bank's earning originates from interest on loans & advances, investments, commission and discounts, foreign exchange rate, gains and miscellaneous Income. Conversely, it expends on depositor's interest, staff salary, provident fund, allowances and other operating expenses like rent, water & electricity, fuel expenses, audit fee expenses, management expenses depreciation, miscellaneous such as loss on sale of assets, write off expenses, losses shortage written off, provision for income tax are non operating expenses.

**Table 4.7**

**Total Expenses to Total Revenues Ratio**

(Amount in million)

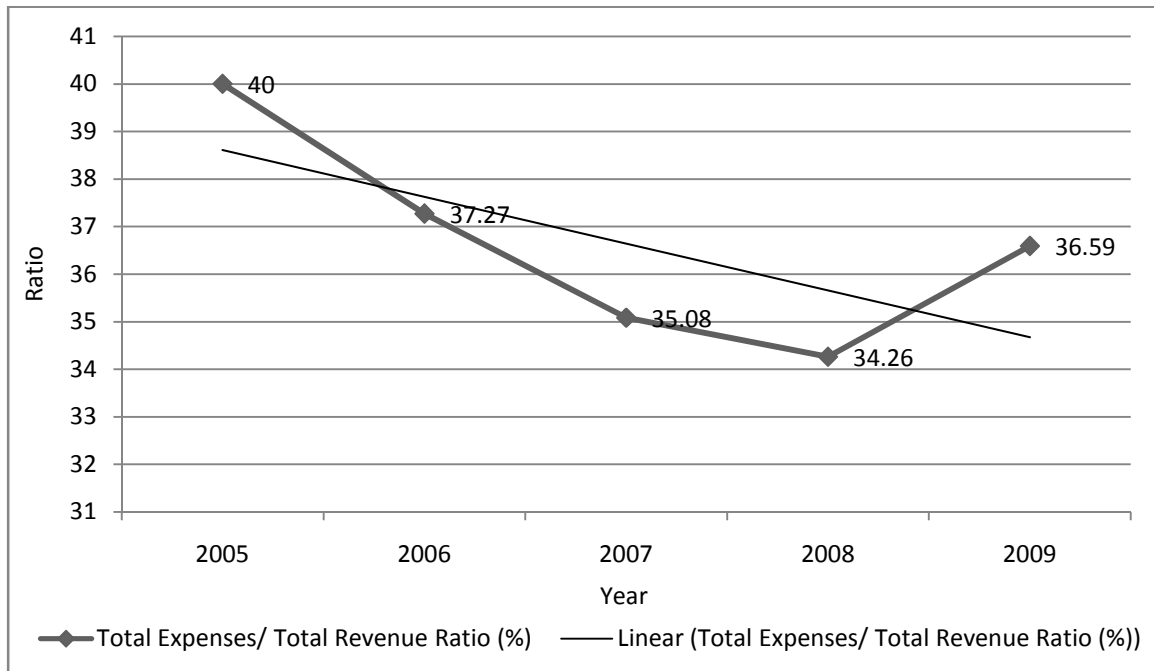
FY	2005	2006	2007	2008	2009
Total Expenses (Rs.)	3169.94	3617.60	4611.39	6023.00	7159.35
Total Revenue (Rs.)	79111.7	9704.82	13142.33	17582.49	19562.42
Total Expenses/ Total Revenue Ratio (%)	40.0	37.27	35.08	34.26	36.59

*Source: NIBL'S Annual Reports*

As shown in Table 4.7, the total expenses to total revenue ratio is decreasing throughout the entire study period. This ratio is distributed from a minimum of 34.26 percent in FYs 2008 to maximum 40.00 percent in FY 2005 with average of 38.24 percent. It can be concluded that the ratios are in decreasing trend with in the study period.

**Figure 4.7**

**Trend of Total Expenses Total Revenue Ratio**



As shown in Figure 4.7, the ratio was increased in FY 2005 but after then it is in continuously decreasing trend to last final FYs. Decreasing trend of ratio is favorable and measure management quality. Thus, negative slope of trend line of the ratios indicates the decreasing expenses with respect to income. This is good sign for the bank in measuring the quality of management. It can be concluded the bank is careful to reduce the expenditures in unproductive activities in later FYs.

#### **4.1.3.2 Earning Per Employee**

An earning per employee is also taken as measure of management quality in this study. It is calculated dividing net profit after taxes by number of employees. Low or decreasing earnings per employee can reflect in efficiencies as a result of overstaffing with similar repercussion in terms of profitability (IMF, 2001)



**Table 4.8**  
**Earning Per Employee**

FY(As at mid July)	2005	2006	2007	2008	2009
Net Profit (Rs.)	232147000	350536000	501398852	696731516	901000000
No. of Employees	353	390	514	622	766
Earnings Per Employee (Rs.)	657640	848810	975484	1120147	1176240

*Source: NIBL'S Annual Reports*

Table 4.8 shows the earnings per employee in rupees during the study period. The amount is increasing throughout the entire study period. So the EPE is in increasing trend which indicates that the correlation between the Net Profit and Nos. of Employees is positive. The mean of the ratios for the study period is Rs.814367.

**Figure 4.8**  
**Trend of Earnings per Employee**

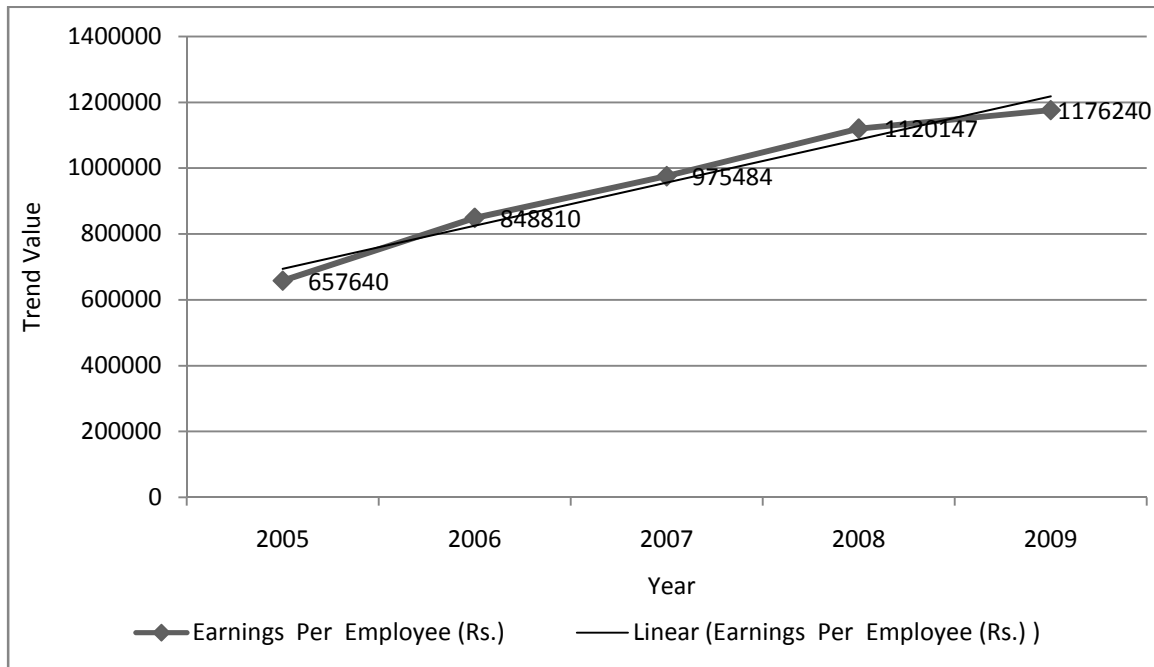


Figure 4.8 shows the observed value, of earning per employee along with least square trend line. The slope of the trend line is positive which indicates the earning per employee is increasing over the study period. Increasing earnings per employee can reflect efficiencies as a result of well staffing. However, in middle FYs it has shown decrement due to increased number of staff with similar repercussion in terms of profitability.

#### **4.1.4. Earning Quality**

The main objective of bank is to earn profit and their level of profitability is measured by profitability ratios. Earnings represent the first line of defense against capital depletion resulting from shrinkage in asset value. Earning performance should also allow the bank to remain competitive by providing the resources. Profitability ratio are calculated to measure the efficiency of bank, higher profit ratios indicates higher efficiency and vice- versa.

##### **4.1.4.1 Return on Equity (ROE)**

ROE is measure of the rate of return flowing to the bank's shareholders. It approximates the net received from investing their capital in the bank (Peter, 1999). Return on equity reveals how well the bank uses the resources of owners. The higher ratio represents sound management and efficient mobilization of the owner's equity and vice versa. ROE of 15% is treated as standard and banking industry are desired to have higher than this (World Bank 1996).

