

# **CAMEL ANALYSIS OF NEPALESE COMMERCIAL BANKS**

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# VIVA- VOCE SHEET

We have conducted the viva- voce examination of the thesis

Presented by

**Bal Krishna Bhandari**

Entitled:

**"CAMEL Analysis of Nepalese Commercial Banks"**

And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for Master's Degree in Business Studies (M.B.S).

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# **RECOMMENDATION**

This is to certify that the thesis

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has been prepared as approved by this department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

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# DECLARATION

I hereby declare that this thesis entitled "CAMEL Analysis of Nepalese Commercial Banks" Submitted to Research Department of Central Department of Management (CDM), Kirtipur Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of requirement for the degree of Master of Business Studied under the supervision of Asso. Prof. Mr. Ajaya Prasad Dhakal Central Department of Management T.U.

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This research study on “CAMEL Analysis of Nepalese Commercial Banks”. Where I took these banks for study, they are Everest Bank Limited, Nepal Investment Bank Limited, Himalayan Bank Limited, Siddhartha Bank Limited and Kumari Bank Limited” has been prepared for the partial fulfillment of the requirement for Master’s Degree in Business Studies (MSB).

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Date:

Bal Krishna Bhandari

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## ABBREVIATIONS

ALLL	:	Allowance for Loan and Lease Losses
APEC	:	Asia Pacific Economic Cooperation
BAFIO	:	Banking and Financial Institutional Ordinance
BCBS	:	Basel Committee of Bank Supervision
BHCs	:	Bank Holding Companies
BIS	:	Bank of International Settlement
BOK	:	Bank Of Kathmandu Limited
B.S.	:	BikramSambat
CAMEL	:	Capital, Assets, Management, Earnings, Liquidity
CAR	:	Capital Adequacy Ratio
CRR	:	Cash Reserve Ratio
DI	:	Depository Institution
EBL	:	Everest Bank Limited
EPS	:	Earning Per Share
EVE	:	Economic Value of Equity
EWS	:	Early Warning System
FDIC	:	Federal Deposit Insurance Corporation
FFIEC	:	Federal Financial Institution Examination Council
FIs	:	Financial Institutions
FISD	:	Financial Institution Supervision Department
FY	:	Fiscal Year
HBL	:	Himalayan Bank Limited
KBL	:	Kumari Bank Limited
IRR	:	Internal Rate of Return
NABIL	:	Nepal Indosuez Bank Limited
NEPSE	:	Nepal Stock Exchange
NGBL	:	Nepal Gridlays Bank Limited
NGOs	:	Non-Government Organizations
NIBL	:	Nepal Investment Bank Limited
NIM	:	Net Interest Margin

NPL	:	Non Performing Loan
NRB	:	Nepal Rastra Bank
NSBI	:	Nepal SBI bank ltd
OCC	:	Controller of the Currency
OIG	:	Office of Inspector General
PCA	:	Prompt Corrective Action
P/E	:	Price Earning
PL	:	Performing Loan
PLL	:	Provision for Loan and Losses
RBS	:	RastryaBeemaSanstan
ROA	:	Return on Assets
ROE	:	Return on Equity
RWA	:	Risk Weight Assets
SBL	:	Siddhartha Bank Limited
SCOR	:	Statistical CAMELS Offsite Rating
SEBON	:	Security Exchange Board Nepal
UFIRS	:	Uniform Financial Institutional Rating System

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

The evolution of banking industry had started a long time back, during ancient times. There was reference to the activities of moneychangers in the temple of Jerusalem in the New Testament. In ancient Greece the famous temples of Delphi and Olympia served as the great depositories for peoples' surplus fund and these were the center of money lending transactions. Indeed the traces of "rudimentary banking" were found in the Chaldean, Egyptian and Phoenician history. The development of banking in ancient Rome roughly followed the Greek pattern. Banking suffered oblivion after the fall of the Roman Empire after the death of Emperor Justinian in 565 A.D., and it was not until the revival of trade and commerce in the middle Ages that the lessons of finance were learnt a new form the beginning. Money lending in the middle Ages was, however, largely confined to the Jews since the Christians were forbidden by the Canon law to indulge in the sinful act of lending money to others on interest. However, as the hold of the Church loosened with the development of trade and commerce about the thirteenth century Christians also took to the lucrative business of money lending, thereby entering into keen competition with the Jews who had hitherto monopolized the business.

As a public enterprise, banking made its first beginning around the middle of the twelfth century in Italy and the Bank of Venice, founded in 1157 was the first the public banking institution. Following it were established the Bank of Barcelona and the Bank of Genoa in 1401 & 1407 respectively. The Bank of Venice and the Bank of Genoa continued to operate until the eighteenth century. With the expansion of commercial activities in Northern Europe there sprang up a number of private banking houses in Europe and slowly it spread throughout the world.

A banker or bank is a financial institution that acts as a payment agent for customers, and borrows and lends money. According to Oxford English Dictionary, "Bank is an establishment for the custody of money received from or on behalf of its customers its essential duty is to pay their draft on it, its profit arise from its use of the money left unemployed by them." Bank can be defined as an institution which renders a loss of

financial services besides taking deposits and giving loans. Nowadays, the functions of a bank are not limited to the taking the deposits from general public and providing it to the person or organization that may use such money in better way. Bank provides other much more important services to its clients and also the operations of bank, today, are not confined within the boundary of a nation. Banks are becoming more international in their service providing capacity. Banks established to support the country's commercial sector are called commercial banks. These banks collect the saving from different part of the society and provide loans to the productive sector of the economy. Commercial banks also provide the overdraft facilities to the interested clients, exchange the foreign currency, transfer the money from one part to other, discount the exchange paper, provide security to invaluable and also play the role of the trustee.

In context to Nepal, the development of banking is relatively recent. The record of banking system in Nepal gives detail account of mixture of slow and steady evolution in the financial and global economy of Nepalese life. In Nepalese chronicle, it was recorded that the new era known as Nepal Sambat was introduced by Shakhandhar, a Sudra Merchant of Kantipur in 879 or 880 A.D. after having paid all the outstanding debts in the country. This shows the basic of money lending practices in ancient Nepal. However, in the absence of any regulatory measure, the unscrupulous Moneylenders were known to have charged exorbitant rates of interest and other dues on loans advanced. The establishment of “Tejarath Adda” during the year 1877 AD was fully subscribed by the government of Kathmandu valley, which played a vital role in the banking system. Later on in 1936 AD the “Udyog Parisad” and in 1937 AD the “Company Acts” & “Nepal Bank Act” formulated and the development of banking sector flourished.

In any economy, the importance of financial sector in general and banking sector in particular cannot be undermined. Banking sector definitely plays a pivotal role in the overall development of an economy. The economy reforms initiated by the Government more than decade ago have changed the landscape of several sector of the Nepalese economy. The Nepalese banking sector is no exception. This sector is going through major changes as a consequence of economic reforms. The changes affect the ownership pattern of banks, regulatory aspects, availability of funds, the

cost of funds as well as opportunity to earn, range of services (fee-base & fund base), and management of priority sector lending.

Different organizations are established for different motives. Some are established by profit motives while others are Service Motive (Humanitarian Organization). So for the Profit Motive Organization it is very important to earn or generate profit from its daily operational activities, if not, then it will be vanished from the competitive market sooner or later. The new private sector banks, reached a remarkable position due to its high level of technology, core banking and aggressive marketing strategies. Talking about the Banks, economic development of any country is mainly influenced by the growth of banking industry in that country. In worldwide, finance industry is considered highly flexible and risky and so they are under the strict control of regulatory authorities. In Nepal, the monitoring authority, Nepal Rastra Bank, has formulated and implemented the guidelines to safe guard the interest of the both parties (Customers and Investors) under which banks has to operate. Also, Following the Basel I and II accords for which many countries are members calls for a healthy banking system in the world. To have global standards, Now CAMEL model is an internationally accepted tool for evaluating performance and predicting bank failures. CAMEL stands for Capital Adequacy, Asset Quality, Management Quality, Earnings Quality and Liquidity. It is considered as the best available method for evaluating bank performance and healthy position of the bank since it considers all areas of banking operations.

It is not always important to say that this bank is good than that bank on the basis of its one or two years profit. Rather, than we have to look overall aspect of the bank and have to analyze the past performance as well. Profit may serve as the main basis for any organization in the short run but in the long run, activities that are done to generate the profit for short run may be the reason for the failure of that organization. So it is really important to know “How efficiently the business is managed in the short run as well as for the long run?” While regarding the commercial banks the latest and widely used tools to analyze the banks overall performance is known as “CAMEL Analysis”.

## 1.2 Statement of Problem

The main objective of Financial Institution is to increase its returns for its owners. But to generate the increase return or profits, banks also have to take high risks. Such risks may be: Credit Risk, Liquidity Risk, Interest Rate Risk, Market Risk, Off-Balance Sheet Risk, Foreign Exchange Risk, Country Risk, Technology Risk, Operational Risk and Insolvency Risk. In context to Nepal, Government owned banks were almost running in loss due to not following proper guidance set by Nepal Rastra Bank and as there is Government to fulfill those losses but now these banks have posted profit. Although, the private sector banks are making profit while facing those above mentioned risks, it is very important that all the Financial Institutions manage these risks and follow appropriate policies, processes or practices to avoid unpleasant situation. Otherwise, it will be very costly to the depositors, creditors, owners and national economy as a whole.

The elementary problem of this research is to analyze the financial condition of Everest Bank Limited, Nepal Investment Bank Limited, Himalayan Bank Limited, Kumari Bank Limited and Siddhartha Bank Limited in the framework of CAMEL and is an attempt to come back with the following research question:

- How well the above banks are managing its Capital Adequacy? Is it in line with the regulated minimum capital requirement or is it sufficient to safeguard the depositors?
- What is the trend of Asset Composition? What is the position of Risk Weight Asset of above mentioned bank in the Balance Sheet?
- How the bank is managing its loan? What is the condition of Good loans and Bad loans? Is there enough loan loss provision to cover up Bad Loans?
- How well is the bank's management? What control and monitoring mechanism are maintained in the bank?
- What are the level, trend and stability of earning with respect to its assets and capital?
- What is the liquidity position? What are the sources and volume of liquid assets?
- How changes in interest rates can affect each bank's earning?

### **1.3 Objectives of the Study**

Analysis of different data published to public by the above mentioned banks of Nepal in their financial pictures is the main objective of this study. After the analysis and matching those results and comparing it to the guidance set by Nepal Rastra Bank and also to each other and making recommendations on following aspects are also objective of this study on specific terms.

- To analyze and compare the Capital Adequacy with reference to Risk Weight Assets
- To analyze Quality of Assets and determined how efficiently the loans are disbursed and managed.
- To find out the efficiency of Management.
- To evaluate the level, trend and stability of the Earning in terms of Capital and Assets.
- To determine whether liquidity is managed as per the NRB Guidance or not.

### **1.4 Important of the Study**

A part from aiming to gain knowledge, research itself adds new to the existing literature. The significant of this study lay mainly in identifying problem or deteriorating Financial Institution, as well as for categorizing institution with deficiencies in particular component areas. Further, it assists in following safety and soundness trends and assessing the aggregate strength and soundness of the financial industry. The study bears much usefulness to carious parties as mentioned below:

To the Management:

Management always wants to know the financial viability of the bank. This study will be helpful to go deeply in to the various matters as to why the performance of their bank is better or worse than other joint venture banks. The management will know about their loose areas and gaps, which can be corrected in future.

To the Share Holders:

Shareholders also want to know whether their funds are in safe hands or not. In other words, how their funds are utilizing and what extent they are gaining. The outcome of this study will help them to identify the productivity of their scarce sources.

To the Others:

Other refers to those all interested group except the management and shareholders such as depositors, investors, competitors, merchant bankers, creditors. This analysis will help them to know about the banks positions and can make their decisions regarding whether to deposit, finance, and invest or not. Moreover, policy makers such as governing authority, government and tax officials, security exchange board, Nepal stock exchange can also be benefited or informed which helps then in formulating policies regarding joint venture banks. This research can be useful materials to students & researchers also.

### **1.5 Limitation of the Study**

This research proposal is conducted to fulfill the academic requirement of Master of Business Studies. The study is bounded in certain limitation, which are as follows:

- The evaluation made herein is taken of only three samples.
- The study covers the data of Ten years only.
- The study mostly and mainly based on the secondary sources of data and information and the accuracy of the study is based on the data available from the annual report published by the respective banks.
- The study focuses on the financial analysis if the study unit in the framework of six component of CAMELS Analysis.
- Being a student resource constraint such as time, finance and other resources have limited the scope of the study.

### **1.6 Scheme of Study**

This study has been comprised into five chapters. The titles of each these chapters and the contents of each of these chapters of this study are summarized below:

#### **Chapter 1: Introduction**

This chapter deals with the subject matter consisting Background, Statement of Problem, Objectives of the Study, Significant of the Study, Limitation of the Study of Everest Bank Limited, Nepal Investment Bank Limited, Himalayan Bank limited, Kumari Bank Limited and Siddhartha Bank Limited.

## **Chapter 2: Review of Literature**

The second chapter, Review of literature deals with review some work analysis and discussion already made in CAMEL Analysis.

## **Chapter 3: Research Methodology**

This chapter includes the research methodology adopted in carrying out the present research. It deals with Research Design, Sources of Data, Data Collection Procedure, Data Processing, Data Analysis Tools and Limitation of the Methodology.

## **Chapter 4: Presentation and Analysis of Data**

The fourth chapter is concerned with analytical frameworks. It includes the analysis of Financial Statement of Everest Bank Limited, Nepal Investment Bank Limited, Himalayan Bank Limited, Kumari Bank Limited and Siddhartha Bank Limited under the framework of CAMEL and comparing it with the guidelines set by Nepal Rastra Bank and also to each other.

## **Chapter 5: Summary, Conclusion and Recommendation**

This is the last chapter, which consists of the suggestive framework that consists with the overall findings, issues and gaps, conclusion and recommendations of the study.

# **CHAPTER II**

## **REVIEW OF LITERATURE**

### **Introduction**

This chapter focuses on the concept of commercial bank, bank supervision, CAMELS rating system and review of research papers and dissertations. The basic concept of the functions of commercial bank, objective of bank supervision and detailed evaluation criteria of the components of CAMELS are reviewed in this chapter. Besides these, current stage of the related research work and dissertations on the research work have been reviewed and summed up.

This chapter will help to take adequate feedback to broaden the information base and inputs to the study. Conceptual framework given by different authors, research scholars, practitioners etc, will be reviewed from books, research papers, annual reports, and articles etc., which are arranged into the following order:

### **2.1 Conceptual Framework**

This section presents the theoretical aspect of the study, which includes the concept of commercial banks, functions of commercial bank, concept of CAMEL rating system. It covers the historical development of financial system and evolution of commercial banks in Nepal, concept of commercial banks, functions of commercial banks and financial performance approaches.

#### **2.1.1 Meaning and Definition of Bank**

A bank is an institution, which deals in money, receiving it on deposit from customer; honoring customer's drawing against such deposit on demand, collecting cheques for customers and lending or investing surplus deposit until they are required for repayment. Generally, an institution established by law, which deals with money and credit is called bank. It is obvious that in a common sense, an institution involved in monetary transaction is called bank. A bank simply carries out the work of exchanging money, providing loan, accepting deposits and transferring the money. Section 2(a) defines bank, which is established under the existing law shall be called bank.

Different scholars have presented the definition or meaning upon the bank and they varies. Here are the some renowned scholar's that most of them have defined bank as follows:

“I believe in that fact the banks are not merely purveyors of money, but also in an important sense; manufactures of money”. (R.S Sayers 1936)

“Bank is a manufacture of credit and machine so facilitating exchanges”. (Horace White 1914)

“A bank is established for the custody of money received from or on behalf of its customers, it's essential duty is to pay their draft on it, its profit arises from its use of the money left unemployed by them”. (Shorter Oxford English Dictionary 1933-1934)

### **2.1.2 Concept of Commercial Banks**

A commercial bank is a profit-seeking firm, dealing in money or rather dealing in claims to money. It is a financial institution that creates deposits liabilities which circulates money unlike the deposits of other financial institutions. In fact, the greater part of money supply is the direct consequence of the profit-creating activities of commercial banks. A commercial bank is an institution that operates for profits. Like other industrial enterprise, a bank too, seeks to earn maximum income through the suitable employment of its resources. It is a financial intermediary, middleman 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 profit, which are adequate enough 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 FIs, which play the role of financial intermediary in collection and disbursement of funds from surplus unit to deficit unit.

Likewise **Section 2(a) of the Commercial bank Act 2031 (1974)** has defined that “Commercial Bank” means a bank which operates currency exchanges transactions, accepts deposits, provides loan; performs, dealing, relating of commerce except the banks which have been specified for the co-operatives, agricultural, industry of similar other specific objective.