**Table 4.9**  
**Return on Equity (ROE)**

(Amount in million)

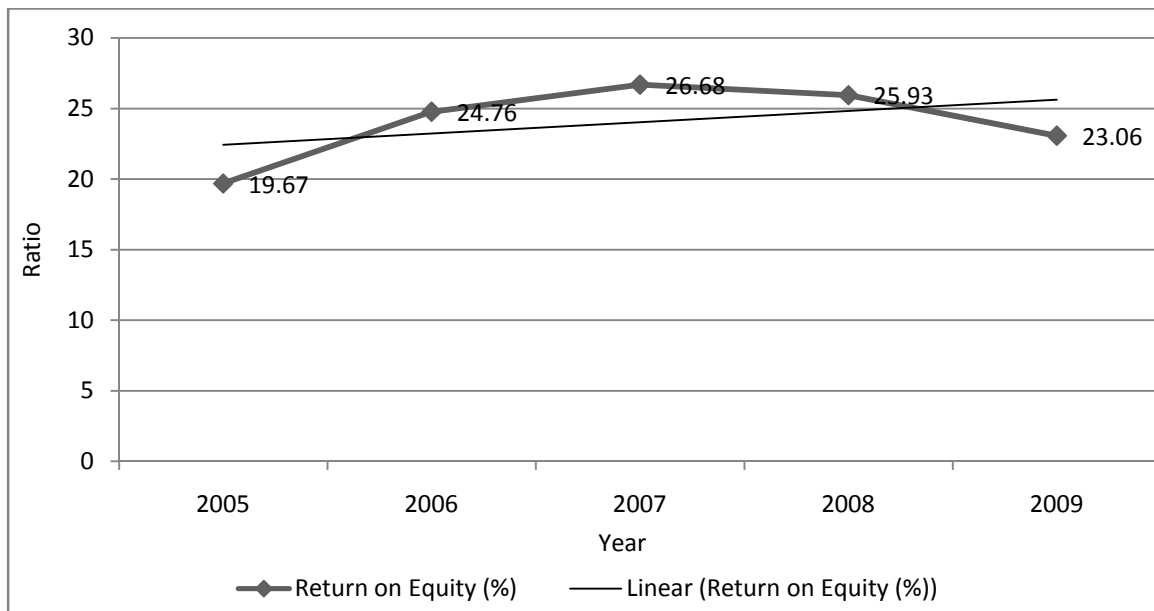
FY(As at mid July)	2005	2006	2007	2008	2009
Net Profit (Rs.)	232.14	350.54	501.40	696.73	901.00
Shareholders Equity	1118.1	1415.9	1878.71	2686.79	3907.84
Return on Equity (%)	19.67	24.76	26.68	25.93	23.06

*Source: Annual Reports*

As shown in Table 4.9, the return on equity ratio of the bank is minimum of 19.67 percent in FY 2005 and maximum of 26.68 percent in FY 2007. The mean ratio of the bank is 23.59 percent, standard deviation is 3.11 percent and the coefficient of variation of them is 25.93 percent, which is adjustable and consistent. The observed values of the ratio are fluctuating over study period. The mean ratios are above the 15 percent benchmark, so this shows that the banks ratio is better which is in increasing trend.

As shown in Figure 4.9 the ratio has slightly decreasing in FY 2005 and it has come up in FY 2006 and 2008. So the ratio is in fluctuating trend throughout the study period. The return on equity of the bank is in fluctuating trend due to the NRB rules as per capital requirement of the commercial bank. The slope of the trend line determined by the least square method is positive which indicates the upward trend in the ratio of bank during the period of six FYs. The average ratio is also above the benchmark. The increasing trend of ratios implies that earning quality of bank is getting better.

**Figure 4.9**  
**Trend of Return on Equity Ratio**



#### 4.1.4.2 Return on Assets (ROA)

ROA determines the net income produced per dollar of assets. It is a measure of profitability linked to the asset size of the bank (Saunders and Cornett, 2004). It is primarily an indicator of managerial efficiency; it indicates how capably the management of the bank has been converting the institutions assets into net earnings (Rose 1999). ROA is a popular tool to measure how well its assets are utilized in generating profit. It measures the profit earning capacity by utilizing available resources i.e. total assets, return will be higher if the banks resources are well managed and efficiently utilized. Generally, the return on assets ratio should be 1% and higher is desired to the banking industry (World Bank, 1996).

**Table 4.10**  
**Return on Assets**

(Amount in million)

FY(As at mid July)	2005	2006	2007	2008	2009
Net Profit after taxes (Rs.)	232.14	350.54	501.40	696.73	901.00
Total Assets (Rs.)	16390.6	21732.0	27590.8	38873.3	53010.8
Return on Assets (%)	1.40	1.61	1.82	1.79	1.69

*Source: NIBL'S Annual Reports.*

As shown in Table 4.10, the return on asset ratio of the bank is minimum of 1.40 percent in FY 2005 and maximum of 1.82 percent in FY 2007. The ratio is increasing throughout the study period. The mean ratio of the bank is 1.55 percent, standard deviation is 0.28 percent and the coefficient of variation of them is 18.61 percent which is variable and not consistent. The bank mean ratio is above the 1 percent benchmark. The bank's ratio is in continues increasing trend which shows the quality of assets and their efficiency to generate return is increasing.

**Figure 4.10**  
**Trend of Return on Asset Ratio**

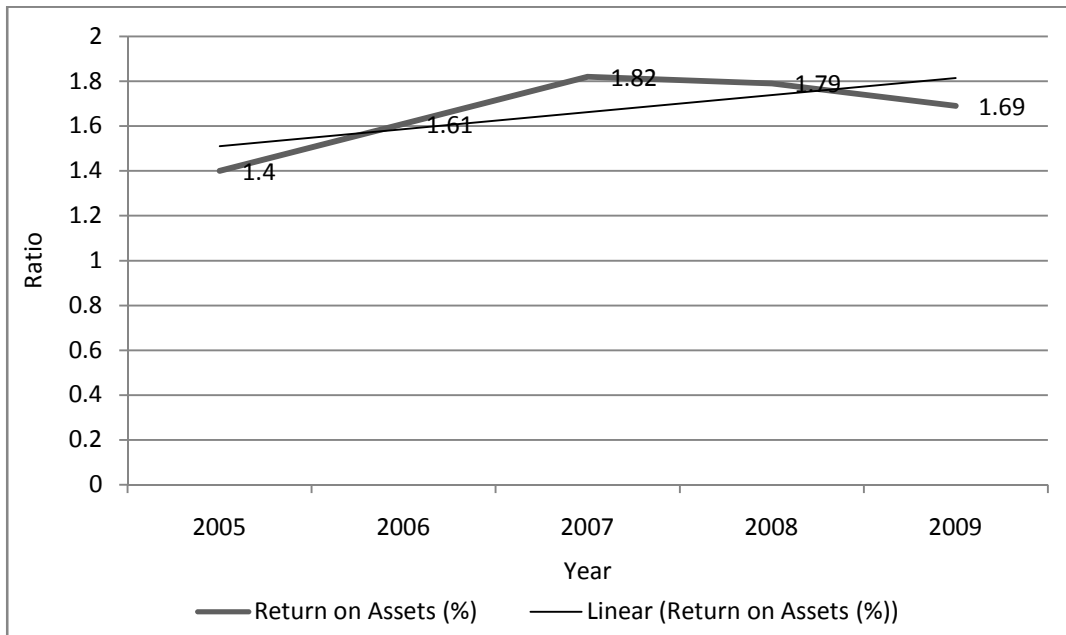


Figure 4.10 shows the observed return assets ratio with least square trend line. It shows the upward movement of ROA since FY 2004 which is supported by the positive slope of the trend line. The positive slope of the trend line shows the increasing trend in return on asset ratio.

#### **4.1.4.3 Net Interest Margin (NIM)**

The net interest margin measure how large a spread between interest revenues and interest costs management has been able to achieve by close control over the banks earning assets and the pursuit of the cheapest sources of funding (Peter, 1999). It is calculated the net interest income dividing by earning assets. Under earning assets loans and advances bills purchase and discounted and investment made in securities (T-Bill, Bonds) are included.

Generally, the net interest margin ratio should be 3% to 4% and higher is better in banking industry (World Bank, 1996). However it highlights the fact that looking

at returns without looking at risk can be misleading and potentially dangerous in terms of bank solvency and long run profitability (Saunders & Cornett, 2004).

**Table 4.11**  
**Net Interest Margin**

(Amount in million)

FY(As at mid July)	2005	2006	2007	2008	2009
Net Interest Income (Rs)	532.05	681.79	899.45	1202.12	1580.96
Earning Assets ( Rs)	14060.23	18378.39	23792.09	33870.67	39562.25
Net Interest Margin (%)	3.79	3.71	3.78	3.54	3.99

*Source: NIBL'S Annual Reports.*

In the past five FYs, the net interest margin ratio of NIBL was distributed as a maximum ratio of 3.99 percent in FY 2009 and minimum ratio 3.54 percent in FY 2008. The ratio of the bank increased in FY 2009. The mean ratio for the study period is found 3.76 percent, standard deviation is 0.10 percent and the coefficient of variation is found 2.72 percent. On the basis of the coefficient of variation, it can be concluded that the ratios are slightly variable. It can be concluded that, throughout the review period the NIM ratio was found within the generally accepted benchmark 3 to 4 percent.