Upadhyaya and Tiwari (1998) stresses that the commercial bank is established with a 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).

A commercial bank is an institutional that operates for profits. 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 intermediary-a sort of a middleman 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-profits which are adequate enough 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 FIs, which play the role of financial intermediary in collection and disbursement of funds surplus unit to deficit unit.

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

Commercial banks are directly related with the people and institution. Although these banks are truly inspired with the objective of gaining profit, these commercial banks are also established to, to accelerate common people's economic welfare and facility, to make available loans to agriculture, industry and commerce and to provide the banking services to the public and the state.

Kohn (2004) states that the basic business of banking is a combination of two functions-payments and financial intermediation and has however, changed and continues to change along three dimensions: entry of new institutions into banking, as new forms of lending and borrowing are developing the intermediation function is evolving; and other related functions to the basic ones are being added. The

commercial banks in Nepal provide the following main banking functions from the book of Banking and Insurance ( Surya Prasad Devkota / Bhisma Raj Subedi and Dependra Kumar Neupane 2062 )

**Accepting Deposits:** This is the oldest function of a bank in which the banker charged commission for keeping the money in its custody. 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. Depositors are allowed to withdraw their money by cheque up to a limited amount during a week or a year. Businessmen keep their deposits in current accounts known as demand deposits. They and can withdraw any amount available in their current account by tuque without notice. The bank does not pay interest on such accounts. A bank accepts fixed or time deposits from savers who do not need money for a stipulated period form 6 months to longer periods ranging up to 10 years or more.

**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 profits. The bank advances loans in the following ways:

**Cash Credit:** The bank advances collateral based loans to businessmen. The amount of the loan is credited to the current account of the browser.

**Term Loans:** These are long term loans and are repayable monthly or quarterly in equal installments.

**Call Loans:** They 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.

**Overdraft:** A bank allows the browser to over draw his current account upto a sum equal to the loan sanctioned.

**Discounting Bills of Exchange:** Banks purchase bills of exchange after discounting i.e. charging rate of interest for the time to maturity, if the holder wants its proceeds before maturity. Banks is reimbursed by the accepting bank on maturity.

**Credit Creation:** Credit creation is one of the most important functions of the commercial banks. When a bank advances a loan, it opens an account in the name of the suctomer 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.

**Foreign Trade Operation:** A commercial bank finances foreign trade of its customers by accepting foreign bills of exchange business-buying and selling of foreign currency.

**Agency Services:** A bank acts as an agent of its customers while collecting and paying cheques, bills of exchange, drafts, dividends etc. It also buys and sells shares, securities, debentures etc. for its customers. Further, it pays subscriptions, insurance premium, utilities 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. For these services, the bank charges a normal fee while it renders others free of charge.

**Miscellaneous Services:** Banks also act as custodian of valuables of the customers by providing locker facility 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. It renders underwriting services to companies and helps in the collection of funds from the public. Lastly, it provides statistics on money market and business trends of the economy.

## **2.1.4 Bank Supervision**

Tuning with the present scenario of globalization and increased economic activities in the country, commercial banks are now introducing complex and innovative banking products. This has amplified as well as diversified the functions to be performed by the Bank supervision Department. This section deals with the concept of bank supervision, objective of bank supervision and the process of supervision.

### **2.1.4.1 Concept of Bank Supervision**

The success of the banking system helpless without an effective and efficient risk management of its operation. As commercial banks are now involved in complex and innovative banking products they are exposed to many risks. The Board of Governors of the Federal Reserve System defined six safety and soundness risks in SR Letter 95-51, issued in November 1995. These risks are defined as follows:

- Credit Risk arises from a potential borrower failing to perform on an obligation.

- Market Risk is the risk of FI's condition resulting from adverse movements in market interest rates or prices.
- Liquidity Risk is the potential that an institution will be unable to meet its obligations as they come due because of an inability to liquidate assets or obtain adequate funding.
- Operational Risk arises from the potential that inadequate information systems, operational problems, breaches in internal controls, fraud or unforeseen catastrophes will result in unexpected losses.
- Legal Risk arises from the potential that unenforceable contracts, lawsuits or adverse judgments can disrupt or otherwise negatively affect the operations or condition of a banking organization.
- Reputational Risk is the potential that negative publicity regarding an institution's business practices, whether true or not, will cause a decline in the customer base, costly litigation or revenue reductions.

There is no theoretically optimal system or standard textbook blueprint for the structure and process of regulating and supervising FI's including banks. In fact, arrangements for banking regulation and supervision differ considerably from country to country. Apart from differences in political structures, the most important factors that account for the differences in regulatory and supervisory approaches included the general complexity and state of development of the financial system, the number, size and complexity of banking institution, the relative openness of the domestic financial system, the nature and extent of public disclosure of banks' financial positions and the availability of technological and human resources for regulation and supervision.

However, an implicit framework for the regulation and supervision of banks can be found in the Core principles for Effective Banking Supervision issued by the Basel Committee on Banking Supervision in 1997. The framework can be interpreted as comprising four distinct yet complementary sets of arrangements:

- Legal and Institutional Arrangements for the formulation and implementation of public policy with to the financial sector, and the banking system in particular,

- Regulatory arrangements regarding the formulation of laws, policies, prescription, guidelines or directives applicable to banking institution(e.g. entry requirements, capital requirements, accounting and disclosure provisions, risk management guidelines);
- Supervisory arrangements with respect to the implementation of the banking regulations and the monitoring and policing of their application;
- Safety arrangements providing a framework for the handling of liquidity and solvency difficulties that can affect individual banking institution of the banking system as a whole and for the sharing of financial losses that can occur (e.g. deposit insurance schemes or winding-up procedures).

#### **2.1.4.2 Approaches to Supervision**

Bank supervisory agencies are responsible for monitoring the financial conditions of commercial banks and enforcing related legislation and regulatory policy. Although much of the information needed to do so can be gathered from regulatory reports, on-site examinations are needed to verify report accuracy and to gather further supervisory information. Much research has explored the value of this private information, both to the bank supervisors and to the public who monitor banks through the financial markets.

This Economic Letter selectively surveys this literature, focusing mainly on studies using CAMELS ratings. These supervisory ratings are assigned at the end of exams and are directly disclosed only to senior bank management and to the appropriate supervisory personnel. CAMEL's ratings 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. The general consensus in this literature is that the private supervisory information contained in CAMELS ratings is useful in the supervisory monitoring of banks. Furthermore, to the extent that this information filters out into the financial markets, it appears to affect the prices of bank securities. Thus, private supervisory information in CAMELS ratings also appears to be useful in the public monitoring of banks.

Overseeing who operates banks and how they are operated, referred to as bank supervision. Or more generally as prudential supervision, is an important method for reducing adverse selection and moral hazard in the banking business, since banking industry reflect the economy and banks can be used by crooks or overambitious entrepreneurs to engage in highly speculative activities, such undesirable people would be eager to run a bank (Charles Keating Jr. is an example given by Eakins and Mishkin). 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. So at present all the commercial banks are supervised by Bank Supervision Department.

Banks and financial institutions' are supervised in most, if not all, countries. However, the nature of the supervision and its detailed application varies greatly from country to country depending upon the character of its industry, size, complexity and their priorities. The past has shown that although the cost of supervision is high, the cost of poor supervision is even higher. The cost of bank failure to the society as a whole is higher than the private cost (the loss to the shareholders), which is the compelling reason for supervising banks. Some of the major validations behind the supervision are:

- To maintain stability and confidence in the financial system, thereby reducing the risk of loss to depositors and other stakeholders.
- To ensure that banks operate in a safe and sound manner and they hold sufficient capital to support the risks that arise in their business.
- To foster an efficient and competitive banking system that is responsive to the public's need for good quality and an easy access of financial services at a reasonable cost.

After the institution of Nepal Rastra Bank, a Supervision Unit was established in NRB to execute the supervision function. Gradually as the supervisory function started to gain prominence, this unit was converted into "Division" in 2031 B.S., under the Banking Development and Credit Department and later in 2041 B.S. into a separate department named Inspection and Supervision Department. Today, there are two separate departments executing the supervision function of NRB. Bank supervision

department (BSD) is responsible for the inspection and supervision of all the commercial banks while Financial Institution Supervision Department (FISD) oversees the inspection and supervision of all other Financial Institutions licensed by NRB. The Bank Supervision Department spearheads the supervisory functions of the Central Bank. 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.

### **2.1.4.3 On-site Supervision**

The BSD is responsible to conduct the on-site examination of the commercial banks in accordance with the annual plan of the department. Almost more than two thirds of the department's staff is dedicated to these activities. On-site examinations are carried out at the banks' premises and involve examination of their business books and assessment of their technical, professional and organizational resources. The objectives of on-site inspection conducted by Bank Supervision Department can be summarized as:

- To determine the commercial banks' financial position and the quality of its portfolios and operations so as to ensure that it is not operating against the interests of the depositors.
- To assess and appraise the competence and capability of the commercial bank's management and staff, as the quality of the institution's management will determine the soundness of its operation.
- To ascertain whether the bank is complying with applicable laws, regulations and monetary measures issued by the NRB.
- To evaluate the adequacy of the bank's records, systems, and internal controls.
- To test the accuracy and validity of the data submitted to the NRB by the Banks.

### **2.1.4.4 Off-site Supervision**

This BSD carries out the off-site surveillance of all the commercial banks, operating in Nepal. The core objective of this function is to conduct periodic financial review of the banks in order to identify the potential problems and to gauge the compliance to

prevailing laws and statute as well as to support the on-site function of the department. In order to pursue its objectives through systemic development, the Department has devised an off-site supervision manual, which has been put into effect. The supervision manual provides guidelines on the objectives, procedures and prescribed documents of the off-site supervision. The inspection and supervision Bylaw, 2059 identifies the following key objectives of an off-site supervision of the Bank Supervision Department.

- To obtain regular information in respect of financial condition and health of the commercial banks.
- To identify potential problems of commercial banks in the absence of onsite inspection.
- To help and strengthen the quality of on-site inspection.
- To ascertain the compliance status to the applicable laws, regulations and directives on the basis of financial statements and other documents obtained from the commercial banks.

The off-site aspect reviews and analyses the financial conditions of banks using prudential reports, statutory returns and other relevant information. It also monitors trends and developments for the banking sector as a whole. Industry reports are generated on quarterly basis. The Off-Site Supervision Unit is responsible for supervising banks' operations on the basis of data and reports submitted by banks. On the basis of prudential analysis of different financial indicators by banks, groups of peer banks and the banking system as a whole, the banks are rated in terms of the level of risk involved in their business operations in accordance with the adopted methodology for analysis.

The Off-Site Surveillance Unit monitors, reviews, and analyzes financial institutions' returns and prepares reports based on said returns and serve as an early warning device to detect emerging problems before they lead to an opened crisis. The returns are used by the supervisors/examiners for the purpose of determining banks' exposures to risk, the effect on banks' profits, etc. Some basic ratios (the financial soundness indicators) are computed from these returns and are used to analyze such important areas as Capital Adequacy, Assets Quality, Earnings, Liquidity and sensitivity to market risk (CAELS rating). 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 an early warning system to identify potential problems in commercial banks as well as for the compliance of applicable provisions. This supports and strengthens the quality of on- site examination.

### **2.1.5. Financial Performance Approaches**

Every business entity should be able to enhance their competitive strength through achieving the financial goals. Commercial bank's strength is usually thought of both in quantitative terms, namely a firm's intrinsic financial condition as reflected in its capital, reserves, asset quality, earnings and liquidity, and in qualitative terms, as evidenced in the underlying quality and effectiveness of management, internal controls, and risk management policies and practices. The soundness of commercial banks is found on a strong balance sheet and strong management. There are many approaches for measuring the performance of commercial banks focuses on balance sheet. They are ROA, ROE, RAROC, RORAC and CAMEL (Koch and Macdonald, 2007). Among them, CAMEL-style method of analysis has been considered in this study. Within this framework, the financial condition and performance of the banks has been assessed.

#### **2.1.5.1 Return on Assets (ROA) Approach**

The rate of return on assets is one of the most common performance measurement approaches of commercial banks. It measures the ability of management to utilize the real and financial resources of the firm to generate returns. Further it examines the profitability of a concern in terms of the relationship between profit earned and assets employed in the firm. It shows the effectiveness of the utilization of assets. It is primarily an indicator of managerial efficiency; it indicates how capably the management of the firm has been converting the institution's assets into net earnings (Rose, 2002). The return on assets provides information on how efficiently a bank is being run. The higher the bank's return on assets the better it is doing in operation and vice versa.

### **2.1.5.2 Return on Equity (ROE) Approach**

The return on equity is also one of the popular performance measurement approaches of commercial banks. Equity holders of company are concerned about how much the company is earning on their equity investment. This information is provided by the return on equity. It measures the rate of return on shareholders' investment. It is the aggregate returns to stockholders before dividends. The higher the return the better, as company can add more to retained earnings and pay more in cash dividends when profits are higher (Koch and Macdonald, 2007). It measures the rate of return flowing to the bank's shareholders. It indicates how well the bank has utilized the resources of the owners.

### **2.1.5.3 Risk Adjusted Return on Capital (RAROC) Approach**

Risk adjusted return on capital is an effective tool for measuring risk - adjusted financial performance. In the 1990s Banker's Trust popularized a method of evaluating loans known as RAROC. Today, many banks and financial institutions employ RAROC to measure managerial performance (Gupta and Kolari, 2005). It is a risk-adjusted framework for profitability measurement and profitability management. It is defined as the ratio of risk-adjusted return to economic capital. Economic capital is attributed on the basis of three risk factors: market risk, credit risk and operational risk. The use of risk-based capital strengthens the risk management discipline within business lines, as the methodologies employed quantify the level of risk within each business line and attribute capital accordingly. Using this method, income is adjusted for risk. Typically, income is adjusted for expected losses. It provides a uniform view of profitability across businesses (Strategic Business Units / divisions.)

### **2.1.5.4 Return on Risk Adjusted Capital (RORAC) Approach**

Return on risk adjusted capital is also a popular method of measuring risk adjusted profit of any commercial banks. Using this method, capital is adjusted for risk. Typically, capital is adjusted for a maximum potential loss based on the probability of future returns or volatility of earnings. Today, many large banks and financial institutions evaluate their line of business profitability and risk via RAROC or RORAC system (Koch and Macdonald, 2004).

### **2.1.6 Concept of “CAMELS” Banking 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.

CAMEL was originally developed by the FDIC for the purpose of determining when to schedule an on-site examination of a bank (Thomson, 1991; Whalen and Thomson, 1998). The FFIEC is revised in January 1997, the DFURS, 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 by all three US supervisors to be reasonably compared and evaluated. Ratings are assigned for each component in addition to the overall rating of a bank’s financial condition. The ratings are assigned on a scale from 1 to 5. The CAMELS ratings 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.

The most important for determining the appropriateness of FIs to act as a financial intermediary are its solvency, profitability, and liquidity. In this respect, the BCBS of the Bank of International Settlements (BIS), since 1988, has recommended using capital adequacy, assets quality, management quality, earnings and liquidity (CAMEL) as criteria for assessing FI.

During an on-site bank exam, supervisors gather private information, such as details on problem loans, with which to evaluate a bank’s financial condition and to monitor its compliance with laws and regulatory policies. A key product of such an exam is a supervisory rating of the bank’s overall condition, commonly referred to as CAMELS rating. CAMELS rating system is used by the three federal banking supervisors [the Federal Reserve, the FDIC, and the 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 an exam. In Nepal, the NRB plays the supervisory role for evaluating bank's financial condition though rating the bank's in accordance to CAMELS is still in its initial phase.

## **Composite Ratings**

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. A 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 in the FFIEC press release (1996) is 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. 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 weakness 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 rated 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 deficiencies that result in unsatisfactory performance. The problems range from severe to critically deficient. The weakness and problems are not being satisfactory addressed or resolved by the board of directors and management. FIs in this group generally are not capable of withstanding business fluctuations. They may be significant noncompliance with laws and regulations. Risk management practices are generally unacceptable relative to the institution's size, complexity and risk profile. Close supervisory attention is required, which 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 weakness are not satisfactory 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 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.

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

### 2.1.6.1 Capital Adequacy

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

**Absorbs Losses:** Capital allows institutions to continue its operations 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 been incurred, thereby helping to maintain confidence in the banking system and minimize liquidity concerns.

**Restricts excessive Asset Growth:** Capital, along with minimum capital ration standards, restrains unjustified asset expansion by requiring that asset growth be funded by a commensurate amount of additional capital.

**Provides Protection to Depositors:** Placing owners at significant risk of loss, should the institution fail; help 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 ratio is 10 percent or more,
- Tier 1 risk-based capital ratio is 6 percent or more, and
- Tier 1 leverage ratio 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 ratio is at least NRB minimum capital adequacy ratio requirement.
- Tier 1 risk-based capital ratio is at least NRB minimum Tier I capital ratio requirement.
- Tier 1 leverage ratio is at least 4 percent.

**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, or 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, or
- Tier 1 leverage ratio is less than 3 percent.

#### **Ratings Capital Component**

- A rating of 1 indicates a strong capital level relative to the institution's risk profile.
- A rating of 2 indicates a satisfactory capital level relative to the FIs risk profile.

- 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 institutions' capital level exceeds minimum regulatory and statutory requirements.
- 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 shareholders or other external sources of financial support may be required.
- 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 it required.

A FI is expected to maintain capital commensurate with the nature and extend of risks to the institution and the 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.

#### **2.1.6.1.1 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 consist 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 it publication 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 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 to 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: Complaint, Largely Complaint, Materially Non-Complaint, and Non-Complaint. For each principle essential and additional criteria are defined. To achieve a "complaint" assessment with a principle, all essential and additional criteria must be met without any significant deficiencies. A "largely complaint" 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-complaint assessment is given when the shortcomings are sufficient to raise doubts about the authority's ability to achieve compliance, but substantial progress has been made. A "non-complaint" 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.

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

NRB has from time to time stipulated minimum capital fund to be maintained by the banks on the basis of 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-Bank FIs issue number E. Pra.Ni.No 01/061/62 (Ashar 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 Institution 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 1<sup>st</sup> Shrawan 2058 (July 16<sup>th</sup> 2001). According to the NRB directive, minimum paid-up capital requirement for establishment of commercial banks is as under:

- Rs. 250 million to operate all over Nepal except Kathmandu Valley.
- Rs. 1000 million to operate all over Nepal.

- All existing commercial banks are required to 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., 2000; Tam and Kiang, 1992; Elliott, 1991; Looney et al., 1989; Lane et al., 1986; Martin, 1977). Estrella et al. (2000) utilized three measures, including a more complex weighted measure, but found the simple measures of capital were relatively good explanatory power over short time horizons, while risk-weighted ratios provided relatively better explanatory power over longer horizons. Eccher et al. (1996), Thomson (1991), Whalen (1991) and Sinkey (1978) employed 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).

#### **2.1.6.2 Assets Quality**

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. Loans are usually the largest of the asset items and can also carry the greatest amount of potential risk to the bank's capital amount. Securities can often be a large amount of potential of the assets and also have identifiable risk. Otherwise items which impact a comprehensive review of asset quality are other real estate, other assets, off-balance 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 successful and profitable 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 on all other facets of bank operations.

##### **2.1.6.2.1 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 impact bank performance.

In addition, any systematic 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 assessment 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 diversification and quality of the loan and investment portfolios,
- The extent of securities underwriting activities and exposure to counter-parties in trading activities,
- The existence of assets concentrations,
- The adequacy of loan and investments 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 not only according to 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.

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

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

- A rating 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 is such institution is of minimal supervisory concern.
- A rating of 2 indicates satisfactory asset quality and credit administration practices. The level and severity of classification and other weakness warrant a limited level of supervisory attention. Risk exposure is commensurate with capital protection and management's abilities.
- A rating of 3 is assigned when 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 weakness, and risks require an elevated level of supervisory concern.
- A rating 4 is assigned to FIs with deficient asset quality or credit administration practices. The levels of risk and problem assets are significant; inadequacy controlled, and subjects the FI to potential losses that, if left unchecked, may threaten its viability.
- A rating of 5 represents critically deficient asset quality of credit administration practices that present and imminent threat to the institution's viability.

#### **2.1.6.2.3 NRB Directive related to Assets quality**

NRB unified directive for Banks & Non-Bank FIs (Ashar 2062 BS) through directive number E.Pra. Ni. No. 02/061/62, requires the banks to classify outstanding loans and advances on the basis of Principal amount. As per the directive the loans and Advances should be classified into the following four categories:

**Pass:** Loans and Advances whose principal amount are not past due over for 3 months include in this category. These are classified and defined as performing loans.

**Substandard:** All loan and advances that are past due for a period of 3 months to 6 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:** All loans and advances which are past due for more than 1 year and have least or thin possibility of recovery considered unrecoverable shall include in this category. Besides this, any 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, on the basis of the outstanding loans and advances and bills purchased classified as above. Loan 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	100%

With the objectives of lowering 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.Na 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.

The facilities extended against bank's own fixed time deposit, HMG securities, NRB Bonds, counter guarantees of World Bank/Agricultural Development Bank/International A+ rated banks (as per list of top 1000 world international banks published by the loan on based magazine, "The Banker"), are excluded from the restriction. Likewise advances and facilities to be used for the purpose of importing specified merchandise by the following public corporation are also excluded:

Name of the corporation

Merchandise

Nepal Oil Corporation	Petrol, Diesel, Kerosene,
L.P.G.	Gas
Nepal Food Corporation	Cereals

### **2.1.6.3 Management Quality**

The capabilities of the board of directors and management, in their respective roles, to identify, measure, monitor 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 practice 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 demonstrated by: active oversight by the board of directors and management; competent personnel; adequate policies, processes, and controls taking into consideration the size and sophistication of the institution; maintenance of an 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 quantity 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 system 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, 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 institution and its risk profile.

#### **2.1.6.3.1 Rating the Management factor**

- 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 and the board has demonstrated the ability to promptly and successfully address existing and potential problems and risks.
- A rating of 2 indicates satisfactory management and board performance and risk management practices relative to the institution's size, complexity, and risk profile. Minor weakness may exist, but are not material to the safety and soundness of the institution and are being addressed. In general, significant risks and problems are effectively identified, measured, monitored, and controlled.
- 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 institution. Problems and significant risks may be inadequacy identified, measured, monitored, or, controlled.
- A rating of 4 indicates deficient management and board performance or 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, measure, monitored or controlled and require immediate action by the board of director and management to preserve the soundness of the institution. Replacing or strengthening management or the board may be necessary.

- 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 the board of directors is necessary.

Researches construct various financial ratios to capture management quality. Meyer and Pifer (1970) state that “Management 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 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.

Sinke (1975) purported that a specific ratio representative of management is difficult to identify, but his view was that many ratios are proxies. Often, researches (Tam and Kiang, 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 expenses to total assets as representative of management operating efficiency. As none of the ratios from previous research exhibited significance.

#### **2.1.6.4 Earning Quality**

Under the UFIRS, in evaluating the adequacy of 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,
- The adequacy of provisions to maintain the ALLL and other valuation allowance accounts,
- 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 lien 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.

##### **2.1.6.4.1 Evaluation of Earnings Performance**

An analysis of earnings comprises of examiner reviewing each component of the Earnings Analysis Trail and Ratio Analysis. Generally, the analysis of earnings begins with the examiner reviewing each component of the earnings analysis trail. The earnings analysis trail provides a means of isolating each major component of the income statement for individual analysis. The earnings analysis trail 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 trail is initially reviewed in isolation. Typically, ratios are examined to determine a board level view of the component's performance. The level of progression along the analysis tail 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.

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

- Net Income to Average Assets Ratio [Return on Assets (ROA) ratio]
- Net Interest Income to Average Assets Ratio
- Net Interest Income to Average Earning Assets Ratio
- Non-interest Income to Average Assets Ratio
- Non-interest Expense to Average Assets Ratio
- Provision for Loan and Lease Losses (PLLL) to Average Assets Ratio
- 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 asset 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.

#### **2.1.6.4.2 Rating the Earnings Factor**

- Earnings rated 1 are strong. Earnings more than sufficient to support operations and maintain adequate capital and allowance levels after are given to asset quality, growth, and other factors affecting the quality, quantity and trend of earnings.

- Earnings rated 2 would be satisfactory and sufficient to support operations and maintain adequate capital and allowance levels after consideration 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.
- Earnings rate 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 earning.
- 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 margin, the development of significant negative trends, nominal or unsustainable earnings, intermittent losses, or a substantive drop in earnings from the previous year may characterize institutions so rated.
- A rating of 5 indicates earnings that are critically deficient. A FI with earnings rated 5 is experiencing losses that represent a distinct threat to its viability through the erosion of capital.

#### **2.1.6.5 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 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 is not maintained at a high cost, or through undue reliance in 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

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

#### **2.1.6.5.1 Rating the Liquidity factor**

- 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.
- A rating of 2 indicated 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 weakness may be evident in funds management practices.
- A rating 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 significant weakness in funds management practices.
- 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 to meet liquidity needs.
- A rating of 5 indicates liquidity levels or funds management practices so critically deficient that the continued viability of the institution is

threatened. Institutions rated 5 require immediate external financial assistance to meet maturing obligations or other liquidity needs.

### **2.1.6.5.2 Liquidity Management Concepts**

There are several principles which the economists have propounded to resolve the conflicts between objectives of liquidity, Safety and profitability. These concepts are discussed as under:

**The Real Bills Doctrine:** The Real Bills doctrine states that a commercial bank should extend only short-term self-liquidating productive loans to business firms. Self liquidating loans are those meant to finance the production, storage, transportation, and distribution. When such goods are ultimately sold, the loans are considered to liquidate themselves automatically. Secondly, there is no risk of running into bad debts since they mature in the short run and are for productive purpose. Lastly, such loans earn income for the banks as they are productive.

**The Shift-ability Theory:** H.G. Moulton propounded the shift-ability theory of bank liquidity. According to this view, an asset to be perfectly shift-ability 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:** The Anticipated Income Theory was developed by H.V. Proch in 1944 based on term loan practices by USA commercial banks. According to this theory, the bank plans for liquidation of long term loans from the anticipated income of the borrower regardless of the nature and character of a borrower's business. The bank puts restrictions on the financial activities of the borrower while granting this loan. Consequently, the bank takes into consideration not only the security but with major Consideration, the anticipated earnings of the borrower. This theory is superior to the bills doctrine and the shift-ability 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 it from different sources. These sources includes the issuing of time certificates of deposit, borrowing from the other commercial banks, borrowing from the central bank, raising of capital funds by issuing shares, and by plowing back of profits.

### **2.1.6.5.3 Liquidity Management Techniques**

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. The treasury or fund manager of any banks and FIs 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. To ensure that funds are available to meet the liquidity needs at the lower cost, the treasury manager of the banks and FIs must manage its money position to comply with the reserve requirements as well as managing its liquid sources.

**Managing Cash Position:** A cash position refers to the amount in the process of collection and currency and demand balances 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 FIs. because cash yields no income. Cash holdings must be limited to a minimum. The treasury/fund manager may invest any excess cash or may acquire additional cash sources from interbank loans or from discount window at the central bank.

**Managing Liquidity Position:** Once the liquidity needs of the banks and FIs have been estimated, the treasury manger must decide how these needs are to be funded. The banks and FIs must choose between two general liquidity management strategies, namely asset management and liquidity management. In the asset management, assets are sold to meet liquidity needs. A combination of these strategies is normally employed. The following guidelines must be kept in mind by the treasury manager when managing the liquidity position of the banks and FIs:

- 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 FIs.
- The treasury managers should know the timing of large withdrawals from big credit clients or depositors in order to plan.
- The priorities and objective of liquidity management should be clear and properly communicated.
- The needs and decision 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 FIs are managing its liquidity position, 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 FIs.
- 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 purpose.
- Inability to meet the demands of new credits 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 cost 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 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 an 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., 1977; Sinkey, 1975).

### **2.1.7 Newest Trends in Bank Supervision**

Traditionally, on-site supervision have focused primarily on assessment of the quality of bank's balance sheet at a point in time and whether it complies with capital requirements and restriction on assets holdings. Although the traditional focus is important for reducing excessive risk taking by banks, it is no longer felt to be adequate in today's world in which financial innovation has produced new markets and instruments that make easy for bank and their employee to make best easily and quickly. In this new financial environment, a bank that is quite healthy at a particular point in time can be drive into insolvency extremely rapidly from trading losses, as forcefully demonstrated by the failure of Barings in 1995. Thus an examination that focuses only on a banks position at a point in time may not be effective in indicating whether a bank will in fact be taking on excessive risk in the near future. So to prevent from such chances there are some newest trends and are

- Disclosure requirements
- Consumer protection and
- Restriction on competition.

## **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 Shanker Dev Campus and Central Library T.U.

### **2.2.1 Review of Journals**

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

Barker and Holdsworth (1993) found an evidence that CAMEL ratings is significant predictors of bank failure, even after controlling for a wide range of publicly available information about the condition and performance of banks. Berger and Davies (1994) evaluated the impact of CAMEL rating changes on the parent holding company's stock price. They separated stock price changes into two components: a 'private

information' effect (which identified the public's awareness of new information discovered by examiners), and a 'regulatory discipline' effect (which valued the regulators' presumed ability to force a bank to change its behavior). Berger and Davies' empirical results provided only weak evidence of a regulatory discipline effect, but they found a strong private information effect. However, the information effect applied only to CAMEL downgrades, which tend to precede stock price declines. Consistent with the findings of Hand, Holthausen and Leftwich (1994), Berger and Davies found no movement in stock price following a CAMEL upgrade. Cole and Gunther (1997, 1999) found that the information contained in CAMEL ratings decays quickly with respect to predicting bank failure from 1986 to 1992. In particular, they found that a model using publicly available financial data is a better indicator of the likelihood of bank failure than the previous CAMEL rating that are more than two quarters old. These two studies address the issue of information decay directly; however, the primary purpose of CAMEL ratings is not to identify future bank failures; but to provide an assessment of bank's overall conditions at the time of the examinations. DeYoung (1998) found a strong positive correlation between efficiency and management quality, as proxies by bank CAMEL ratings. Examining the relationship between cost efficiency and problem loans, he found that cost efficiency to Granger-cause reductions in problem loans. He note that a decline in cost inefficiency generally tends to be followed by a rise in nonperforming loans, "evidence that bad management practices are manifested not only in excess expenditures, but also in subpar underwriting and monitoring practices that eventually lead to nonperforming loans."

Focusing specially on CAMEL ratings, Berger and Davies (1998) used event study methodology to examine the behavior of BHC stock prices in the eight-week period following an exam of its lead bank. They concluded that CAMEL downgrades reveal unfavorable private information about bank conditions to the stock market. This information may reach the public in several ways, such as through bank financial statements made after a downgrade. These results suggested that bank management may reveal favorable private information in advance, while supervisors in effect force the release of unfavorable information. Berger, Davies, and Flannery (1998) extended this analysis by examining whether the information about BHC conditions gathered by supervisors was different from that used by the financial markets. They found that

assessments by supervisors and rating agencies are complementary but different from those by the stock market. The authors attributed this difference to the fact that supervisors and rating agencies, as representatives of debt holders, are more interested in default probabilities than the stock market, which focuses on future revenues and profitability. This rationale also could explain the authors' finding that supervisory assessments are much less accurate than market assessments of banks' future performances. (Joseph A Lopez) 1998 The academic literature effectively shows that CAMELS ratings, as summary measures of the private supervisory information gathered during on-site bank exams, do contain information useful to both the supervisory and public monitoring of commercial banks. A relevant policy question is whether supervisors might benefit by disclosing CAMELS ratings to the public. Such disclosure could benefit supervisors by improving the pricing of bank securities and increasing the efficiency of the market discipline brought to bear on banks. As argued by Flannery (1999), market assessments of bank conditions compare favorably with supervisory assessments and could improve with access to supervisory information. However, although supervisors could benefit from such improved public monitoring of banks, the costs to the current form of supervisory monitoring must also be considered. For example, if CAMELS ratings were made public, the current information-sharing relationship between examiners and bankers could change in a way that adversely affects supervisory monitoring. Further research and debate on this question is currently needed.

Hirtle and Lopez (1999) examined the usefulness of past CAMEL ratings in assessing banks' current conditions. They found that, conditional on current public information, the private supervisory information contained in past CAMEL ratings provides further insight into bank's current conditions, as summarized by current CAMEL ratings. The authors found 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 study is that private supervisory information, as summarized by CAMELS ratings, is clearly useful in the supervisory monitoring of bank conditions. Barth and others (2004) carried out a study on "Bank Safety & Soundness and the Structure of Bank Supervision: A Cross Country Analysis". They have raised two central questions about the structure of bank supervision are whether central

banks should supervise banks and whether to have multiple supervisors. They have used data for 70 countries across developed, emerging and transition economies to estimate statistical connections between banking performance, the structure of bank supervision, permissible banking activities, legal environments, banking market structure and macroeconomic conditions. They found that where central banks supervise banks, banks tend to have more non-performing loans. Countries with multiple supervisors have lower capital ratios and higher liquidity risk. They also found that conclusions from non-transition economies may not necessarily apply to transition economies. Derviz and Podpiera (2007) investigated the determinants of the movements in the long-term Standard & Poor's and CAMELS bank ratings in the Czech Republic during the period of 1998 to 2001. The same list of explanatory variables corresponding to the CAMELS rating inputs employed by the Czech National Bank's banking sector regulators was examined for both ratings in order to select significant predictors among them. They have employed an ordered response logit model to analyze the monthly long-run S&P rating and a panel data framework for the analysis of the quarterly CAMELS rating. The predictors for which they found significant explanatory power are: Capital Adequacy, Credit Spread, the ratio of Total Loans to Total Assets, and the Total Asset Value at Risk. Models based on these predictors exhibited a predictive accuracy of 70 percent. Additionally, they found that the verified variables satisfactorily predict the S&P rating one month ahead. Baral (2008) carried out a research study on "Health Check –up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal". It has covered four fiscal years period from 2001 to 2004 .The study was based on historical data disclosed by annual reports of joint venture banks, and NRB in its supervision annual reports. The study concluded that the financial health of joint venture banks is better than that of the other commercial banks. The study further indicates that the CAMEL component indicators of the joint venture banks are not so strong to manage the possible shocks. The CAMELS rating system provides a standardized method for rating banks, but it is only as effective as the skills and judgment of the supervision who are examining ,evaluating and rating banks on a regular basis (Waymond,2009).