**Figure 4.11**  
**Trend of Net Interest Margin Ratio**

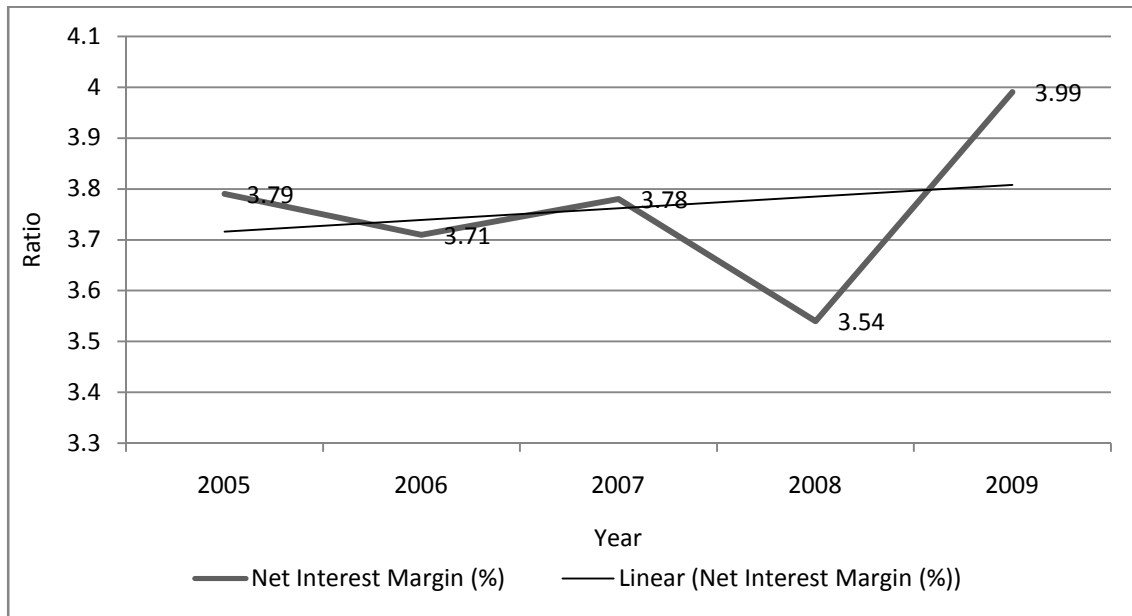


Figure 4.11 shows the observed net interest margin ratio with least square trend line. It shows the downward movement of observed net interest margin till FY 2006 and then upward movement of the ratio up to final FY of the study. The slope of the trend line is negative and it shows decreasing trend of net interest margin ratio during the study period.

#### **4.1.4.4 Earning Per Share (EPS)**

Earning per share provides a direct measure of the returns flowing to the bank's owners, its stock holders measure relative to the number of shares to the public (Peter, 1999). The earnings per share of an organization give the strength of the share in the market. The higher EPS is supposed to be a best comparing between two banks. The earnings per share of NIBL are tabulated below:

**Table 4.12**  
**Earning Per Share**

FY(As at mid July)	2005	2006	2007	2008	2009
Net Profit (Rs. in million)	232.14	350.54	501.40	696.73	901.00
No of Share (in million)	5.87	5.91	8.01	12.03	24.07
Earning per share (Rs.)	39.5	59.35	62.59	57.87	37.42

*Source: NIBL'S Annual Reports.*

Table 4.12 reveals that the EPS of the bank has ranged between Rs.39.5 in FY 2005 to Rs.37.42 in FY 2009. The mean average of EPS is Rs.54.20, standard deviation is 9.12 percent and coefficient of variation of the bank is 16.82 percent. The EPS of the bank has fluctuating throughout the study period.

**Figure 4.12**  
**Trend of Earning Per Share**

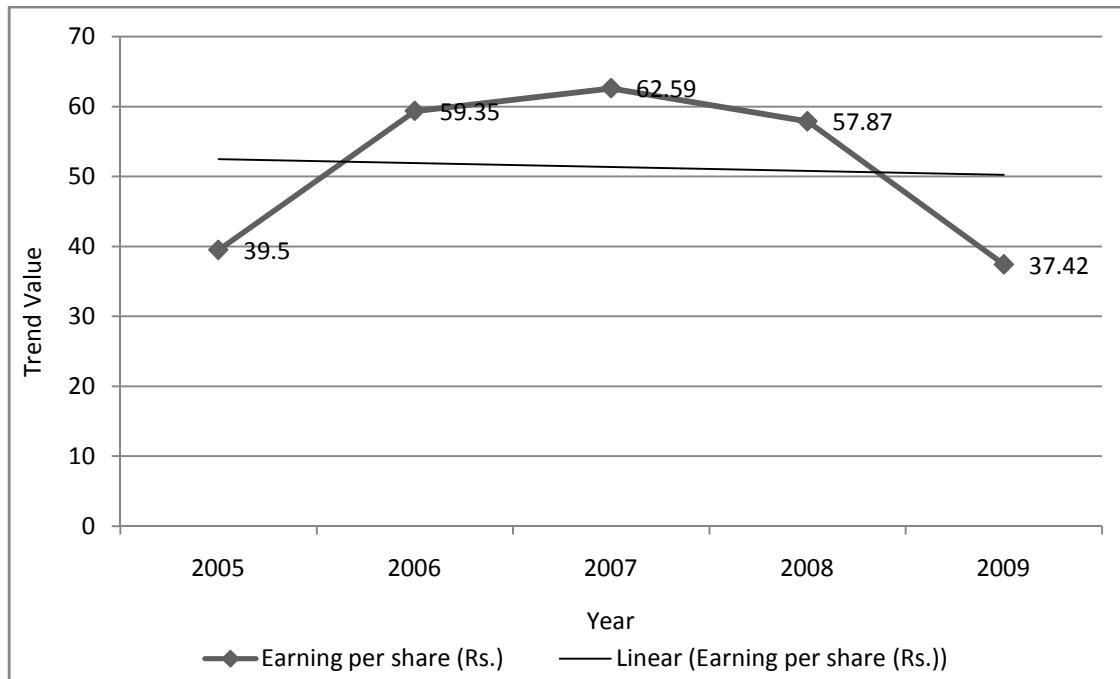


Figure 4.12 shows the observed values of earning per share along with the trend line. The EPS of the bank is fluctuated down in FY 2005 over the study period.



The slope of the trend line is positive which indicates that the trend of the earning per share is in increasing trend.

#### **4.1.5 Liquidity**

The level of liquidity influences the ability of a banking system to withstand shocks. Liquidity risk arises when an FI's liability holders like depositors demand immediate cash for the financial claims they hold with an FI. The most liquid asset is cash which FIs can use directly to meet liability holder's demands to withdraw funds. Day to day withdrawals by liability holders are generally predictable and large. FIs can expect to borrow additional funds on the money and financial markets to meet any sudden shortfalls of cash. At times FIs face a liquidity crisis due to either a lack of confidence on the FIs problem or some unexpected need for cash, the liability holders may demand larger withdrawals than usual. This turns the FI's liquidity problem into a solvency problem and causes it to fail (Saunders and Cornett, 2004).

##### **4.1.5.1 Liquid Assets to Total Deposit Ratio**

This ratio measures the percentage of liquid fund with the bank to meet short term obligation. It measures overall liquidity position. Cash in hand foreign currency in hand, balance with NRB, balance held abroad and money at call are included in total liquid fund. This ratio is computed by dividing liquid assets by total deposits. The higher ratio implies the better liquidity position and lower ratio shows the inefficient liquidity position of the bank.

**Table 4.13****Liquid Funds to Total Deposit Ratio**

(Amount in million)

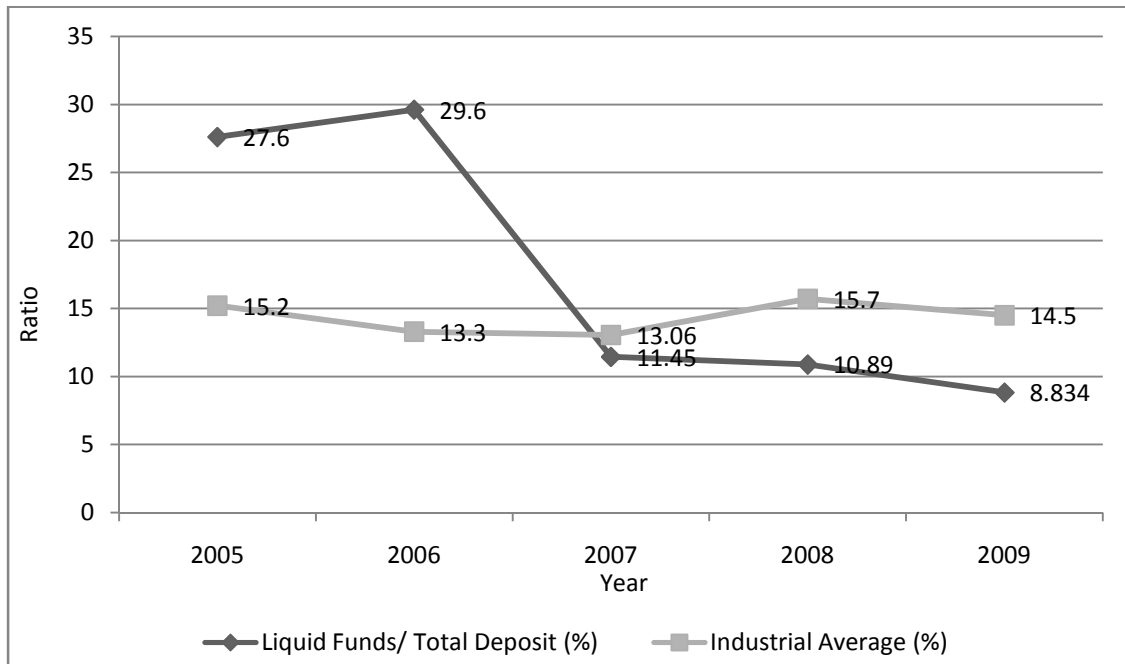
FY(As at mid July)	2005	2006	2007	2008	2009
Liquid Funds (Rs.)	3934.78	5602.86	2804.47	3755.09	4125.65
Total Deposits (Rs.)	14254.5	18927.3	24488.85	34451.72	46698.10
Liquid Funds/ Total Deposit (%)	27.60	29.60	11.45	10.89	8.834
Industrial Average (%)	15.2	13.3	13.06	15.70	14.5
Diff from Industrial Avg (%)	12.4	15.9	-1.61	-4.81	-5.66

*Source: NIBL'S Annual Reports, \* Banking and Financial Statistics NRB*

Table 4.13 shows that the liquid funds to total deposit ratio of NIBL during the period of FY 2005 to FY 2009. The ratios are fluctuating trend. The ratios are in decreasing trend for the first FYs. The ratio is 15.2 percent in FY 2005 and then it decrease in FY 2007 and in FY 2008. The ratios were greater than the industrial average ratios in all FYs 2005 and 2006 i.e. difference is positive but the difference is negative in the last three FY. Figure 4.13 exhibits the observed liquid fund to total deposits ratio at the bank with compare to industrial average ratio within the study period of last six FYs.

**Figure 4.13**

**Comparing Liquid Funds to Total Deposits Ratio with Industrial Average**



In Figure 4.13 the total liquid fund to total deposit curve of the bank is above the industry average curve in all the observed FY. This fact implies that the overall liquidity position of the bank is better than industrial average ratio but more liquidity impacts profitability negatively.

**4.1.5.2 NRB Balance to Total Deposit Ratio**

This ratio shows whether bank is holding the balance as required to NRB. To ensure adequate liquidity in the commercial banks to meet the depositors demand for cash at any time, to inject the confidence in depositors regarding the safety of their deposited funds NRB has put the directives to maintain certain percent of total deposit in NRB by the commercial banks. Total deposit means current, savings and fixed deposit account as well as call account deposit and certificates of deposits. For the purpose, deposits held in convertible foreign currency, employee guaranteed amount and margin account will not be included (NRB Directive

Manual, 2004). The following table shows the NRB Balance to Total Deposit ratio with compare to industrial average ratio by NIBL.

**Table 4.14**  
**NRB Balance to Total Deposit Ratio**

(Amount in million)

FY(As at mid July)	2005	2006	2007	2008	2009
NRB Balance (Rs.)	780.24	1526.06	1381.35	1820.00	2125.36
Total Deposit ( Rs.)	14254.5	18927.3	24488.85	34451.72	46698.10
NRB Balance/ Total Deposit (%)	5.47	8.06	5.64	5.28	4.55
Industrial Average (%)	7.1	7.2	6.88	7.23	7.5
Diff. From industrial Average (%)	-1.63	0.86	-1.24	-1.95	-2.94

*Source: NIBL'S Annual Reports \*Banking and Financial Statistics NRB*

Table 4.14 shows that NIBL has not maintaining balance with NRB. NRB balance to total deposit ratio of the bank is fluctuating during the observed FYs. The NRB balance to deposit ratio showed maximum in FY 2006 with 8.06% when the minimum ratio 4.55% in FY 2009. The ratio was less than the industrial average ratio in all observed FYs i.e. difference is negative except in FY 2006. This implies that deposit of NIBL with NRB is less than that of average. This indicates that the bank has less exposure towards balance with NRB.

**Figure 4.14**

**Comparing NRB Balance to Total Deposits Ratio with Industrial Average**

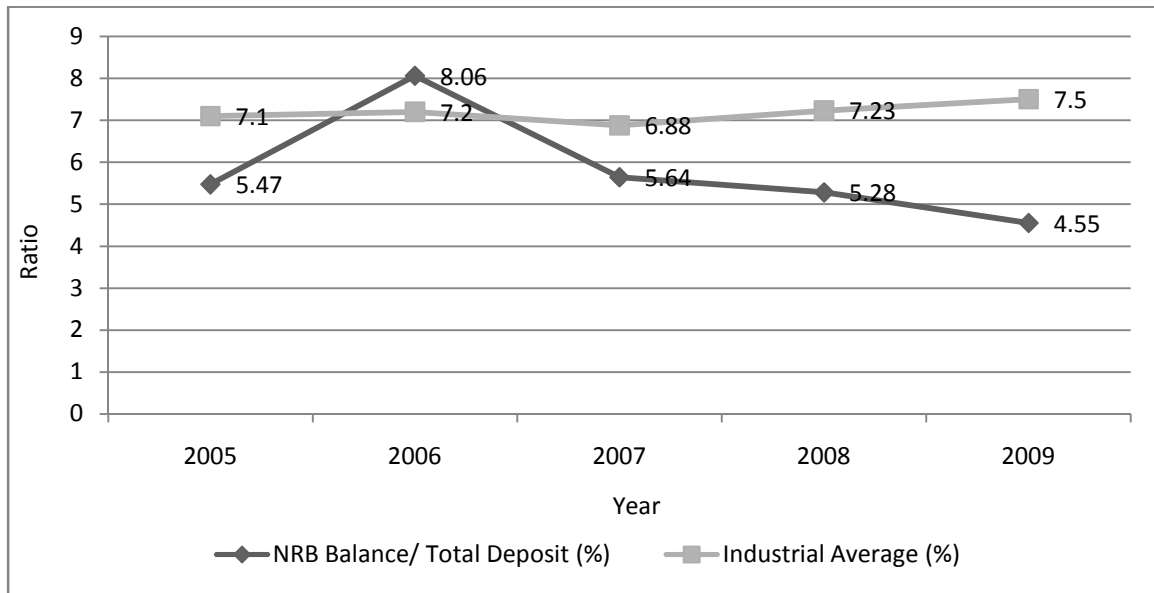


Figure 4.14 shows the NRB balance to total deposit ratio with compare to industrial average ratio within the study period of last six FYs. As shown in Figure 4.14 the NRB balance to total deposit curve of NIBL is below the industrial average curve in all FYs during the study period except in FY 2006. This fact implies that the balance with NRB of the bank is less than the average balance. This shows that the bank has not maintained the balance with NRB as per the directives over the study period.

**4.1.5.3 Cash in Vault to Total Deposit Ratio**

This ratio shows the percentage of total deposits held as cash in vault. This ratio is computed by dividing cash at vault by total deposits. Cash and foreign currencies in hand are included as cash in vault. Total deposit means current savings and fixed deposits account as well as call account deposit and certificates of deposits. For the purpose deposits held in convertible foreign currency, employees guarantee amount and margin account will not be included (NRB Directive Manual, 2004).

**Table 4.15**  
**Cash in Vault to Total Deposit Ratio**

(Amount in million)

FY(As at mid July)	2005	2006	2007	2008	2009
Cash in Vault (Rs)	374.26	562.00	763.98	1464.48	1925.68
Total Deposit (Rs.)	14254.5	18927	24488.85	34451.72	46698.10
Cash at vault/ Total Deposit (%)	2.63	2.97	3.12	4.25	4.12
Industrial Average (%)	1.9	2.2	2.32	2.97	2.5
Diff from Industrial Average	0.73	0.77	0.8	1.28	1.65

*Source: NIBL'S Annual Reports \*Banking and Financial Statistics NRB*

Table 4.15 shows that the cash in vault to total deposit ratio of bank has increasing trend. The highest ratio is 4.25% in FY 2008 and the lowest ratio is 2.63% in FY 2005. The ratio has decreased till FY 2005 and then increased till FY 2004 then the ratio increased up to final FY. The ratio is less than the industry average in beginning 3 years.