New Business Age (2007) came up with ranking of Nepali commercial banks for the second consecutive quarter of the F.Y. 2006/07. The assessment was made by using some parameters set under the famous CAMEL model with minor modifications to

suit the information availability. The figures were based on the financial results published by respective banks in the newspapers. So the banks that had not published the results were excluded from the ranking. The capital adequacy of the Nepali commercial banks was ranked by calculating capital adequacy ratio and debt-equity ratio. The asset quality of the banks was ranked by calculating non-performing loan to total loan and advances ratio and loan loss provision to non-performing loan ratio. The management quality was measured by calculating return on net worth and profit per employee. The earning quality was measured by calculating percentage change in net profit and interest income to total income ratio. And the liquidity of the Nepali commercial banks was compared based on the parameters namely liquid asset to total deposit ratio and liquid asset to total asset ratio.

### **2.2.2 Review of Dissertations**

Chand (2006) conducted a study on “Financial Performance Analysis of NABIL Bank Limited in the Framework of CAMELS”. The main objective of the study was to analyze the financial condition of NABIL. It use only five fiscal years 2000/01 through 2004/05. The research uses on secondary information data. Some financial and statistical tools and descriptive techniques are applied to evaluate the financial performance of NABIL. Here in found that the capital adequacy of the bank were generally above the NRB standards in all the years. The non-performing loan to loan ratios were all below the industrial average and the international standard. The loan loss provision of the bank is decreasing constantly in each year. The management proxy ratios, total expenses to total income ratio and earning per employees were favorable to the bank. The earning quality ratios were generally above the benchmark prescribed by World Bank. The overall liquidity position of the bank was in good condition. The cumulative gap of risk sensitive assets and risk sensitive liabilities, re-priced over the over maturity bucket was in continuous decreasing trend. The interest rate sensitivity ratio to the total earning assets over the short term horizon was in decreasing trend.

Likewise, Sharma (2007) carried out the research study entitled "Financial Performance Analysis of Nepal SBI Bank Ltd. in the Framework of CAMEL" with the basic objective of analyzing the financial performance of Nepal SBI Bank Ltd.

(NSBL) in the CAMEL framework. The study was based on secondary data covering the period of six years from 2001 to 2006 A.D. Sharma has used only the financial tools. The researcher concluded that NSBL was well capitalized and complying with the directives of NRB. The bank has maintained satisfactory level of past due loan on total loan except in 2001. Earning per employees of the bank was found quite high. NIM of the bank was found satisfactory. Furthermore, the liquidity position of the bank was found sound.

Gurung (2007) carried out a research study on "Financial Performance Analysis of Annapurna Finance Company Limited in the Framework of CAMEL". The main objective of the study was to analyze the financial performance of Annapurna Finance Company Limited (AFCL) in the framework of CAMEL from the F.Y. 059/60 to the F.Y. 062/63. The study was based on secondary data covering the period of five years. Gurung used various financial and statistical tools to get the meaningful result and to meet the research objective. The result that the capital funds of AFCL is sound and sufficient to meet the financial operation as per the NRB standard. The non-performing loan ratios are below the international standard and in fluctuating trend. The loan loss ratios are also fluctuating but in increasing trend during the study period. The management proxy ratio total expense to total income ratios are also in fluctuating trend due to changes in taxation rate and increase in provision for possible losses. Another management proxy ratio earning per employee is in increasing trend. The earning quality ratios are generally in fluctuating and decreasing trend except the net interest margin which is in increasing trend. The overall liquidity position of AFCL is in good condition.

Sanjel (2008) conducted a study on "Comparative Analysis of Financial Status and Performance Evaluation of Himalayan Bank Limited and NABIL Bank Limited in the Framework of CAMELS Rating System". The research study was focused on assessing the financial performance of Nabil Bank Limited (NABIL) and Himalayan Bank Limited (HBL) comparatively in the framework of CAMELS, by using descriptive and analytical research design, prescribed by UFIRS and in accordance to BASEL accord. The banks' audited annual reports of condition for the period 2004/01 to 2006/07 were the primary source of information and treated as authentic. Financial ratios, simple mathematical and statistical tools had been applied to get the

meaningful result of the collected data in this research work. From the study we can found that the capital adequacy ratios are above the NRB standard in case of NABIL but HBL was not able to maintain the adequate level. The non-performing loans to loan ratios are well below the industrial average and the international standard. The loan loss provision of NABIL is decreasing continuously in each year whereas the loan loss provision of HBL is in increasing trend but it is below industrial average. The total expenses to revenue ratio are in decreasing trend and the earnings per employee are in increasing trend which indicates effective management of NABIL. But in case of HBL, both are in decreasing trend, which implies overstaffing in the bank. The earning quality ratios like return on equity, return on assets, net interest margin, earning per share of both the banks are generally above the benchmark prescribed by World Bank and in increasing trend which show that the quality of earning is increasing. Overall the liquidity of NABIL is in good position whereas the liquidity position of HBL in overall is also good but the bank is not strictly following the NRB directives i.e. the amount to be maintained in vault and NRB balance is not sufficient.

Joshi (2008), conducted a study on “A Comparative Study on Financial Performance of Nepal SBI Bank Ltd & Nepal Bangladesh Bank Ltd.” with the objectives to highlight various aspects of relating to financial performance of Nepal Bangladesh bank and Nepal SBI bank ltd for a period of 1999/00 to 2006/07, to analyze financial performance through the use of appropriate financial tools and to show the cause of change in cash position of the two banks.

Sapkota (2009) in his study “Profitability Benchmarking of NB Bank” has analyzed Profitability Position with other Joint Venture (JV) banks i.e. NABIL, SCB, HBL, NSBI, EBL with given objectives of examining the profitability situation of the JV bank industry as a whole and sample banks analyzing the profitability trend of NB Bank and the JV bank industry over the last five years and ascertaining the comparative position of profitability of NB Bank with respect to other JV Banks. The main findings of this study are: It is identified from the analysis that NB Bank is performing not well under the industry standard and also has least performance among all players in the JV Bank industry in Nepal. NB Bank’s past and present

earning generating potential is assessed low in many parameters of profitability in comparison to the industry as well as other joint venture banks in the country.

Pradhan (2009) conducted a study entitled “Profit Planning of Commercial Banks with a Comparative Study of Everest Bank Ltd., NABIL Bank Ltd. and Bank of Kathmandu Ltd.” The main objectives of this study are: to find out the relationships between total investment, loan and advance, deposit, net profit and outside assets, to identify the investment priority sectors of commercial banks to assess the impact of investment on profitability to analyze and forecast the trend and structure of deposit utilization and its projection for five years of commercial banks to provide suggestion and possible guidelines to improve investment policy and its problems.

Maharjan (2010), has performed a case study in “Financial Performance of Nabil Bank” with the primary data for the last eight years from 2003 to 2009. The study was conducted by analyzing the various financial ratios which are also the measuring tools in camels analysis. The main objective of this analysis is to determine the efficiency and performance of the firm’s management as reflected in the financial records and reports.

Similarly, Shrestha (2011), found some evidence from CAMEL rating systems. It studied that the financial condition of Nepalese commercial banks and the financial soundness of the commercial banks. The research uses some of commercial banks are Standard Chartered, Nabil, Himalayan, Bank of Kathamandu, Nepal Investment. SBI, Siddhartha, NCC, NIC,. All the resources are taking secondary data for the last five years from 2007 to 2011. It shows that highly reputed bank's financial condition is good than the new struggling bank. Over all the study is found that the performance of finance is satisfaction and good condition of commercial banks.

In the light of worsening political and economic condition in the country the banking sector of the country is still growing at a steady pace. Deposits, loans, investments etc. all has shown a increasing trend. With 31 commercial banks operating currently along with other financial intermediaries there is a stiff competition in the financial services sector.

### **2.3 Research Gap**

Various studies have been conducted in the past on financial analysis of commercial banks in Nepal and as well as in other countries with different purpose and results. The research paper done in the context of Nepal mainly emphasized on liquidity, profitability and leverage of the commercial banks. Though many research works has been done in the past, they lack micro-level analysis and found applying traditional analysis of financial performance. However, these all research lacks analysis of sixth component i.e. sensitivity of the market risks. Since financial institutions are the backbone of the economy it should be evaluated and analyzed properly to figure out the actual condition by using various advanced tools, techniques and with much expertise. Focusing on the above point this study attempts to evaluate the financial performance of the participating banks on all the components.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research is a process of searching specific problem to solution again and again. The researcher will search again and again to get the appropriate findings. Research methodology is a systematic way to solve the research problem. As the basic objective of the present research is to find out the ratios under the CAMEL framework and to determine whether they are in satisfactory level or not as well as under the guideline set by Nepal Rastra Bank or not .

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. The above research procedures are adopted comprehensively to accomplish the objectives set in the chapter. Following are the major contents of research methodology in course of this thesis.

#### **3.2 Research Design**

The evaluation of the performance is designed to reflect an assessment of the financial condition of the first fifteen commercial banks based on CAMELS perspective prescribed by UFIRS/UBPRS in the line with BASEL II accord. Hence the research is conducted on historical and analytical case study basis. Therefore descriptive cum analytical research methodology has been followed, to achieve the desired objectives. In order to evaluate the financial performance of the selected five banks, some financial and statistical tools and descriptive technique are applied.

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

To do this research work Ten Year's Annual Reports have been taken of respective banks which are published by the bank after audit to the general public. It covers the fiscal year of 2002/2003 – 2011/2012 till.

Basically the research is based on secondary information data. The annual report of the banks is the major sources of data. The regulatory data will be collected from

NRB directives and reports. The basic conceptual information was collected through BASEL, FDIC and NRB publications and work papers. The information related to the past and current work conducting in the research field will be collected from the following sources:

- ) NRB reports and bulletins and its official website
- ) BASEL Committee publications through its official website
- ) Various research papers and dissertations
- ) Various articles published in journals and financial magazines
- ) Nepal Stock exchange report from its website
- ) The annual reports of the related banks and from their respective official websites

Formal and informal discussions with the senior staff of the banks will be held which will be helpful in understanding and obtaining the additional information.

### **3.4 Data Processing**

The financial data from the published documents and audited financial statements will be manually extracted into the computer files of Microsoft excel program which will act as master database file. The data will be refined further into spread sheets to carry out financial ratios calculation and graphical illustrations through mathematical functions and chart programs of the excel program.

### **3.5 Population Sampling**

At present there are 31 commercial banks are operating in Nepal. Due to time lack and resource constrain it is not possible to study all of them regarding the study topic. Therefore sampling will be done selected from population. The populations are as follows.

1. Nepal Bank Limited
2. Rastriya Banijya Bank Limited
3. Agriculture Development Bank Limited
4. Nabil Bank Limited
5. Nepal Investment Bank Limited
6. Standard Chartered Bank Nepal Limited

7. Himalayan Bank Limited
8. Nepal SBI Bank Limited
9. Nepal Bangladesh Bank Limited
10. Everest Bank Limited
11. Bank of Kathmandu Limited
12. Nepal Credit and Commerce Bank Limited
13. Lumbini Bank Limited
14. Machhapuchchhre Bank Limited
15. Kumari Bank Limited
16. Laxmi Bank Limited
17. Siddhartha Bank Limited
18. Global IME Bank Limited
19. Citizens Bank International Limited
20. Prime Commercial Bank Ltd
21. Sunrise Bank Limited
22. NIC Asia Nepal Limited
23. Grand Bank Nepal Limited
24. NMB Bank Limited
25. Kist Bank Limited
26. Janata Bank Nepal Limited
27. Mega Bank Nepal Limited
28. Commerz & Trust Bank Nepal Limited
29. Civil Bank Limited
30. Century Commercial Bank Limited
31. Sanima Bank Limited

Above the data of commercial bank I am taking five banks among them for study of camel analysis. These are Everest Bank Limited, Nepal Investment Bank Limited, and Himalayan Bank Limited, Siddhartha Bank Limited, and Kumari Bank limited of Ten years Data.

### 3.6 Data Analysis Tools and Techniques

Financial Ratios are the major tools used for the descriptive analysis of the study. They are used to determine the performance of the banks in the framework CAMEL component. The CAMEL stands for:

#### **C = Capital Adequacy**

) Capital Adequacy Ratio

$$\text{Capital Adequacy Ratio} = \frac{\text{Total Capital Fund}}{\text{Total Risk Weight Asset}}$$

Where,

Total Capital Fund = Core Capital + Supplementary Capital

) Tier I Capital Adequacy Ratio / Core Capital Ratio

$$\text{Core Capital Adequacy Ratio} = \frac{\text{Core Capital}}{\text{Total Risk Weight Asset}}$$

) Tier II Capital Adequacy Ratio / Supplementary Capital Ratio

$$\text{Supplementary Capital Adequacy Ratio} = \frac{\text{Supplementary Capital}}{\text{Total Risk Weight Asset}}$$

#### **A = Asset Quality**

) Performing Loan Ratio

$$\text{Performing Loan Ratio} = \frac{\text{Total Performing Loan}}{\text{Total Loan \& Advances}}$$

Where,

Total Performing Loan = those loans which have been paying or overdue up to 3 months either in the form of interest servicing or principal repayment,  
= Pass Loan + Restructured Loan

Total Loan & Advances = Total Performing Loan + Total Non-Performing Loan

Performing Loan = Pass Loan + Restructured Loan

) Non-Performing Loan Ratio

$$\text{Non Performing Loan Ratio} = \frac{\text{Total Non Performing Loan}}{\text{Total Loan \& Advances}}$$

Where,

Total Non-performing Loan = those loans which have been past due either in the form of interest servicing or principal repayment and graded as possible default

= Sub Standard Loan + Doubtful Loan + Bad Loan

Total Loan & Advances = Total Performing Loan + Total Non-Performing Loan

Performing Loan = Pass Loan + Restructured Loan

) Loan Loss Coverage Ratio

$$\text{Loan Loss Coverage Ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Total Non Performing Loan}}$$

Where,

Total Loan Loss Provision = Provision on (Pass Loan+ Restructured Loan + Sub Standard Loan + Doubtful Loan + Bad Loan)

Total Non-Performing Loan = Sub Standard Loan + Doubtful Loan + Bad Loan

) Loan Loss Provision Ratio

$$\text{Loan Loss Provision Ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Total Loan \& Advances}}$$

Where,

Total Loan Loss Provision = Provision on (Pass Loan+ Restructured Loan +  
Sub Standard Loan + Doubtful Loan + Bad  
Loan)

Total Loan & Advances = Total Performing Loan + Total Non-Performing  
Loan

Performing Loan = Pass Loan + Restructured Loan

Total Non-Performing Loan = Sub Standard Loan + Doubtful Loan + Bad  
Loan

**M = Management Efficiency**

) Total Expenses to Income Ratio

$$\text{Total Expenses to Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Income}}$$

Where,

Total Expenses = Interest Expenses + Employee Expenses +Other Operating  
Expenses + Exchange Loss + Non-Operating Loss

Total Income = Interest Income + Commission & Discount Income + Other  
Operating Income + Exchange Gain +Non-Operating Income

) Earning Per Employee

$$\text{Earning Per Employee} = \frac{\text{Net Profit After Tax}}{\text{Total No. of Employees}}$$

) Efficiency Ratio

$$\text{Efficiency Ratio} = \frac{\text{Total Non Interest Expenses}}{\text{Total Net Interest Income}^* + \text{Total Non Interest Income}}$$

Where,

Total Non-Interest Expenses = Exchange Loss + Employee Expenses + Other  
Operating Expenses + Non-Operating Loss

Total Net Interest Income\* = Total Net Interest Income (before provisions)

Total Net Interest Income = Total Interest Income - Total Interest Expenses

Total Non-Interest Income = Commission and Discount Income +Other  
Operating Income + Exchange Gain + Non-  
Operating Income

### **E = Earning**

) Return on Equity

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income after Tax}}{\text{Share holders' Fund}}$$

) Return On Assets

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income after Tax}}{\text{Total Assets}}$$

) Earnings Per Share

$$\text{Earning per Share (EPS)} = \frac{\text{Net Income after Tax}}{\text{No. of Shares Outstanding}}$$

) Price Earnings (P.E) Ratio

$$\text{Price Earning (P / E) Ratio} = \frac{\text{Market Price Per Share}}{\text{Earning Price Pre Share}}$$

) Net Interest Margin

$$\text{Net Interest Margin} = \frac{\text{Net Interest Income}}{\text{Total Earning Assets}}$$

### **L = Liquidity**

) Cash Reserve Ratio

➤ NRB Balance to Total Deposit Ratio

$$\text{NRB Balance to Total Deposit Ratio} = \frac{\text{Local Currency Balance in NRB}}{\text{Total Local Currency Deposit} - \text{Margin Deposit}}$$

➤ Cash in Vault to Total Deposit Ratio

$$\text{Cash in Vault to Total Deposit Ratio} = \frac{\text{Cash in Vault}}{\text{Total Deposits}}$$

Where,

Cash in vault = Local Currency in Hand + Foreign Currency in Hand

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

) Cash & Bank Balance Ratio to Total Deposit Ratio

$$\text{Cash and Bank Balance Ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Total Deposits}}$$

Where,

Total Cash & Bank Balance = Cash Balance + Balance with NRB + Balance with Bank/Financial Institution (Local Currency +Foreign Currency)

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

) Investment in Government Security Ratio to Total Deposit Ratio

$$\text{Investment in Gov.Security to Total Deposit} = \frac{\text{Investment in Government Security}}{\text{Total Deposits}}$$

Where,

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

) Liquid Assets to Total Depositing Ratio

$$\text{Total Liquid Asset to Total Deposit Ratio} = \frac{\text{Total Liquid Asset}}{\text{Total Deposits}}$$

Where,

Total Liquid assets = Cash in hand + NRB Balance + Domestic bank balance + Foreign currency bank balance + Money at call & short notice+ Investments in Government securities.