**Figure 4.15**

**Comparing Cash at Vault Total Deposits Ratio with Industrial Average**

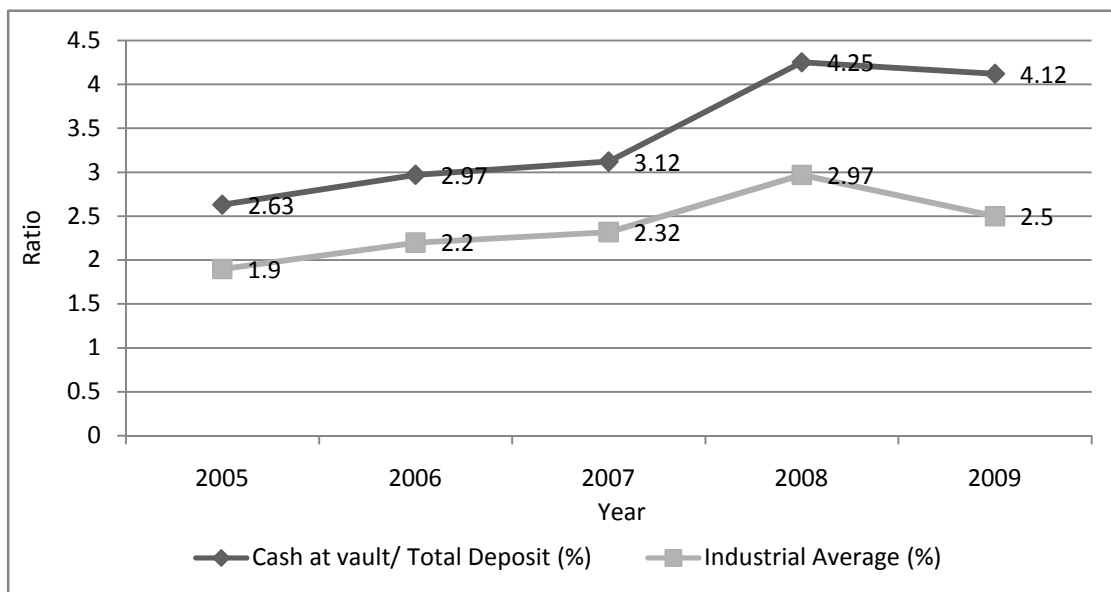


Figure 4.15 exhibits the observed cash in vault ratio of the NIBL with compare to industrial average ratio within the study period of last six years. In the chart, the ratio curve is giving ripples like appearance which indicates fluctuation of ratio in alternate FYs. The ratio is observed below the industry average in beginning 3 FYs and above in last 3 years of review period. The ratios were above the NRB standard of 2% except in beginning 2 years. Overall it indicates bank capacity to keep cash position is going better in later FYs.

#### **4.1.6 Sensitivity to Market Risk**

Sensitivity to market risk refers to the risk that changes in market conditions could adversely affect earnings and or capital. Market risk encompasses exposures associated with changes in interest rates, foreign exchange rates, commodity prices, equity prices, etc. While all of these items are important, the primary risk in most banks is interest rate risk (IRR), which is the focus of the study.

When a bank has more liabilities re-pricing in a rising rate environment than assets re-pricing, the net interest margin (NIM) shrinks. Conversely, if the bank is asset sensitive in a rising interest rate environment, NIM will improve because the bank has more assets re-pricing at higher rates. There are many ways to monitor or exposure to IRR. Measurement systems vary in complexity from very simple methods such as a gap model, to very sophisticated models such as a simulation or duration analysis. This study is worked with gap model, which simply measures the net quantity that changes in interest rates will have on earnings. With a view to minimize the IRR, NRB requires the banks to adopt Gap Analysis adopted for minimization of liquidity risk shall also be applied in respect of minimizations of IRR. Banks shall classify the time interval of the assets and liabilities on the basis of maturity period of 0-90 days, 91-180 days, 181-270 days, 271-365 days, over 1 FY. The effect on the profitability is measured by multiplying the change in

interest rate,  $\zeta R_i$  in the  $i^{\text{th}}$  maturity bucket annualized with Cumulative Gap (NRB Directive Manual, 2004).

If the interest rates rise on RSAs and RSLs, the positive CGAP (RSA>RSL) would project the increase in the expected annual net interest income (NII). However, if interest rate falls when CGAP is positive, NII will fall. As rates, fall interest revenue falls by more than interest expense. Thus NII falls by approximately by  $(\text{CGAP}) \times (-\zeta R)$ . In general when CGAP is positive the change in NII is positively related to the change in interest rates. Thus, banks would want to keep CGAP positive when interest rates expected to rise.

Conversely, when the CGAP or the Gap Ratio is negative (RSA<RSL), if interest rates rise by equal amounts for RSAs and RSLs, NII will fall. Similarly, if interest rates fall equally for RSAs and RSLs, NII will increase when CGAP is negative. As rates, fall interest expense decreases by more than the revenues. In general, when CGAP is negative, the change in NII is negatively related to the change in interest rates. Thus, banks are expected to keep CGAP negative when interest rates are expected fall.

Expressing the re-pricing gap as a percentage of assets, gives: (1) the direction of the interest rate exposure (+or-CGAP) (2) the scale of the CGAP against the assets size of the bank.

Gap analysis of RSAs and RSLs of NIBL for the period of FY 2005/06 to 2009/10 is made as shown in Table 4.17 (a, b, c, d, e) based on the different maturity time bucket.



**Table 4.16**  
**GAP Analysis**

**a. 2005**

	1-90	91-180	181-270	271-365	>365	Total
RSA (million )	6569.435	2078.377	1141.252	1556.276	1246.148	12592.088
RSL (Million)	4140.153	486.745	764.525	179.498	6315.529	11886.180
GAPi (RSA – RSL) (Million)	2429.282	1591.632	376.727	1376.778	(5068.511)	705.908
CGAP (RSA-RSL) (Million)	2429282	4020914	4397641	5774.419	705.407	-
RSA/RSL	1.58	4.26	1.49	8.67	0.19	1.05
CGAPi Ratio [CGAP/Total RSA (%)]	19.29	31.93	34.92	45.85	5.60	5.60
ζ R%				1%	1%	
ζ NII (Million) CGAP×ζR				57.74	7.59	
% Change in NII				0.46%	0.056%	

**b. 2006**

	1-90	91-180	181-270	271-365	>365	Total
RSA (million )	9122.321	1715.828	1160.242	2021.128	1830.576	15850.09
RSL (Million)	4234.688	324.20	845.50	175.97	8738.18	14318.5
GAPi (RSA – RSL) (Million)	4887.63	1391.63	314.74	1845.15	(6907.601)	1531.55
CGAP (RSA- RSL) (Million)	4887.63	6279.26	6594.00	8439.15	1531.55	-
RSA/RSL	2.15	5.29	1.37	11.48	0.20	1.11
CGAPi Ratio [CGAP/Total RSA](%)	30.8	39.61	41.60	53.24	9.66	9.66
ζ R%				1%	1%	
ζ NII (Million) CGAP×ζR				84.39	15.31	
% Change in NII				0.53%	0.10%	

**c. 2007**

	1-90	91-180	181-270	271-365	>365	Total
RSA (million )	10063.11	3560.45	2298.19	3276.66	1971.38	21169.81
RSL (Million)	5532.60	543.70	1836.48	754.44	10531.59	19198.83
GAPi (RSA – RSL) (Million)	453.51	3016.74	461.712	2522.23	(8560.22)	1970.97
CGAP (RSA-RSL) (Million)	4530.51	7547.25	8008.96	10531.19	1970.97	-
RSA/RSL	1.81	6.55	1.25	4.34	0.18	1.10
CGAPi Ratio [CGAP/Total RSL] (%)	21.4	35.65	37.83	49.74	5.18	5.18
ζ R%				1%	1%	
ζ NII (Million) CGAP×ζ R				105.31	19.70	
% Change in NII				0.50%	0.05%	

**d. 2008**

	1-90	91-180	181-270	271-365	>365	Total
RSA (million )	11148.077	4542.48	2837.67	4400.87	4095.26	27024.37
RSL (Million)	6957.99	883.93	1158.63	1445.04	14371.58	24917.19
GAPi (RSA – RSL) (Million)	4190.08	3658.54	1679.04	2855.83	(10276.32)	2107.18
CGAP (RSA- RSL) (Million)	4190.08	7848.62	9527.67	12383.50	2107.18	-
RSA\ RSL	1.60	5.13	2.45	3.04	0.29	1.08
CGAPi Ratio [CGAP/Total RSA] (%)	37.58	276.58	29.78	35.54	51.45	51.45
ζ R%				1%	1%	
ζ NII (Million) CGAP×ζ R				17.36	5.37	
% Change in NII				0.36%	0.51%	

#### e. 2009

	1-90	91-180	181-270	271-365	>365	Total
RSA (million )	18244.93	5506.66	3868.25	4249.80	6234.10	38103.73
RSL (Million)	28419.41	1267.66	561.68	1181.93	3463.97	34894.66
GAPi (RSA – RSL) (Million)	10174.48	4239.00	3306.56	3067.86	2770.12	3209.06
CGAP (RSA-RSL) (Million)	10174.48	5935.48	2628.92	438.94	3209.06	-
RSA/RSL	0.64	4.34	3.43	6.88	1.79	1.79
CGAPi Ratio [CGAP/Total RSA] (%)	55.76	107.78	67.96	10.32	51.47	51.47
ζ R%				1%	1%	
ζ NII (Million) CGAP×ζ R				4.38	32.09	
% Change in NII				0.10%	0.51%	

The period from 2005 to 2009 is taken for review of the sensitivity of market risk. From FY 2004 to 2008, net financial assets (RSA-RSL) repricing in the short term maturity bucket ranging from 0-90 day to 271-365 days was found positive. In the long term maturity bucket (Ψ365 days) the gap was negative in all the FYs by Rs. 5068.511, Rs. 6907.601, Rs. 8560.22, Rs. 10276.32 except in 2008 i.e. Rs.2770.12 (all figure in millions) respectively.

#### 4.2 Major Findings of the Study

The major findings of the study on financial analysis of Nepal Investment Bank Ltd. In the framework of CAMELS are as follows:

- J Core (Tier I) capital ratio was above the NRB standard with maximum positive difference of 8.52% in FY 2005 and minimum positive difference of 7.71% in FY 2006. The bank was able to maintain more than 6% above the

NRB requirement in Tier I ratio during study period. In general it is found that the core capital adequacy ratio of NIBL is adequate and sufficient.

- J The proportion of supplementary (Tier II) capital in the total capital fund is decreasing as compared to Tier I capital. This means the bank is increasing capital of permanent nature. The bank needs to keep increase additional reserve for interest spread and exchange fluctuation reserve. The ratios of supplementary capital are within the boundary of NRB standard during the period of past six FYs.
- J Total capital adequacy ratio of the bank was maximum with 12.17% in FY 2007 and 11.28% was minimum in FY 2009. The total capital adequacy ratio is fluctuating from FY 2005 to FY 2009. The CAR difference is positive with NRB standard in all the FYs. The maximum positive different with NRB standard was 0.97% in FY 2002 and minimum was 1.17% in FY 2007. The positive difference gap seems in decreasing trend which is a matter of concern.
- J Assets composition of NIBL bank like in every banks remained largely proportion in the loans and investment in the last six financial FYs. In the study period of five FYs, the average composition of cash & Bank balance, money at call, investment, loan & advances, fixed assets and other assets were 9.52%, 0.46%, 19.67%, 64.72%, 2.25% and 1.19% respectively. It reveals that movement of money at call observe in switch over into investment during in the beginning two FYs.
- J The non-performing loans to total loans and advances ratio range from 2.69% in FY 2005 to 0.59% in FY2009 with an average of 1.76%. The ratios were below the industrial average. Similarly, it is found that the NPL ratio of the bank is below the international accepted standard of 5% or in single digit. In general it also shows efficient credit management and recovery efforts.
- J The loan loss ratio for the study period is in continuous decreasing trend. The ratio ranges from 3.13% in FY 2005 to 1.21% in FY 2009 with an average of

3.56%. The decreasing trend of NPL to total loan ratio also requires lower provisioning. It also indicates bank's quality of loan assets is getting better.

- J The total expenses to total revenue ratio fluctuated over the study period which was the maximum of all the review period else the trend is in decreasing trend. The ratio was reached to minimum ratio 34.26% in FY 2008. The negative slope indicates decreasing expenses with respect to income and is credited to good management quality.
- J The average earnings per employee of the observed period, was Rs.955,664.2. The slope of the observe earnings per employee trend along with least square trend line is positive, which indicates the earning per employee is increasing over the study period, which reflect efficiencies as a result of well staffing with similar repercussion in terms of profitability.
- J The return on equity ratio of the bank is minimum of 19.67% in FY 2005 and maximum of 26.68% in FY 2007. The mean ratio of the bank is 17.7%. The ratio is fluctuating in upward trend. The slope of the trend line determined by the least square method is positive. The increasing trend of ratio implies that earning of quality of bank is getting better. In all FY of the review period ratio and obviously the mean ratio is above the 15% benchmark, hence the bank's ROE ratio is sound.
- J The return on assets mean ratio of the bank is 1.55%. The upward movement of ratio since FY 2006 is also supported by the positive slope of the trend line obtained by least square trend line. The bank's mean ratio is above the bench mark 1% and higher so this shows that the quality of assets and their efficiency to generate additional return is increasing.
- J In the past six FYs the Net interest margin mean ratio for the study period is found 3.7%. The slope of the trend line obtained from least square trend line is negative which shows decreasing trend of NIM ratio during the study period. On the basis of the mean ratio of the bank is within the boundary of

benchmark 3% to 4% so the bank's ratio is better but it is in declining tendency.

- J The EPS of the bank was fluctuating over the FYs of the study period. The EPS of the bank was ranged between Rs.39.50 in FY 2005 to Rs.62.59 in FY 2007. The mean average of EPS is Rs.54.20 and the EPS of the bank fluctuate down once in FY 2005, thereafter it was increased. The increasing trend of EPS is also supported by positive slope of the trend line.
- J The liquid assets to total deposit ratio of NIBL during the period FY 2005 to FY 2009 are fluctuating trend. The ratio was minimum in FY 2008 with 10.89% and highest ratio was 29.66% in FY 2006. The ratio in all observed FYs i.e. difference is positive in all period. This implies that the bank's liquidity position in overalls is better but this impact in profit ability negatively.
- J NRB banks to total deposit ratio of NIBL showed in maximum in FY 2008 with 8.06% when the minimum ratio 4.55% in FY 2009. The ratios are in fluctuating trend. The ratio were less than the industrial average ratio in all observed FYs i.e. difference is negative. This implies bank is not strictly following the directives issued by NRB in respect to balance must held in NRB.
- J The volume of cash at vault ratio is less than the industry average in half of the beginning FYs. The observed cash in vault ratio was fluctuating in alternate FYs. The ratio was above the NRB standard of 2% in all FYs. Overall it indicates banks capacity to keep cash position is going better in latter FYs. However the bank is not strictly following the directives issued by NRB in respect to balance must held as a vault.
- J From FY 2004 to 2008, net financial assets (RSA-RSL) repricing in the short term maturity bucket ranging from 0-90 day to 271-365 days was found positive. In the long term maturity bucket (>365 days) the gap was negative in all the FYs except one year. The cumulative gap, CGAP of the RSAs and

RSLs repricing in the short term maturity bucket (0-365) in all the FYs was found positive. The CGAP repricing in the long term maturity bucket was however found negative in all the FYs. The CGAP repricing over the one FY maturity bucket was in continuous decreasing trend from FY 2005 except one year. The CGAP or the Interest rate sensitivity ratio to the total earning assets over the short time horizon i.e. up to one FY in continuous increasing trend. The CGAP ratio repricing over the long term horizon has decreased to 5.18% in FY 2006.

## **CHAPTER - V**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This chapter includes three aspects of the study summary, conclusion and recommendations. The first aspect summarizing the whole study, the second draws the conclusion and the last one forwards the recommendations.

#### **5.1 Summary**

The research study is focused on assessing the financial performance of Nepal Investment Bank Limited (NIBL) in the framework of CAMELS, by using descriptive and analytical research design, prescribed by UFIRS and in accordance to BASEL accord. The study focuses the financial performance of NIBL as regard to its capital adequacy, level and trend of risk weighted assets, assets composition and quality of loan assets, management of revenues and expenses, level and trend of earnings, liquidity position and sensitivity to interest rate risk. The bank's audited annual reports of condition for the period FY 2005 to FY 2009 are the secondary source of information and treated as authentic. As CAMELS was little been researched in Nepal. This research would be beneficial to minimize the risk.