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

Furthermore for the detail study and analysis of research work different kinds of Tabular, Graphical and diagram presentation are also done wherever necessary.

### **3.7 Research Variables**

Capital, Core Capital, Supplementary Capital, Total Risk Weight Asset, Loans, Loan Provisions, Total Non-Performing, Total Performing Loan, Total Loan & Advances, Total Expenses, Total Income, Share Holder's Fund, Total Assets, Earning Per Share, Market Price Per Share, Total Earning Asset, Total Deposits, Cash Balance, Bank Balance, Liquid Assets, Investment in Government Securities, Net Profit after Tax, No of Employees, No of Shares, Total Expenses, are research variables of present study.



# **CHAPTER IV**

## **DATA PRESENTATION AND ANALYSIS**

### **4.1 Introduction**

This chapter deals with the presentation and analysis of data collected from different sources with the focus on the camel component. As stated in the theoretical prescription, the financial performance analysis of Everest Bank Limited, Nepal Investment Bank, Himalayan Bank, Siddhartha Bank Limited and Kumari Bank Limited are concentrated in the five component of camel; i.e. Capital Adequacy, Assets Quality, Management Quality, Earning Quality and Liquidity. The data collected from annual reports of respective banks have been analyzed with the application of camel.

### **4.2 Data Presentation and Analysis**

The data collected from different sources has been refined and documented in tables, which are further processed to analyze and arrived at the findings on the financial conditions of above mentioned banks in terms of Camel Analysis. The major findings of the study on financial performance of Everest Bank Limited (EBL), Nepal Investment Bank (NIBL), Himalayan Bank (HBL), Siddhartha Bank Limited (SBL) and Kumari Bank Limited (KBL) are also described on each section and part of CAMEL Analysis.

#### **4.2.1 CAPITAL ADEQUACY**

Capital Adequacy is a measure of an FI's financial strength, in particular its ability to cushion operational and abnormal losses. In other words, it is a ratio of solvency. Minimum capital adequacy ratios have been designed to ensure banks can absorb a reasonable level of losses before becoming insolvent. The higher the capital adequacy ratios a bank has, the greater the level of unexpected losses it can absorb before becoming insolvent. An FI should have adequate capital to support its risk assets in accordance with the risk-weighted capital ratio framework. It has become recognized that capital adequacy more appropriately relates to asset structure than to the volume of liabilities. Risk Weight Assets, Core Capital and Supplementary Capital are major figures used to calculate Capital Adequacy Ratio.

Risk-weighted assets are the total of all assets held by the bank which are weighted for credit risk according to a formula determined by the Regulator (usually the country's Central Bank). Assets-at-

risk are defined as the total of the impaired values of assets at the date of making the advance to the sub borrower. Assets are typically classified as: (i) risk-free; (ii) minimum risk; (iii) general risk; (iv) substandard; (v) "workout" (or minimal chance of recovery); and (vi) fixed assets, furniture and office equipment, computers, etc. To each of these classifications is awarded a percentage of their values for which an FI's capital is needed to cover risk of losses. Most central banks follow the Bank of International Settlements (BIS) guidelines in setting formulae for asset risk weights. Nepal Rastra Bank has categorized the assets of the bank, on the balance sheet items and off the balance sheet items, on their nature and risk associated with them. So The Total Risk Weighted Asset is computed by the multiplying the Total net value of asset by its risk weight. In the context of Nepal, NRB has assigned following weight for following Assets of Banks

#### 0% risk weight Asset

Cash Balance, Gold (Tradable), Balance with Nepal Rastra Bank, Investment in Government Security, Investment in Nepal Rastra Bank's Bond, Fully Secured Loans against own Fixed Deposit Receipt, Fully Secured Loan against Government Security, AIR on Government Security, Bills Collection.

#### 10% risk weight Asset

Forward Foreign Exchange Contract

#### 20% risk weight Asset

Balances with Domestic Licensed Banks and Financial Institutions, Fully secured FDR Loan against Fixed Deposit Receipt of Other Banks, Receipt of other Licensed Banks & Financial Institutions, Balances with Foreign Banks, Money at Call, Loan Against Guarantees of Internationally Rated Banks, Other Investment in Internationally Rated Banks, Letter of Credit with maturity less than 6 month (Full Value), Guarantees issued against counter guarantee of Internationally rated Foreign Banks.

#### 50% risk weight Asset

Letter of Credit with maturity more than 6 months (Full Value), Bid Bond, Performance Bond.

#### 100% risk weight Asset

Investment in Shares, Debentures and Bonds, Other Investment, Loan Advances and Bills Purchased/ Discounted, Fixed Assets, All Other Assets, Other Accrued Interest Receivable (Accrued Interest Receivable- Interest on Government Security-interest Suspense), Advanced Payment Guarantee, Financial Guarantee, Other Guarantee, Irrevocable Loan Commitment, Contingent Liabilities in respect of Income Tax, All Other Contingent Liabilities

The 1993 Basel Accord enforced the capital ratio to risk adjusted assets of commercial banks. According to this accord, core capital must equal to or exceed 4 percent of the risk weighted assets of the commercial banks. Similarly, the amount of the supplementary capital should not exceed the amount of the core capital and the total capital must equal or exceed 8 percent of risk weighted assets. NRB initially fixed the core capital at the level of 4.5 percent of the risk weighted assets and total capital at the level of 9 percent of risk weighted assets of the commercial banks (NRB 2058). The mandatory level of total capital, as set by Nepal Rastra Bank, for the FY 2002/03 is 10% and for FY 2003/04 to 2006/07 is 11% of risk weighted assets of commercial banks. But NRB has strictly directed all commercial banks that the amount of the supplementary capital should not be in excess to the amount of the core capital (NRB 2005). Capital Adequacy Ratio is calculated as:

$$\begin{aligned}
 \text{Capital Adequacy Ratio} &= \frac{\text{Total Capital Fund}}{\text{Total Risk Weight Asset}} \\
 &= \frac{\text{Tire I Capital} + \text{Tire II Capital}}{\text{Total Risk Weight Assets}} \\
 &= \frac{\text{Core Capital} + \text{Supplementary Capital}}{\text{Total Risk Weight Assets}}
 \end{aligned}$$

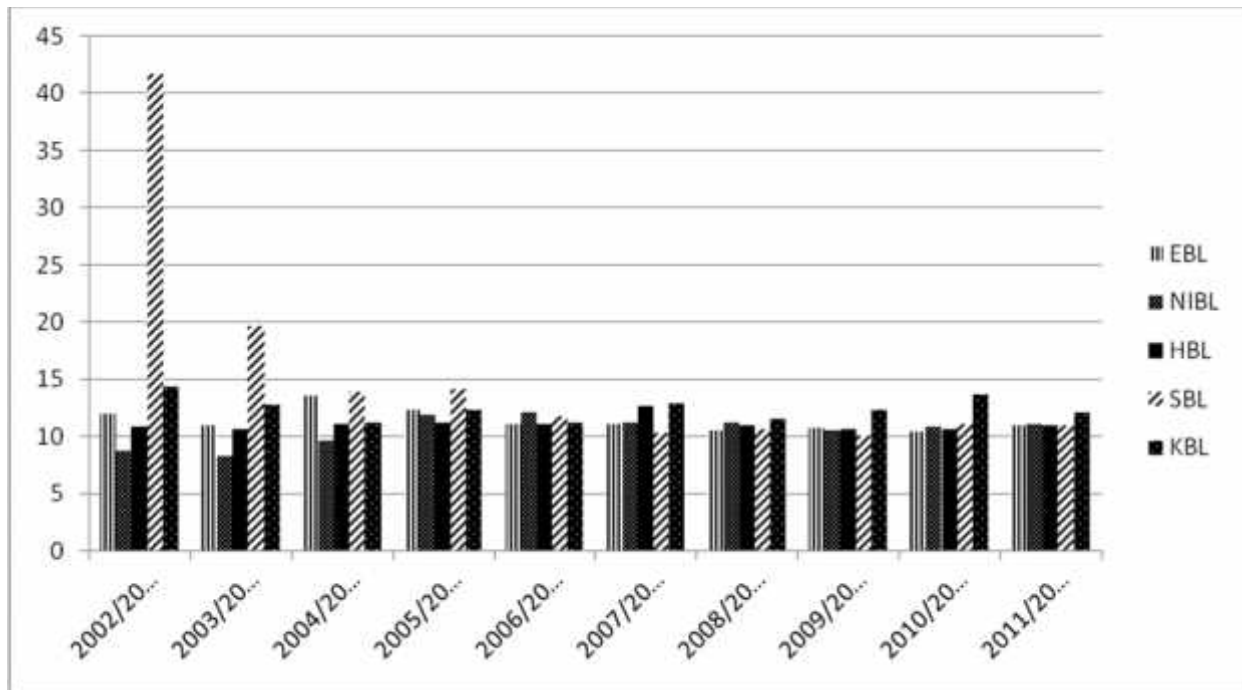
Table 4.2.1 is the observed Capital Adequacy Ratio during the study period in numerical terms which is presented below

**Table: 4.2.1 Capital Adequacy Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Capital Fund "in Rs."</b>	<b>Total Risk Adjusted Asset "in Rs."</b>	<b>Capital Adequacy Ratio%</b>
<b>2002/2003</b>	EBL	684,163,000.00	5,707,030,000.00	11.99
	NIBL	695,260,000.00	789,616,0000.00	8.81
	HBL	1,604,212,125.00	14,681,449,073.00	10.93
	SBL	355,005,994.87	850,647,012.29	41.73
	KBL	363,469,934.00	2,528,767,733.00	14.37
<b>2003/2004</b>	EBL	766,879,000.00	6,924,807,000.00	11.07
	NIBL	1,099,380,000.00	13,255,496,016.00	8.29
	HBL	1,796,218,859.00	16,860,638,296.00	10.65
	SBL	390,258,002.41	1,979,823,911.75	19.71
	KBL	570,147,056.00	4,449,407,210.00	12.81
<b>2004/2005</b>	EBL	1,247,562,000.00	9,195,588,000.00	13.57
	NIBL	1,578,770,000.00	16,274,063,706.00	9.70
	HBL	2,017,063,712.00	18,321,719,590.00	11.10
	SBL	413,424,989.16	2,968,444,347.06	13.93
	KBL	705,529,193.00	6,291,843,521.00	11.21
<b>2005/2006</b>	EBL	1,391,339,000.00	11,291,137,000.00	12.32
	NIBL	2,094,199,650.00	17,491,787,670.00	11.97
	HBL	2,242,843,009.00	19,918,325,322.00	11.26
	SBL	632,279,000.00	4,465,021,233.00	14.16
	KBL	940,979,000.00	7,625,050,127.00	12.34
<b>2006/2007</b>	EBL	1,676,115,000.00	14,976,737,000.00	11.19
	NIBL	285,1619,000.00	23,435,634,330.00	12.17
	HBL	2,435,368,979.00	21,889,713,128.00	11.13
	SBL	863,832,000.00	7,297,686,632.00	11.84
	KBL	1,115,207,000.00	9,959,911,399.00	11.20
<b>2007/2008</b>	EBL	2,348,390,000.00	20,974,862,000.00	11.19
	NIBL	3,891,235,470.00	34,484,541,420.00	11.28
	HBL	3,253,515,981.00	25,624,467,383.00	12.70
	SBL	1,147,111,000.00	11,081,373,000.00	10.35
	KBL	1,858,207,000.00	14,418,707,000.00	12.89
<b>2008/2009</b>	EBL	2,703,870,000.00	25,619,753,000.00	10.55
	NIBL	5,095,353,000.00	45,312,265,000.00	11.24
	HBL	3,845,211,300.00	34,905,889,843.00	11.01
	SBL	1,625,456,000.00	15,210,560,000.00	10.68
	KBL	2,050,908,000.00	17,743,239,000.00	11.56
<b>2009/2010</b>	EBL	3,275,141,000.00	30,240,428,000.00	10.83
	NIBL	5,651,045,000.00	53,553,866,600.00	10.55
	HBL	4,218,361,500.00	39,357,005,251.00	10.72
	SBL	1,983,990,000.00	19,535,956,000.00	10.16
	KBL	2,124,625,000.00	17,220,685,000.00	12.34
<b>2010/2011</b>	EBL	3,605,841,000.00	34,583,548,000.00	10.43
	NIBL	6,324,627,000.00	57,993,926,000.00	10.90
	HBL	4,711,243,495.00	44,124,521,593.00	10.68
	SBL	2,340,315,000.00	21,113,150,000.00	11.08
	KBL	2,456,420,000.00	17,856,397,000.00	13.75
<b>2011/2012</b>	EBL	4,574,751,000.00	41,525,347,000.00	11.02
	NIBL	6,963,182,000.00	62,704,174,000.00	11.10
	HBL	5,283,900,074.00	47,934,898,606.00	11.02
	SBL	2,908,066,000.00	26,365,323,000.00	11.03
	KBL	2,554,089,000.00	20,936,998,000.00	12.20

Chart 4.2.1.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Capital Adequacy Ratio among five banks.

#### 4.2.1. aCapital Adequacy Ratio % ( percentage )



As shown in the above table 4.2.1 and chart 4.2.1.a, we can analysis the Capital Adequacy Ratio over the 10 years.

During the FY year 2002/2003 the SBL of 41.73 % is the highest Ration among the other banks, the NIBL of 8.29% is the lowest ratio than other banks, and the EBL of 11.99% is the middle position.

During the FY year FY 2003/2004 the SBL of 19.71% is the highest Ration among the other banks, the NIBL of 8.81% is the lowest ratio than other banks, and the EBL of 11.07% is the middle position.

During the FY year 2004/2005 the SBL of 13.93% is the highest Ration among the other banks, the NIBL of 9.70% is the lowest ratio than other banks, and the KBL of 11.21% is the middle position.

During the FY year 2005/2006 the SBL of 14.16% is the highest Ration among the other banks, the HBL of 11.26% is the lowest ratio than other banks, and the EBL of 11.26% is the middle position.

During the FY year 2006/2007 the NIBL of 12.17% is the highest Ration among the other banks, the HBL of 11.13% is the lowest ratio than other banks, and the SBL of 11.20% is the middle position.

During the FY year 2007/2008 the KBL of 12.89% is the highest Ratio among the other banks, the SBL of 10.35% is the lowest ratio than other banks, and the NIBL of 11.28% is the middle position. During the FY year 2008/2009 the KBL of 11.56% is the highest Ratio among the other banks, the EBL of 10.55% is the lowest ratio than other banks, and the HBL of 11.01% is the middle position. During the FY year 2009/2010 the KBL of 12.34% is the highest Ratio among the other banks, the SBL of 10.16% is the lowest ratio than other banks, and the HBL of 10.72% is the middle position. During the FY year 2010/2011 the KBL of 13.75% is the highest Ratio among the other banks, the EBL of 10.43% is the lowest ratio than other banks, and the NIBL of 10.90% is the middle position. During the FY year 2011/2012 the KBL of 12.20% is the highest Ratio among the other banks, the EBL and HBL are equaled value of 11.02% is the lowest ratio than other banks, and the SBL of 11.03% is the middle position.

#### **4.2.1.1 Tier I (Core) Capital Adequacy Ratio**

Tier I Capital is the core measure of a bank's financial strength from a regulator's point of view. It is also known as Core Capital. In the context of Nepal, Tier I (core/primary) Capital includes Paid-up Capital, Share Premium, Non-redeemable Preference Share, General Reserve Fund, Cumulative Profit / Loss, Capital Redemption Reserve, Capital Adjustment Fund/ Proposed Bonus Share and Other Free Reserve. Amount of the Goodwill, Fictitious Assets, Investment in excess of prescribe limit specified by NRB, and investment in security of companies with financial interest is deducted from the sum of all elements of the primary capital to arrive at the core capital.

Tier I ratio shows the relationship between the total core capital or internal sources and total risk adjusted assets. The theoretical reason for holding capital is that it should provide protection against unexpected losses. It is also called Core Capital Ratio (CCR). The mandatory level of Core Capital, as set by Nepal Rastra Bank, for the FY 2002/03 is 5% and for FY 2003/04 to 2006/07 is 5.5% of risk weighted assets of commercial banks. It is calculated by using the following model.

$$\textit{Tire I Capital Adequacy Ratio} = \frac{\textit{Tire I Capital}}{\textit{Total Risk Weight Asset}}$$

OR

$$\textit{Core Capital Adequacy Ratio} = \frac{\textit{Core Capital}}{\textit{Total Risk Weight Asset}}$$

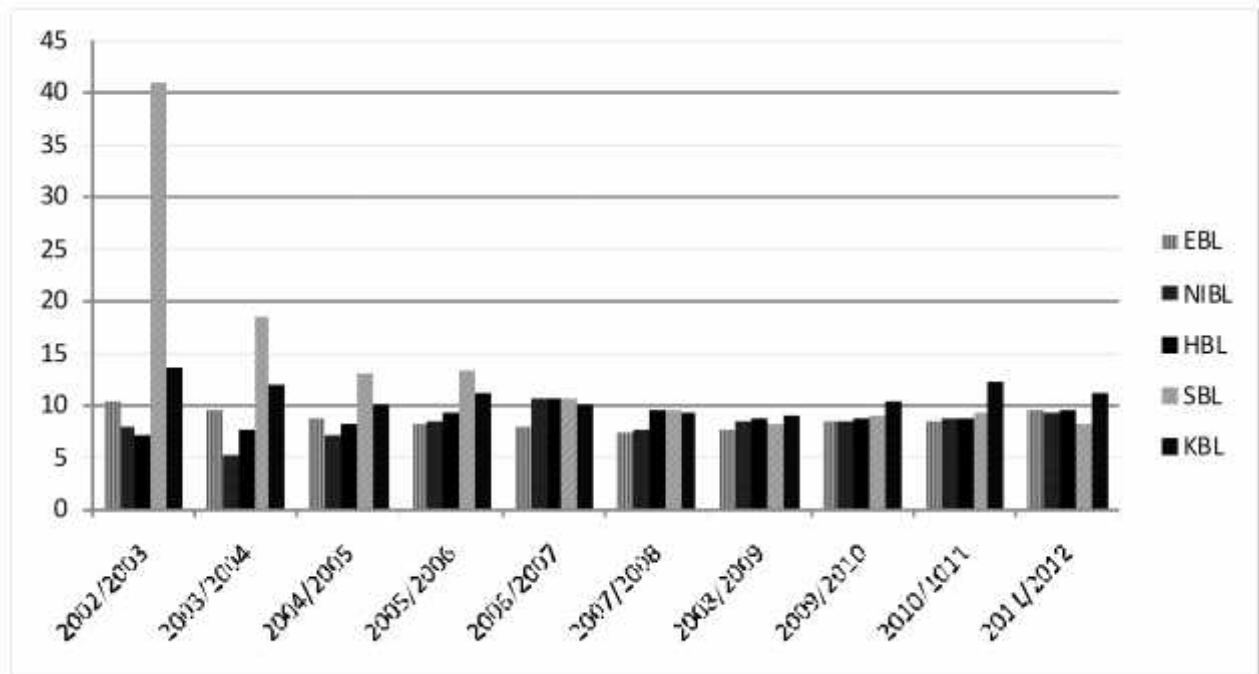
Table 4.2.1.1 is the observed Tire I (Core) Capital Adequacy Ratio during the study period in numerical terms which is presented below:

**Table 4.2.1.1 Tier I (Core) Capital Adequacy Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Core Capital "in Rs."</b>	<b>Total Risk Adjusted Asset "in Rs."</b>	<b>Core Capital Ratio%</b>
<b>2002/2003</b>	EBL	597,009,000.00	5,707,030,000.00	10.46
	NIBL	621,440,000.00	7,896,160,000.00	7.87
	HBL	1,038,620,500.00	14,681,449,073.00	7.07
	SBL	348,715,745.19	850,647,012.29	40.99
	KBL	347,289,038.00	2,528,767,733.00	13.73
<b>2003/2004</b>	EBL	663,269,000.00	6,924,807,000.00	9.58
	NIBL	710,610,000.00	13,255,496,016.00	5.36
	HBL	1,297,384,208.00	16,860,638,296.00	7.69
	SBL	366,198,329.81	1,979,823,911.75	18.50
	KBL	529,677,363.00	4,449,407,210.00	11.90
<b>2004/2005</b>	EBL	816,793,000.00	9,195,588,000.00	8.88
	NIBL	116,1480,000.00	16,274,063,706.00	7.14
	HBL	1,525,773,390.00	18,321,719,590.00	8.33
	SBL	387,615,864.54	2,968,444,347.06	13.06
	KBL	641,715,719.00	6,291,843,521.00	10.20
<b>2005/2006</b>	EBL	927,550,000.00	11,291,137,000.00	8.21
	NIBL	1,393,273,570.00	16,274,063,706.00	8.56
	HBL	1,721,940,400.00	18,321,719,590.00	9.40
	SBL	593,244,000.00	4,465,021,233.00	13.29
	KBL	858,520,000.00	7,625,050,127.00	11.26
<b>2006/2007</b>	EBL	1,171,133,000.00	14,976,737,000.00	7.82
	NIBL	1,852,197,400.00	17,491,787,670.00	10.59
	HBL	2,104,595,598.00	19,918,325,322.00	10.57
	SBL	786,870,000.00	7,297,686,632.00	10.78
	KBL	1,019,893,000.00	9,959,911,399.00	10.24
<b>2007/2008</b>	<b>EBL</b>	1,560,859,000.00	20,974,862,000.00	7.44
	NIBL	2,658,914,910.00	34,484,541,420.00	7.71
	HBL	2,469,785,092.00	25,624,467,383.00	9.64
	<b>SBL</b>	1,049,680,000.00	11,081,373,000.00	9.47
	<b>KBL</b>	1,359,032,000.00	14,418,707,000.00	9.42
<b>2008/2009</b>	<b>EBL</b>	1,981,579,000.00	25,619,753,000.00	7.73
	NIBL	3,879,969,000.00	45,312,265,000.00	8.56
	HBL	3,074,436,960.00	34,905,889,843.00	8.81
	<b>SBL</b>	1,257,070,000.00	15,210,560,000.00	8.26
	<b>KBL</b>	1,612,799,000.00	17,743,239,000.00	9.09
<b>2009/2010</b>	<b>EBL</b>	2,537,092,000.00	30,240,428,000.00	8.39
	NIBL	4,554,090,000.00	53,553,866,600.00	8.50
	HBL	3,414,638,614.00	39,357,005,251.00	8.67
	<b>SBL</b>	1,581,568,000.00	19,535,956,000.00	8.96
	<b>KBL</b>	1,772,135,000.00	17,220,685,000.00	10.29
<b>2010/2011</b>	<b>EBL</b>	2,927,168,000.00	34,583,548,000.00	8.46
	NIBL	5,083,617,000.00	57,993,926,000.00	8.77
	HBL	3,916,970,800.00	44,124,521,593.00	8.87
	<b>SBL</b>	1,965,766,000.00	21,113,150,000.00	9.31
	<b>KBL</b>	2,204,905,000.00	17,856,397,000.00	12.34
<b>2011/2012</b>	<b>EBL</b>	3,990,924,000.00	41,525,347,000.00	9.61
	NIBL	5,858,857,000.00	62,704,174,000.00	9.34
	HBL	4,600,146,030.00	47,934,898,606.00	9.60
	<b>SBL</b>	2,155,666,000.00	26,365,323,000.00	8.18
	<b>KBL</b>	2,365,249,000.00	20,936,998,000.00	11.30

Chart 4.2.1.1.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Core Capital Adequacy Ratio among five banks

**Chart: 4.2.1.1.a Tier I (Core) Capital Adequacy Ratio (%) in percentage**



As shown in the above Table 4.2.1.1 and Chart: 4.2.1.1.a, we can analyze the Core Capital Adequacy Ratio over the 10 years.

During the FY year 2002/2003 the SBL of 40.99% is the highest Ratio among the other banks, the HBL of 7.07% is the lowest ratio than other banks, and the EBL of 10.46 % is the middle position.

During the FY year 2003/2004 the SBL of 18.50% is the highest Ratio among the other banks, the NIBL of 5.36% is the lowest ratio than other banks, and the EBL of 9.58% is the middle position.

During the FY year 2004/2005 the SBL of 13.06% is the highest Ratio among the other banks, the NIBL of 7.14% is the lowest ratio than other banks, and the EBL of 8.88% is the middle position.

During the FY year 2005/2006 the SBL of 13.29% is the highest Ratio among the other banks, the EBL of 8.21% is the lowest ratio than other banks, and the HBL of 9.40% is the middle position.

During the FY year 2006/2007 the SBL of 10.78% is the highest Ratio among the other banks, the EBL of 7.82% is the lowest ratio than other banks, and the HBL of 10.57% is the middle position.

During the FY year 2007/2008 the HBL of 9.64% is the highest Ratio among the other banks, the EBL of 7.44% is the lowest ratio than other banks, and the KBL of 9.42% is the middle position.

During the FY year 2008/2009 the KBL of 9.09% is the highest Ratio among the other banks, the EBL of 7.73% is the lowest ratio than other banks, and the NIBL of 8.56% is the middle position. During the FY year 2009/2010 the KBL of 10.29% is the highest Ratio among the other banks, the EBL of 8.39% is the lowest ratio than other banks, and the HBL of 8.67% is the middle position. During the FY year 2010/2011 the KBL of 12.34% is the highest Ratio among the other banks, the EBL of 8.46% is the lowest ratio than other banks, and the HBL of 8.87% is the middle position. During the FY year 2011/2012 the KBL of 11.30% is the highest Ratio among the other banks, the SBL of 8.18% is the lowest ratio than other banks, and the HBL of 9.60% is the middle position.

#### **4.2.1.2 Tier II (Supplementary) Capital Adequacy Ratio**

Tier II Capital is a measure of a bank's financial strength with regard to the second most reliable form of financial capital, from a regulator's point of view. This ratio shows the absolute contribution of supplementary capital in capital adequacy. In Nepalese context, Tier II (supplementary) capital comprises of Loan Loss Provision on Pass Loan, Assets Revaluation Fund, Hybrid Capital Instruments, Unsecured Subordinated Term Debt, Exchange Equalization Fund, Excess Loan Loss Provision, and Provision for Loss on Investment. It is used to analyze the supplementary capital adequacy of the banks and determined by using the following model.

$$\textit{Tire II Capital Adequacy Ratio} = \frac{\textit{Tire II Capital}}{\textit{Total Risk Weight Asset}}$$

OR

$$\textit{Supplementary Capital Adequacy Ratio} = \frac{\textit{Supplementary Capital}}{\textit{Total Risk Weight Asset}}$$

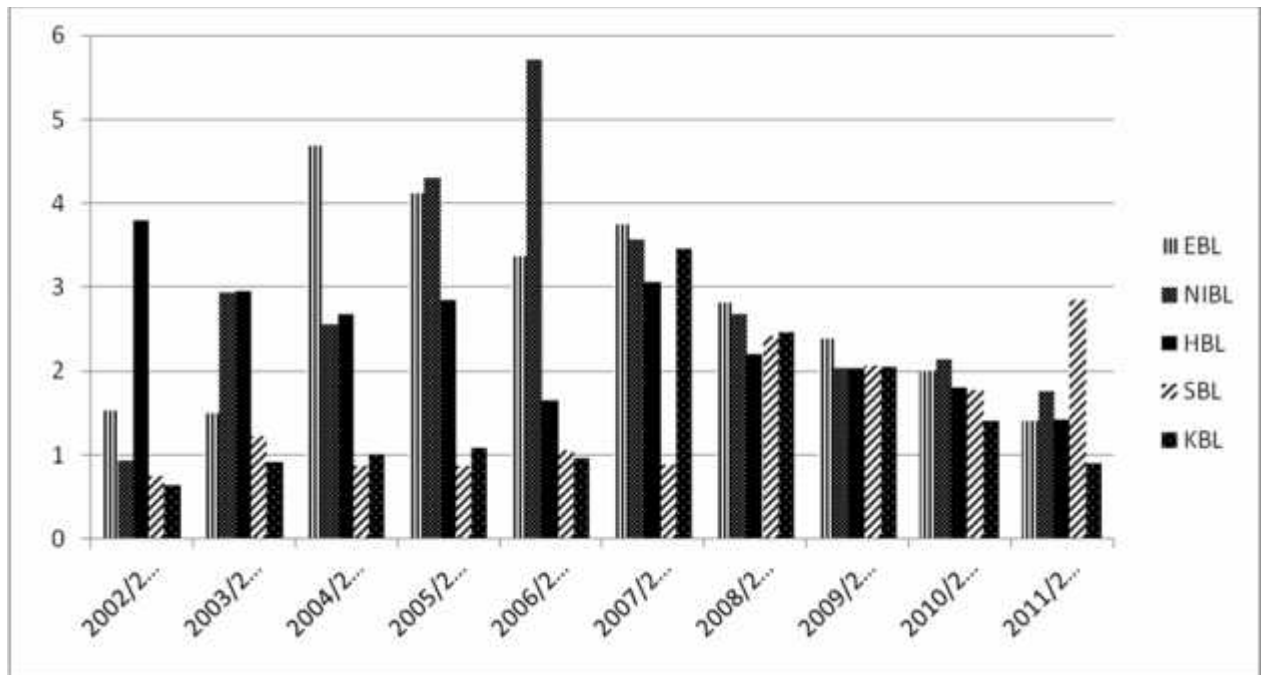
Table 4.2.1.2 is the observed Tire II (Supplementary) Capital Adequacy Ratio during the study period in numerical terms which is presented below.