Commercial banks are introducing complex and innovative banking products, they are exposed to many risks and therefore more amplified as well as diversified the functions performed by the bank supervision Department. A key product of supervision is a rating of the bank's overall condition, commonly referred to as a CAMELS rating. CAMELS rating system is used by the three federal banking supervisors [The Federal Reserve, FDIC, and Office of the Comptroller of the Currency (OCC)] and other financial supervisory agencies to provide a convenient summary of bank conditions at the time of exam. Various studies have been conducted in the past on financial analysis of commercial banks in the US and



other regions were found done. In context of Nepalese banking environment, there are only few researchers conducted in the framework of CAMEL (Baral 2005, Bhandari, 2007, Chand 2006). The study analyzes the level, trend and comparative analysis of capital adequacy, non performing loans, loan loss provision, assets composition, management quality ratios, earning capacity, liquidity position and sensitivity to market risk components of the bank during of 5 year period from FY 2005 to FY 2009 A.D. During the research the areas that formed part of the research review were functions of commercial bank, concept of CAMELS rating system and component evaluation system, Basel capital accord, NRB guidelines. Besides these, review of research paper, work paper dissertations and related reports were reviewed.

The research was conducted with in the framework of descriptive and analytical research design. For the study purpose, Nepal Investment Bank Limited was chosen as a study unit applying convenience sampling as technique out of 20 commercial banks. The required data and information were collected from secondary sources. In addition with this primary data also are used in this research work, which was collected, by using unstructured interview with senior staff in the bank. Financial ratios, simple mathematical and statistical tools have been applied to get the meaningful result of the collected data in this research work.

The analysis has been made to compare the banks ratios with NRB standard, industrial average and analyze the trend of ratios. The capital adequacy ratios of the bank are generally above than NRB standard in all the years except in year 2003, which leads to conclude that the bank is running with adequate capital. The capital adequacy ratios above the NRB standard of the banks show additional protection and security to stockholders and financial soundness of the banks. The assets are mainly composed of loans and advances investment. The non-performing loans to loan ratios are quite below the industrial average and the

international standard. The loan loss provision of the bank is fluctuated continuously in each year. The total expenses to revenue ratio is in decreasing trend the earning per employee is in increasing trend, which indicate effective management. The earning quality ratios like return on equity, return on assets, net interest margin, earning per share are generally above the benchmark prescribed by World Bank and in increasing. The cash in vault to total deposit ratio and NRB balance to total deposit ratios are below than the industrial average during the study periods except in one instance where as liquid assets to total deposit ratios are above the industrial average during the study period. This show that the liquidity position of the bank is good but the bank is not able to follow the NRB directives strictly. The cumulative gap of risk sensitive assets and risk sensitive liabilities, repriced over the one year maturity bucket was in continuous trend where as the CGAP of RSAs and RSLs re pricing in the long term maturity bucket was found negative in all the years. The Interest rate sensitivity ratio to the total earning assets over the short-term horizon i.e. up to one year was in increasing trend. The CGAP ratio to the earning assets over the long-term horizon has been maintained at 5.18 percentages in last year, hence the interest rate change would affect on them. In a rising interest environment, the bank would profit over the 1-year time horizon as it has maintained CGAP<sub>CHO</sub> (Positive). Conversely, the bank would make loss if the interest rates are falling.

## **5.2 Conclusions**

Based on the finding, the performance of NIBL in the framework of CAMELS is concluded as under.

Core capital adequacy ratio measure in terms of core capital to total risk adjusted assets is as per NRB standard. It means the bank is using adequate amount of internal sources or core capital in past five years. Looking to the fact, the banks are financially sound and strong. Supplementary capital ratio of the bank is with in

the boundary of NRB standard over study period, which supports to draw the conclusion of the supplementary capital of the bank is sufficient or adequate. The increasing tendency in final years implies that the increasing proportion of supplementary capital in total risk adjusted assets of the bank.

Capital adequacy ratios reveals that the bank is running with the adequate capital and the capital fund of the bank is sound and sufficient to meet the banking operation as per the NRB standard. The assets composition of the bank during the study period reveals that movement of money at call was observed in switch over into investment during the beginning two years. As it can be seen, the major part of total assets was held in form of loans and advances.

The decreasing trend of non-performing loans and advances ratio helps to conclude that the bank is aware of non-performing loans and adopting the appropriate policies to manage this problem and to increase the quality of assets. The decreasing trend of loan loss ratio indicates that the quality of loans becoming upgrading year by year i.e. it seems that amount of non-performing loans and possibility of default in future is decreasing.

The decreasing trend of total expenses to total revenues ratios shows that the bank is gradually moving towards cost minimizations and cost efficiency. The increasing trend of earning per employee depicts efficiencies because of well staffing, with similar repercussions in terms of profitability. The increasing trend of return on equity shows that the bank management is aware about stockholder's wealth maximization. The increasing trend of return on assets concludes that the capability of the management to converting the bank's assets into net earning is increasing.

The decreasing trend of net interest margin shows that spread between interest revenues and interest costs managements has been not able to achieve by close

control over the bank's earning assets and the pursuit of the cheapest sources of funding. Still, the bank has better net interest margin comparing with benchmarks. The increasing trend of earning per share shows that the return flowing to the bank's owner is increasing. This tendency affect the strength of the share in the market is also increasing.

The liquid funds to total deposit ratio is above the industrial average ratio. This shows that there is very high proportion of liquid funds than the proportion of investment in income generating asset and shows lack of specific policy of invest of additional idle funds to high income generating assets in the form of investment. The NRB balance to total deposits ratio is below the industrial average during the study period. This shows that the bank is not maintaining sufficient amount of balance, which must be held in NRB.

The cash in vault to total deposit ratio is below the industrial average ratio and NRB standard during the study period. This shows that ignoring the percentage of liquid fund with the bank to make immediate payment to the depositors but the condition is improving in all the year, which shows that adequate liquidity to meet its short-term obligation in later years. The sensitivity of net financial assets in a short-term maturity bucket is high and therefore highly sensitive to interest change risk. Conversely the bank hasn't able to match, the risk sensitive assets to risk sensitive liabilities in long term maturity bucket and therefore interest rate changes has affect on them.

### **5.3 Recommendations**

Based on analysis and finding of the study the following recommendations can be made as suggestions to overcome the weakness in the existing financial performance of Nepal Investment Bank Ltd.

- J Although the bank has been decreasing the proportion on non-performing loans to total loans and advances during the study period, the bank is advised to give more attention to decrease the level as it can to meet the international standards. Management has to give serious attention towards the recovery and timely follow-up of the disbursed loan. It is recommended to formulate an effective powerful loan recovery committee.
- J The loan loss provision to total loans and advances is fluctuating but is decreasing in the last years of the study period, which show there is a low probability of loan default in future. The bank needs to give attention to lower the proportion of loan loss provision by increasing the quality of assets by strengthening the credit appraisal and follow up measures.
- J The total expenses to total revenue is decreasing trend during the study period. Therefore, the bank needs to generate additional operating revenues in the coming years also.
- J The earning per employee is in increasing trend during the study period which shows an efficient management of the bank. The bank needs to take attention to keep on this kind of good result in future.
- J During the study period, the earning quality ratios i.e. return on equity, return on assets, net interest margin and earnings per share are sound and the bank needs to maintain this level. The bank needs to increase the revenue and further control the operating expenses, which would cushion in a competitive environment.
- J The liquid assets of the bank are found above the industry average. Hence, it is recommended to look upon new areas of lending and investment opportunities for proper utilization of the idle liquid assets. Likewise, deposit limitation of calculating the NRB balance and cash at vault to total deposit ratio, the bank ratios are below the industrial average's, which need to be

monitored frequently and complied in accordance with the NRB requirements.

) The bank's short-term net financial assets are highly sensitive to interest rate risk. As the CGAP ratio to earning assets is high. Since positive CGAP is beneficial when interest rates expected to rise and conversely negative. CGAP is beneficial when interest rates are expected to fall; the bank should minimize the mismatch of short-term risk sensitive assets in order to minimize sensitivity to prevailing falling interest rates scenario.

# APPENDICES

## Appendix 1

### List of Commercial Banks in Nepal

S.N.	Name of the Banks	Estd. Year (B.S.)	Address	Paid Up capital (Million)
1	Nepal Bank Limited	1994	Kathmandu	380.4
2	Rastriya Banijya Bank	2022	Kathmandu	1172.3
3	Agriculture Development Bank Ltd.	2024	Kathmandu	9437.5
4	NABIL Bank Limited	2041	Kathmandu	2029.1
5	Nepal Investment Bank Limited	2042	Kathmandu	2409.1
6	Standard Chartered Bank Nepal Limited	2043	Kathmandu	1398.5
7	Himalavan Bank Limited	2049	Kathmandu	1600
8	Nepal SBI Bank Limited	2050	Kathmandu	1653.6
9	Nepal Bangladesh Bank Limited	2050	Kathmandu	1860.3
10	Everest Bank Limited	2051	Kathmandu	1079.6
11	Bank ofKathmandu Limited	2051	Kathmandu	1359.5
12	Nepal Credit and Commerce Bank Limited	2053	Siddharthanagar, Rupandehi	1399.6
13	Lumbini Bank Limited	2055	Narayangadh, Chitwan	1294.5
14	NIC Bank Limited	2055	Biratanagar, Morang	1311.5
15	Machapuchre Bank Limited	2057	Pokhara, Kaski	1627.2
16	Kumari Bank Limited	2057	Durbarmarg, Kathmandu	1306
17	Laxmi Bank Limited	2058	Birjung, Parsa	1613.5
18	Siddhartha Bank Limited	2059	Kathmandu	1561
19	Global Bank Limited	2063	Birjung, Parsa	1473.4
20	Citizen Bank Internatinal Ltd.	2064	Kathmandu	1207