**Table 4.2.1.2 Tier II (Supplementary) Capital Adequacy Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Supplementary Capital "in Rs."</b>	<b>Total Risk Adjusted Asset "in Rs.)</b>	<b>Supplementary Capital Ratio%</b>
<b>2002/2003</b>	EBL	87,154,000.00	5,707,030,000.00	1.53
	NIBL	73,820,000.00	7,896,160,000.00	0.934
	HBL	565,91,625.00	14,681,449,073.00	3.8
	SBL	6,290,249.68	850,647,012.29	0.74
	KBL	16,180,896.00	2,528,767,733.00	0.64
<b>2003/2004</b>	EBL	103,610,000.00	6,924,807,000.00	1.50
	NIBL	388,770,000.00	13,255,496,016.00	2.93
	HBL	498,834,651.00	16,860,638,296.00	2.96
	SBL	24,059,672.60	1,979,823,911.75	1.22
	KBL	40,469,693.00	4,449,407,210.00	0.91
<b>2004/2005</b>	EBL	430,769,000.00	9,195,588,000.00	4.68
	NIBL	417,300,000.00	16,274,063,706.00	2.56
	HBL	491,290,322.00	18,321,719,590.00	2.68
	SBL	25,809,124.62	2,968,444,347.06	0.87
	KBL	63,813,474.00	6,291,843,521.00	1.01
<b>2005/2006</b>	EBL	463,789,000.00	11,291,137,000.00	4.11
	NIBL	700,926,080.00	16,274,063,706.00	4.3
	HBL	520,902,609.00	18,321,719,590.00	2.84
	SBL	39,035,000.00	4,465,021,233.00	0.87
	KBL	82,459,000.00	7,625,050,127.00	1.08
<b>2006/2007</b>	EBL	504,982,000.00	14,976,737,000.00	3.37
	NIBL	999,421,610.00	17,491,787,670.00	5.71
	HBL	330,773,378.00	19,918,325,322.00	1.66
	SBL	76,962,000.00	7,297,686,632.00	1.05
	KBL	95,314,000.00	9,959,911,399.00	0.96
<b>2007/2008</b>	EBL	787,531,000.00	20,974,862,000.00	3.75
	NIBL	1,232,320,570.00	34,484,541,420.00	3.57
	HBL	783,730,889.00	25,624,467,383.00	3.06
	SBL	97,431,000.00	11,081,373,000.00	0.88
	KBL	499,175,000.00	14,418,707,000.00	3.46
<b>2008/2009</b>	EBL	722,291,000.00	25,619,753,000.00	2.82
	NIBL	1,215,385,000.00	45,312,265,000.00	2.68
	HBL	770,774,340.00	34,905,889,843.00	2.21
	SBL	368,385,000.00	15,210,560,000.00	2.42
	KBL	438,108,000.00	17,743,239,000.00	2.47
<b>2009/2010</b>	EBL	720,049,000.00	30,240,428,000.00	2.38
	NIBL	1,096,951,000.00	53,553,866,600.00	2.04
	HBL	803,722,886.00	39,357,005,251.00	2.04
	SBL	402,422,000.00	19,535,956,000.00	2.06
	KBL	352,490,000.00	17,220,685,000.00	2.05
<b>2010/2011</b>	EBL	678,673,000.00	34,583,548,000.00	2.01
	NIBL	1,241,010,000.00	57,993,926,000.00	2.14
	HBL	794,272,695.00	44,124,521,593.00	1.80
	SBL	374,850,000.00	21,113,150,000.00	1.77
	KBL	251,514,000.00	17,856,397,000.00	1.40
<b>2011/2012</b>	EBL	583,827,000.00	41,525,347,000.00	1.41
	NIBL	1,104,325,000.00	62,704,174,000.00	1.76
	HBL	683,754,044.00	47,934,898,606.00	1.43
	SBL	752,400,000.00	26,365,323,000.00	2.85
	KBL	188,840,000.00	20,936,998,000.00	0.90

Chart 4.2.1.2.ais a bar diagram which represents the above tabulated numerical data which helps to compare the Supplementary Capital Adequacy Ratio among five banks.

**Chart: 4.2.1.2.a Tier II (Supplementary) Capital Adequacy Ratio (%) in percentage**



As shown in the above Table 4.2.1.2 Tier II (Supplementary) and chart:4.2.1.2.a Tier II, we can analyze the Tier II (Supplementary) Capital Adequacy Ratio over the 10 years.

During the FY year 2002/2003 the HBL of 3.8% is the highest Ratio among the other banks, the SBL of 0.64% is the lowest ratio than other banks, and the NIBL of 0.934% is the middle position.

During the FY year 2003/2004 the HBL of 2.96% is the highest Ratio among the other banks, the KBL of 0.91% is the lowest ratio than other banks, and the EBL of 1.50% is the middle position.

During the FY year 2004/2005 the HBL of 2.96% is the highest Ratio among the other banks, the SBL of 0.91% is the lowest ratio than other banks, and the NIBL of 2.56% is the middle position.

During the FY year 2005/2006 the NIBL of 4.3% is the highest Ratio among the other banks, the SBL of 0.87% is the lowest ratio than other banks, and the HBL of 2.84% is the middle position.

During the FY year 2006/2007 the NIBL of 5.71% is the highest Ratio among the other banks, the KBL of 0.96% is the lowest ratio than other banks, and the HBL of 1.66% is the middle position.

During the FY year 2007/2008 the EBL of 3.75% is the highest Ratio among the other banks, the SBL of 0.88% is the lowest ratio than other banks, and the KBL of 3.46% is the middle position.

During the FY year 2008/2009 the EBL of 2.82% is the highest Ratio among the other banks, the HBL of 2.21% is the lowest ratio than other banks, and the KBL of 2.47% is the middle position.

During the FY year 2009/2010 the EBL of 2.38% is the highest Ratio among the other banks, the HBL and NIBL are equaled value of 2.04% is the lowest ratio than other banks, and the KBL of 2.05% is the middle position.

During the FY year 2010/2011 the NIBL of 2.14% is the highest Ratio among the other banks, the KBL of 1.40% is the lowest ratio than other banks, and the HBL of 1.80% is the middle position.

During the FY year 2011/2012 the SBL of 2.85% is the highest Ratio among the other banks, the KBL of 0.90% is the lowest ratio than other banks, and the HBL of 1.43% is the middle position.

### ***Findings:***

Here are taking the Five Nepalese commercial banks of 10 year period for analysis and study. These are EBL, NIBL, HBL, SBL and KBL. The period has taken from 2002/2003 up to 2011/2012.

Although the Core Capital of all the five banks has increased over the study period, but the core capital adequacy ratio of all banks are increased by up and down. It is mainly due to happen higher percentage the increment in the Total Risk Weight Assets. On the other hand, there is increment in supplementary capital as well as Supplementary Capital Adequacy Ratio due to the higher percentage increment in Supplementary Capital than Total Risk Weight Assets.

Here in the total Capital Adequacy ratio are increasing over the period of study, we can see and know that from 2003 up to 2005 there are some banks are struggling to meet the minimum requirement of the Nepal Rastra Bank. But from 2006 to 2012 are good time for banks because all are they able to meet the requirement. And other side all the banks are able to meet the minimum requirement of Core Capital Adequacy Ratio which determined by Nepal Rastra Bank.

The some reason is to fluctuated that are increase in total risk weight Assets, decrease in total Capital fund. By the way So, all banks show the financial strength and soundness throughout the study period which indicates that the banks are applying adequate amount of internal sources of shareholder's funds with significant Core Capital Adequacy ratio throughout the study period.

### **4.2.2 ASSETS QUALITY**

Asset quality has direct impact on the financial performance of an FI. The quality of assets particularly, loan assets and investments, would depend largely on the risk management system of the institution. Credit risk is one of the factors that affect the health of an individual FI. The extent of the credit risk depends on the quality of assets held by an individual FI. The quality of assets held by an FI depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers: especially the corporate sector. We can use a number of measures to

indicate the quality of assets held by FIs. ADB suggests these measures: loan concentration by industry, region, borrower and portfolio quality; related party policies and exposure on outstanding loan, approval process of loan, check and balance of loans; loan loss provision ratio; portfolio in arrear; loan loss ratio; and reserve ratio—of checking the quality of assets of an FI (ADB 2002).

NRB uses composition of assets, nonperforming loan to total loan ratio, net nonperforming loan to total loan ratio as the indicators of the quality of assets of commercial banks (NRB 2005). 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 the 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 has directed FIs to classify the loans into performing loan and nonperforming loans. The loans that are not due and 3 months past due fall in the class of performing loans/performing assets (which are overdue up to 3 months) and others do in the non-performing loans. Further, non-performing loans are classified into three groups: substandard (Which are overdue from 3 month up to 6 months), doubtful (which are overdue from 6 months up to 12 months), and bad debt/ loss (which are overdue after 1 year). Here are the some regulations that NRB has made e regarding to the provision of performing and non-performing loan which are given below:

- For any normal loan, Commercial banks have to make 1 percent provision for pass loan/performing loan, 25 percent for substandard loan, 50 percent for doubtful loan and 100 percent for bad loan (NRB 2005).
- If any bank has given loan on the basis of Personal Guarantee (i.e. without taking any movable or immovable property as security), bank has to make 20 percent more provision in general, i.e. 21 percent provision for pass loan/performing loan, 45 percent for substandard loan, 70 percent for doubtful loan and 100 percent for bad loan.
- Shareholder holding 1 percent or more shares of any bank cannot take a lone from that bank. If loan is already taken before this NRB regulation, that bank has to make 2 provision for pass loan/performing loan, 50 percent for substandard loan, 100percent for doubtful loan.
- In the case of reschedule of restructured loans (i.e. Old Principle + Due interest = New principle), any bank has to report to the NRB about the restructured and has to make a provision of 12.50, considering as pass loan/performing loan, on the first day of reschedule / reschedule, 50 percent for substandard loan, 100 percent for doubtful loan.

Under the Asset Quality following ratios are used to measure the performance of banks.

#### **4.2.2.1 Performing Loan Ratio:**

Performing loan refers to those good loans of bank which are paying its Principle + Interest on time or overdue up to 3 months. So, The Performing Loan Ratio is the proportion of Performing Loan to Total Loan and Advances. This ratio shows the proportion of good loans. Hence, higher Performing Loan Ratio reflects the competency or success of loan department of bank and vice versa or the better financial health of bank. The ratio is used to analyze the asset quality of the bank and determined by using the given model.

$$\text{Performing Loan Ratio} = \frac{\text{Total Performing Loan}}{\text{Total Loan \& Advances}}$$

Where,

Total Performing Loan = those loans which have been paying or overdue up to 3 months either in the form of interest servicing or principal repayment, or  
= Pass Loan + Restructured Loan

Total Loan & Advances = Total Performing Loan + Total Non-Performing Loan

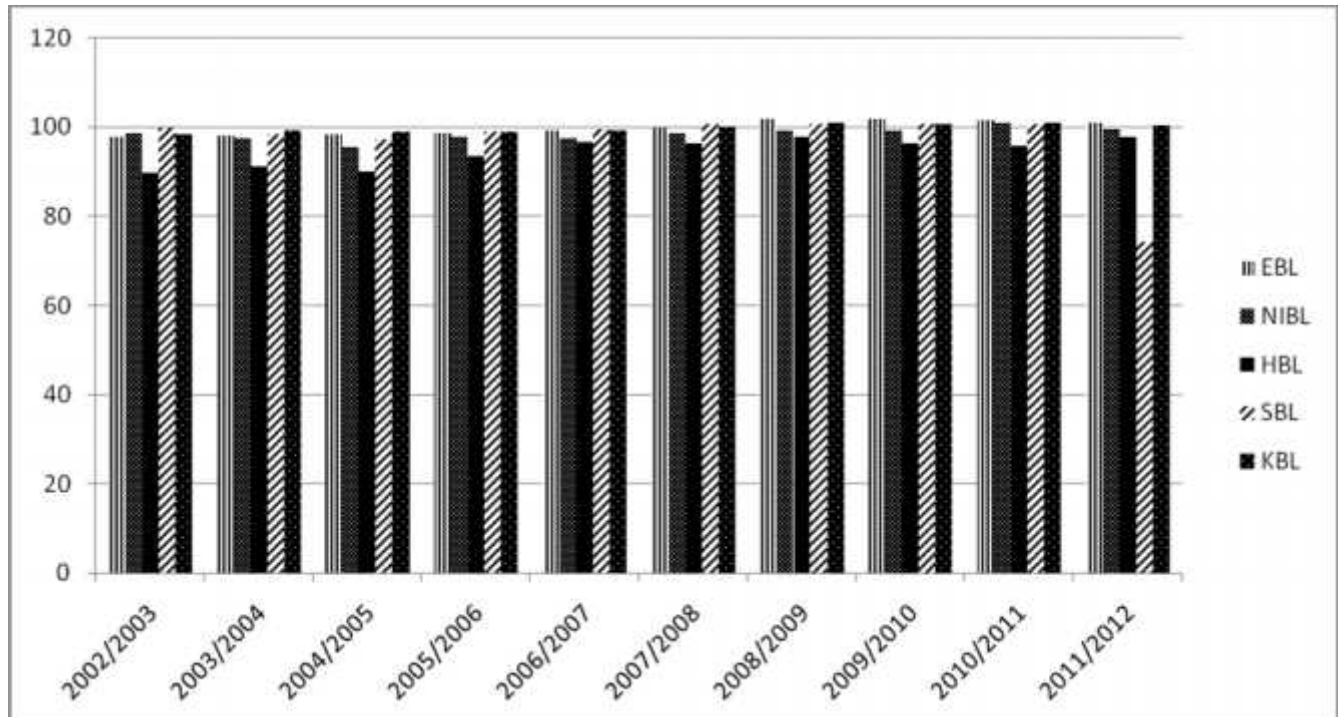
Table 4.2.2.1 is the observed Performing Loan Ratio of five banks during the study period in numerical terms which is presented below

**Table 4.2.2.1 Performing Loan Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Performing Loan "in Rs."</b>	<b>Total Loan &amp; Advances "in Rs."</b>	<b>Performing Loan Ratio%</b>
<b>2002/2003</b>	EBL	4,938,390,206.00	5,049,581,309.00	97.80
	NIBL	5,697,933,486.00	5,772,140,251.00	98.71
	HBL	9,751,759,501.00	10,844,599,000.00	89.92
	SBL	629,024,968.48	629,024,968.48	100.00
	KBL	2,101,263,243.00	2,137,587,047.00	98.30
<b>2003/2004</b>	EBL	5,991,085,718.00	6,095,841,087.00	98.28
	NIBL	7,157,131,478.00	7,338,566,487.00	97.52
	HBL	11,772,168,356.00	12,919,631,000.00	91.12
	SBL	1,542,603,738.25	1,567,826,770.76	98.39
	KBL	3,669,794,872.00	3,697,984,528.00	99.24
<b>2004/2005</b>	EBL	7,771,282,526.00	7,900,090,271.00	98.37
	NIBL	9,977,369,462.00	10,453,163,997.00	95.45
	HBL	12,110,616,517.00	13,451,168,000.00	90.03
	SBL	2,567,003,700.00	2,634,930,609.08	97.42
	KBL	5,627,024,183.00	5,681,012,721.00	99.05
<b>2005/2006</b>	EBL	10,007,018,658.00	10,136,254,448.00	98.73
	NIBL	12,905,658,783.00	13,178,152,000.00	97.93
	HBL	14,721,218,259.00	15,761,976,000.00	93.40
	SBL	3,835,697,432.00	3,869,269,992.00	99.13
	KBL	6,943,433,808.00	7,007,787,514.00	99.08
<b>2006/2007</b>	EBL	13,969,507,151.00	14,082,686,087.00	99.20
	NIBL	17,347,128,354.00	17,769,100,000.00	97.63
	HBL	17,152,108,557.00	17,793,724,000.00	96.63
	SBL	6,298,185,615.00	6,319,727,198.00	99.66
	KBL	8,996,314,613.00	9,062,433,481.00	99.27
<b>2007/2008</b>	EBL	18,555,269,076.00	18,339,085,562.00	100.01
	NIBL	27,219,833,753.00	27,529,305,000.00	98.87
	HBL	19,460,158,551.00	20,179,613,000.00	96.43
	SBL	9,415,608,432.00	9,335,600,000.00	100.85
	KBL	11,369,905,053.00	11,335,087,939.00	100.30
<b>2008/2009</b>	EBL	24,351,570,294.00	23,884,673,616.00	101.95
	NIBL	36,613,250,015.00	36,827,157,409.00	99.42
	HBL	24,968,209,447.00	25,519,519,000.00	97.84
	SBL	13,444,493,343.00	13,328,620,000.00	100.87
	KBL	14,730,718,558.00	14,593,346,830.00	100.94
<b>2009/2010</b>	EBL	28,112,693,861.00	27,556,356,032.00	102.01
	NIBL	40,694,405,581.00	40,948,440,033.00	99.38
	HBL	28,098,922,927.00	29,123,755,000.00	96.48
	SBL	16,767,761,749.00	16,653,850,000.00	100.68
	KBL	14,890,569,849.00	14,765,912,480.00	100.84
<b>2010/2011</b>	EBL	31,533,329,830.00	31,057,691,462.00	101.53
	NIBL	41,492,411,058.00	41,095,514,519.00	100.96
	HBL	31,576,522,315.00	32,968,270,000.00	95.78
	SBL	18,499,454,479.00	18,384,030,000.00	100.62
	KBL	14,758,337,115.00	14,626,073,558.00	100.90
<b>2011/2012</b>	EBL	36,309,338,831.00	35,910,974,673.00	101.11
	NIBL	41,481,296,984.00	41,636,998,817.00	99.62
	HBL	35,217,307,884.00	35,968,473,000.00	97.91
	SBL	20,294,393,557.00	27,334,160,200.00	74.25
	KBL	17,701,376,531.00	17,614,348,989.00	100.49

Chart 4.2.2.1.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Performing Loan Ratio among Five banks.

**Chart: 4.2.2.1.a Performing Loan Ratio in percentage (%)**



As shown in the above Table 4.2.2.1 Performing Loan Ratio and Chart: 4.2.2.1.a Performing Loan Ratio we can analyze the Assets quality Ratio over the 10 years.

During the FY year 2002/2003 the SBL of 100.00% is the highest Ratio among the other banks, the HBL of 89.92% is the lowest ratio than other banks, and the NIBL of 98.71% is the middle position.

During the FY year 2003/2004 the KBL of 99.24% is the highest Ratio among the other banks, the HBL of 91.12% is the lowest ratio than other banks, and the EBL of 98.28% is the middle position.