21	Prime Commercial Bank Ltd.	2064	Kathmandu	1210
22	Sunrise Bank Ltd.	2064	Kathmandu	1625
23	Bank of Asia Nepal Ltd.	2064	Kathmandu	1500
24	DCBL Bank Ltd.	2065	Kathmandu	1920.9
25	NMB Bank Ltd.	2065	Kathmandu	1651.6
26	Kist Bank Ltd.	2066	Kathmandu	2000
27	Janata Bank Nepal Ltd.	2066	Kathmandu	1400
28	Mega Bank Nepal Ltd.	2067	Kathmandu	1631
29	Commerz & Trust Bank Nepal Ltd.	2067	Kathmandu	1400
30	Civil Bank Nepal Ltd.	2067	Kathmandu	1200

*Source: <http://www.nrb.org.np>*



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### **Ranking of Nepali Commercial Bank**

With the financial results for the third quarter of the current fiscal year published by the banks, we present CAMEL rating of the 14 private sector banks of which the results are available. We selected CAMEL because it is very simple and accepted worldwide. Apart from analyzing the banks on each of these ratios based on CAMEL, we have also provided additional information like Total Income, Operating Profit, Interest Income, Deposit, Advance and Total Asset.

#### **CAMEL Model**

##### **C for Capital Adequacy:**

Capital Adequacy reflects the overall financial condition of the bank. It also reflects the bank's leverage. In this category, we have considered Capital Adequacy Ratio (CAR) and Debt-Equity Ratio to rank the commercial banks.

##### **A for Asset Quality:**

The prime objective behind measuring the Asset Quality is to ascertain the component of non-performing loan as percentages of total loan. In this category, we have considered the ratio of non-performing loan to total loan and the ratio of loan loss provision to non-performing loan to rank the banks.

##### **M for Management:**

Though it involves a subjective analysis for measuring the efficiency of the management, we have considered the ratio of total advance to total deposit and Return on Net Worth (RONW) to compare the commercial banks to avoid being subjective.

**E for Earning Quality:**

This parameter gains importance in the light of the argument that much of a bank's income is earned through the non-core activities like investments, treasury and so on. In this category, we have considered the percentage growth of Profit after Tax (PAT) and the ratio of Interest Income to Total Income to rank the banks.

**L for Liquidity:**

In this category, we have considered the ratio of Liquid Asset to Total Deposit (LA/TD) and Liquid Asset to Total Asset (LA/TA) to rank of the banks. LA/TD measures the ability of a bank to meet the demand from the demand deposit in a particular time. Further, LA/TA measures the liquidity available to the deposits of a bank.

<b>S. No</b>	<b>Bank</b>	<b>CAR (%)</b>	<b>Rank</b>	<b>D/E</b>	<b>Rank</b>
1	NIC	12.30	5	11.70	7
2	NABIL	13.40	2	8.72	1
3	SCB	18.06	1	11.23	6
4	HBL	11.64	6	12.34	8
5	NIB	11.20	10	12.63	10
6	NSBI	12.94	4	13.07	11
7	EBL	11.33	7	15.10	12
8	BOK	13.39	3	12.49	9
9	LUMBINI	(7.73)	13	-	-
10	KBL	11.23	9	10.58	4
11	MBL	11.26	8	10.76	5
12	LAXMI	11.11	12	9.74	3
13	SBL	11.17	11	8.95	2
14	RBB	(42.14)	14	-	-

CAR = Capital Adequacy Ratio D/ E = Debt Equity Ratio

<b>S. No</b>	<b>Bank</b>	<b>NPL/TL</b>	<b>Rank</b>	<b>LLP/NPL</b>	<b>Rank</b>
1	NIC	2.30	8	141.50	6
2	NABIL	1.80	5	139.00	7
3	SCB	1.89	6	144.94	4
4	HBL	4.68	11	113.13	8
5	NIB	1.90	7	144.50	5
6	NSBI	5.08	12	93.86	13
7	EBL	0.91	2	100.00	12
8	BOK	3.21	10	104.30	10
9	LUMBINI	20.94	13	101.89	11
10	KBL	2.56	9	82.78	14
11	MBL	1.26	4	187.92	2
12	LAXMI	0.49	1	307.85	1
13	SBL	0.99	3	154.36	3
14	RBB	31.81	14	106.44	9

NPL = Non Performing Loan

TL= Total Loan

LLP= Loan Loss Provision

## Management

<b>Sr. No</b>	<b>Bank</b>	<b>TA/TD</b>	<b>Rank</b>	<b>RONW</b>	<b>Rank</b>
1	NIC	0.92	3	0.10	6
2	NABIL	0.87	5	0.20	3
3	SCB	0.42	13	0.22	2
4	HBL	0.64	11	0.16	5
5	NIB	0.78	7	0.20	3
6	NSBI	0.93	2	0.24	1
7	EBL	0.75	8	0.17	4
8	BOK	0.74	9	0.17	4
9	LUMBINI	0.88	4	-	
10	KBL	0.85	6	0.10	6
11	MBL	0.71	10	0.05	8
12	LAXMI	0.85	6	0.06	7
13	SBL	0.96	1	0.10	6
14	RBB	0.50	12	-	

TA = Total Advances TD= Total Deposit

RONW = Return on Net Worth

### Earning Quality

Sr. No	Bank	PAT Growth in %	Rank	II/TI	Rank
1	NIC	61.48	4	0.89	3
2	NABIL	36.22	6	0.78	9
3	SCB	1.71	13	0.72	10
4	HBL	32.01	7	0.81	8
5	NIB	27.76	8	0.81	8
6	NSBI	20.44	10	0.88	4
7	EBL	19.33	11	0.85	6
8	BOK	24.11	9	0.81	8
9	LUMBINI	136.36	1	0.84	7
10	KBL	56.80	5	0.91	1
11	MBL	(14.09)	14	0.86	5
12	LAXMI	117.03	2	0.90	2
13	SBL	66.92	3	0.91	1
14	RBB	8.51	12	0.85	6

II = Interest Income TI = Total income

### Liquidity

<b>Sr. No</b>	<b>Bank</b>	<b>LA/TD</b>	<b>Rank</b>	<b>LA/TA</b>	<b>Rank</b>
1	NIC	0.11	6	0.10	7
2	NABIL	0.19	2	0.12	5
3	SCB	0.19	2	0.16	2
4	HBL	0.08	8	0.07	10
5	NIB	0.09	7	0.07	10
7	NSBI	0.11	6	0.08	9
8	EBL	0.13	5	0.11	6
9	BOK	0.14	4	0.12	5
10	LUMBINI	0.11	6	0.09	8
11	KBL	0.11	6	0.10	7
12	MBL	0.27	1	0.24	1
13	LAXMI	0.15	3	0.13	4
14	SBL	0.11	6	0.08	9
17	RBB	0.19	2	0.15	3

TA = Total Advances TD= Total Deposits RONW = Return on Net Worth

### Additional Indicators

<b>Sr. No</b>	<b>Bank</b>	<b>Operating Profit</b>	<b>TI</b>	<b>II</b>	<b>Deposit</b>	<b>Advance</b>	<b>TA</b>
1	NIC	143,283	599,085	534,937	9,393,047	8,631,830	11,163,209
2	NABIL	733,986	1,441,809	1,122,261	18,119,889	15,786,400	28,405,611
3	SCB	787,893	1,440,802	1,040,289	24,623,026	10,264,109	28,523,851
4	HBL	562,883	1,539,395	1,250,905	28,613,194	18,344,657	33,938,053
5	NIB	520,808	1,387,344	1,129,178	21,680,132	16,870,565	25,012,577
6	NSBI	196,657	650,182	570,813	10,486,778	9,758,593	15,443,088
7	EBL	311,880	949,394	805,324	17,221,094	12,946,089	20,455,190
8	BOK	268,297	731,817	591,864	12,028,302	8,943,999	14,264,081
9	LUMBINI	163,509	407,701	341,062	6,007,196	5,296,531	7,313,975
10	KBL	153,558	628,612	573,705	10,134,142	8,640,923	11,515,373
11	MBL	78,375	563,229	486,801	10,463,294	7,474,002	11,713,085
12	LAXMI	64,022	360,452	324,820	6,965,083	5,886,686	7,987,669
13	SBL	107,033	379,549	345,183	5,613,989	5,396,989	7,127,559
14	RBB	150,422	1,820,282	1,548,367	47,834,136	24,095,608	59,023,284

TI = Total income II = Interest Income TA= Total Asset

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