During the FY year 2004/2005 the KBL of 99.05% is the highest Ratio among the other banks, the NIBL of 90.03% is the lowest ratio than other banks, and the SBL of 97.42% is the middle position.

During the FY year 2005/2006 the SBL of 99.13% is the highest Ratio among the other banks, the HBL of 93.40% is the lowest ratio than other banks, and the EBL of 98.73% is the middle position.

During the FY year 2006/2007 the SBL of 99.66% is the highest Ratio among the other banks, the HBL of 96.63% is the lowest ratio than other banks, and the EBL of 99.20% is the middle position.

During the FY year 2007/2008 the SBL of 100.85% is the highest Ratio among the other banks, the HBL of 96.43% is the lowest ratio than other banks, and the EBL of 100.01% is the middle position. During the FY year 2008/2009 the EBL of 101.95% is the highest Ratio among the other banks, the HBL of 97.84% is the lowest ratio than other banks, and the SBL of 100.87% is the middle position. During the FY year 2009/2010 the EBL of 102.01% is the highest Ratio among the other banks, the HBL of 96.48% is the lowest ratio than other banks, and the SBL of 100.68% is the middle position. During the FY year 2010/2011 the EBL of 101.53% is the highest Ratio among the other banks, the HBL of 95.78% is the lowest ratio than other banks, and the KBL of 100.90% is the middle position. During the FY year 2011/2012 the EBL of 101.11% is the highest Ratio among the other banks, the SBL of 74.25% is the lowest ratio than other banks, and the NIBL of 99.62% is the middle position.

#### **4.2.2.2 Non-Performing Loan Ratio:**

Non-performing loan refers to those loans which are not paying its Principle + Interest in time or overdue more than three months. So, it consists of Sub-standard loan, Doubtful loan and Bad Loan. 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. Higher non-performing loan ratio indicates that the bank's assets are not doing well or the loan department is not so conscious while passing loan. So, lower ratio will be preferred regarding Non-performing Loan Ratio. The ratio is determined by using the given model.

$$\text{Non Performing Loan Ratio} = \frac{\text{Total Non Performing Loan}}{\text{Total Loan \& Advances}}$$

Where,

Total Non-performing Loan = those loans which have been past due either in the form of interest servicing or principal repayment and graded as possible default OR  
 = Sub Standard Loan + Doubtful Loan + Bad Loan

Total Loan & Advances = Total Performing Loan + Total Non-Performing Loan

Performing Loan = Pass Loan + Restructured Loan

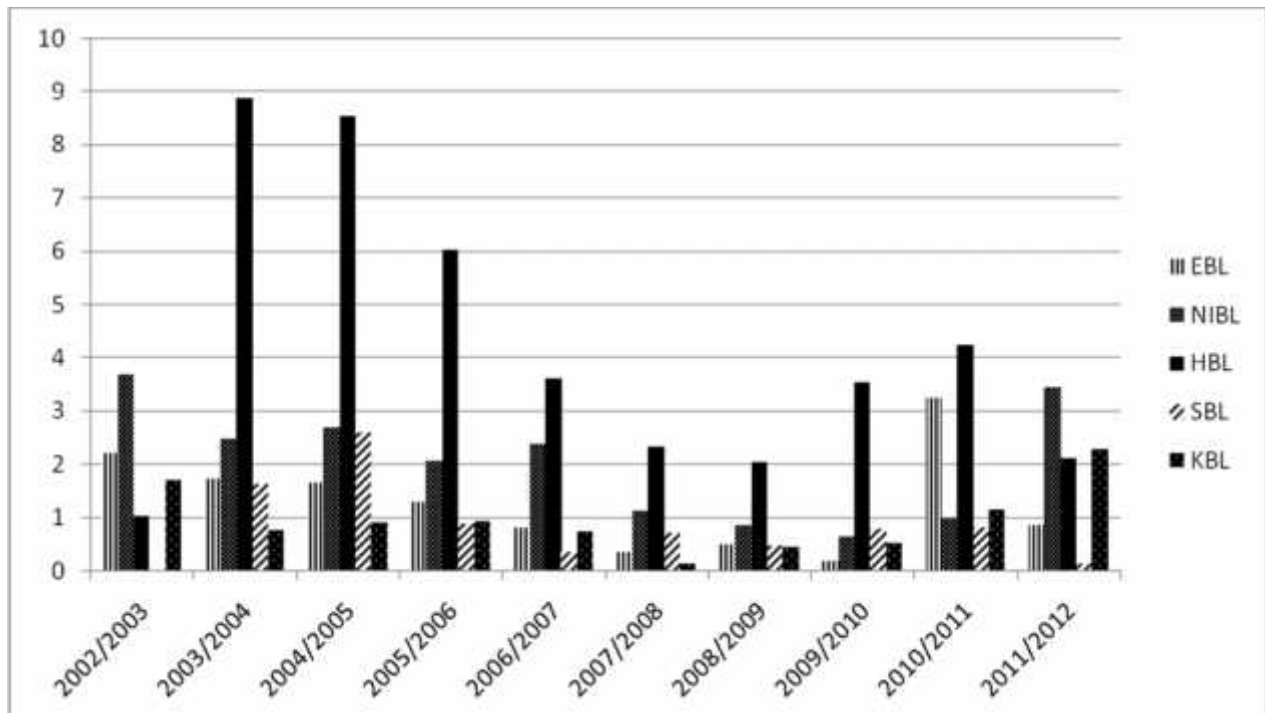
Table 4.2.2.2 is the observed Non Performing Loan Ratio of five banks during the study period in numerical terms which is presented below:

**Table 4.2.2.2 Non Performing Loan Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Non-Performing Loan "in Rs."</b>	<b>Total Loan &amp; Advances "in Rs"</b>	<b>Non-Performing Loan Ratio%</b>
<b>2002/2003</b>	EBL	111,191,103.00	5,049,581,309.00	2.20
	NIBL	177,091,823.00	5,772,140,251.00	3.68
	HBL	1,092,839,487.00	10,844,599,000.00	1.01
	SBL	-	629,024,968.48	0.00
	KBL	36,323,804.00	2,137,587,047.00	1.70
<b>2003/2004</b>	EBL	104,755,369.00	6,095,841,087.00	1.72
	NIBL	181,435,008.00	7,338,566,487.00	2.47
	HBL	1,145,353,319.00	12,919,631,000.00	8.86
	SBL	25,223,032.51	1,567,826,770.76	1.61
	KBL	28,189,656.00	3,697,984,528.00	0.76
<b>2004/2005</b>	EBL	128,807,745.00	7,900,090,271.00	1.63
	NIBL	280,874,131.00	10,453,163,997.00	2.68
	HBL	1,147,462,638.00	13,451,168,000.00	8.53
	SBL	67,926,909.08	2,634,930,609.08	2.58
	KBL	53,988,538.00	5,681,012,721.00	0.90
<b>2005/2006</b>	EBL	129,235,790.00	10,136,254,448.00	1.27
	NIBL	272,493,041.00	13,178,152,000.00	2.06
	HBL	1,040,757,823.00	15,761,976,000.00	6.02
	SBL	33,572,560.00	3,869,269,992.00	0.87
	KBL	64,353,706.00	7,007,787,514.00	0.92
<b>2006/2007</b>	EBL	113,178,936.00	14,082,686,087.00	0.80
	NIBL	421,971,549.00	17,769,100,000.00	2.37
	HBL	641,615,303.00	17,793,724,000.00	3.60
	SBL	21,541,583.00	6,319,727,198.00	0.34
	KBL	66,118,868.00	9,062,433,481.00	0.73
<b>2007/2008</b>	EBL	63,067,450.00	18,339,085,562.00	0.34
	NIBL	309,471,549.00	27,529,305,000.00	1.12
	HBL	470,730,728.00	20,179,613,000.00	2.33
	SBL	65,178,511.00	9,335,600,000.00	0.69
	KBL	15,247,500.00	11,335,087,939.00	0.13
<b>2008/2009</b>	EBL	117,985,232.00	23,884,673,616.00	0.49
	NIBL	309,470,983.00	36,827,157,409.00	0.84
	HBL	551,309,634.00	25,519,519,000.00	2.02
	SBL	60,302,357.00	13,328,620,000.00	0.45
	KBL	64,542,683.00	14,593,346,830.00	0.44
<b>2009/2010</b>	EBL	43,705,982.00	27,556,356,032.00	0.16
	NIBL	254,034,452.00	40,948,440,033.00	0.62
	HBL	1,024,831,962.00	29,123,755,000.00	3.52
	SBL	127,586,580.00	16,653,850,000.00	0.77
	KBL	75,510,176.00	14,765,912,480.00	0.51
<b>2010/2011</b>	EBL	1,008,512,928.00	31,057,691,462.00	3.24
	NIBL	395,282,853.00	41,095,514,519.00	0.96
	HBL	1,391,747,983.00	32,968,270,000.00	4.22
	SBL	147,741,065.00	1,838,4030,000.00	0.80
	KBL	167,895,925.00	14,626,073,558.00	1.14
<b>2011/2012</b>	EBL	307,492,696.00	35,910,974,673.00	0.85
	NIBL	1,425,394,070.00	41,636,998,817.00	3.42
	HBL	751,164,917.00	35,968,473,000.00	2.09
	SBL	312,906,599.00	273,341,602,000.00	0.11
	KBL	399,960,499.00	17,614,348,989.00	2.27

Chart: 4.2.2.2.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Non-Performing Loan Ratio among five banks.

**Chart: 4.2.2.2.a Non Performing loan Ration**



As shown in the above Table 4.2.2.2 Non Performing Loan Ratio and Chart: 4.2.2.2.a Non-Performing Loan Ratio we can analysis the Assets quality Ratio over the 10 years

During the FY year 2002/2003 the NIBL of 3.68% is the highest Ratio among the other banks, the SBL of 0.00% is the lowest ratio than other banks, and the KBL of 1.70% is the middle position.

During the FY year 2003/2004 the HBL of 8.86% is the highest Ratio among the other banks, the KBL of 0.76% is the lowest ratio than other banks, and the EBL of 1.72% is the middle position.

During the FY year 2004/2005 the HBL of 8.53% is the highest Ratio among the other banks, the KBL of 0.90% is the lowest ratio than other banks, and the SBL of 2.58% is the middle position.

During the FY year 2005/2006 the HBL of 6.02% is the highest Ratio among the other banks, the SBL of 0.87% is the lowest ratio than other banks, and the EBL of 1.27% is the middle position.

During the FY year 2006/2007 the HBL of 3.60% is the highest Ratio among the other banks, the SBL of 0.34% is the lowest ratio than other banks, and the EBL of 0.80% is the middle position.

During the FY year 2007/2008 the HBL of 2.33% is the highest Ratio among the other banks, the KBL of 0.13% is the lowest ratio than other banks, and the SBL of 0.69% is the middle position.

During the FY year 2008/2009 the HBL of 2.02% is the highest Ratio among the other banks, the KBL of 0.44% is the lowest ratio than other banks, and the EBL of 0.49% is the middle position. During the FY year 2009/2010 the HBL of 3.52% is the highest Ratio among the other banks, the EBL of 0.16% is the lowest ratio than other banks, and the NIBL of 0.62% is the middle position. During the FY year 2010/2011 the HBL of 4.22% is the highest Ratio among the other banks, the SBL of 0.80% is the lowest ratio than other banks, and the KBL of 1.14% is the middle position. During the FY year 2011/2012 the NIBL of 3.42% is the highest Ratio among the other banks, the SBL of 0.11% is the lowest ratio than other banks, and the HBL of 2.09% is the middle position.

#### **4.2.2.3 Loan Loss Coverage Ratio**

Loan Loss Coverage Ratio is the relationship between Total Loan Loss Provision and Total Non-Performing Loan. It measures the proportion of Total Loan Loss Provision in relation to Total Non-Performing loan. Out of the Total Non-Performing if some loans become bad or default then that loss to the bank is covered from the Loan Loss Provision fund. So, from that point of view, higher the loan loss coverage ratio is better for the banks. . The ratio is determined by using the given model:

$$\text{Loan Loss Coverage Ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Total Non Performing Loan}}$$

Where,

$$\text{Total Loan Loss Provision} = \text{Provision on (Pass Loan+ Restructured Loan + Sub Standard Loan + Doubtful Loan + Bad Loan)}$$

$$\text{Total Non-Performing Loan} = \text{Sub Standard Loan + Doubtful Loan + Bad Loan}$$

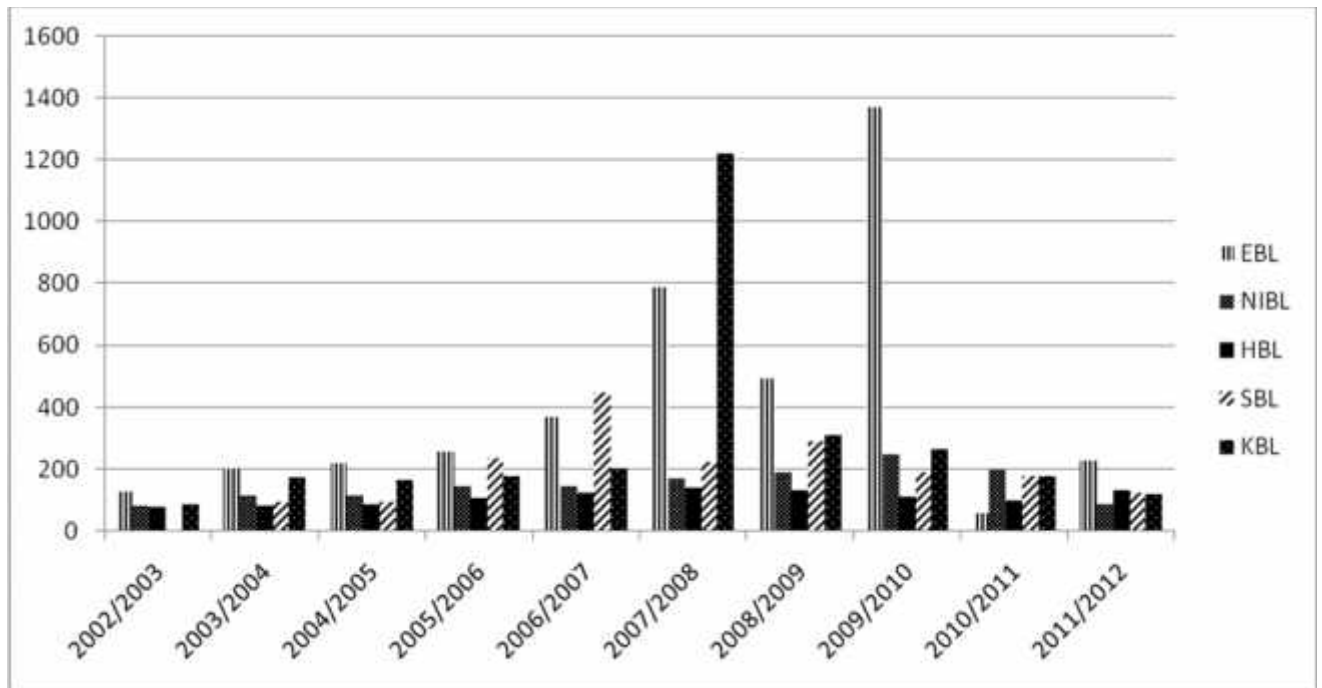
Table 4.2.2.3 is the observed Loan Loss Coverage Ratio of three banks during the study period in numerical terms which is presented below:

**Table 4.2.2.3 Loan Loss Coverage Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Loan Loss Provision "in Rs."</b>	<b>Total Non-Performing Loan "in Rs."</b>	<b>Loan Loss Coverage Ratio%</b>
<b>2002/2003</b>	EBL	141,120,662.00	111,191,103.00	126.92
	NIBL	148,394,238.00	177,091,823.00	83.79
	HBL	842,750,803.00	1,092,839,487.00	77.11
	SBL	6,290,249.69	0.00	-
	KBL	31,850,225.00	36,323,804.00	87.68
<b>2003/2004</b>	EBL	211,718,478.00	104,755,369.00	202.11
	NIBL	208,440,985.00	181,435,008.00	114.88
	HBL	962,454,736.00	114,535,3319.00	84.03
	SBL	24,059,672.60	25,223,032.51	95.39
	KBL	48,975,805.00	28,189,656.00	173.74
<b>2004/2005</b>	EBL	281,418,795.00	128,807,745.00	218.48
	NIBL	325,159,170.00	28,087,4131.00	115.77
	HBL	1,005,391,744.00	114,7462,638.00	87.62
	SBL	64,154,594.28	67,926,909.08	94.45
	KBL	90,087,062.00	53,988,538.00	166.86
<b>2005/2006</b>	EBL	334,946,772.00	129,235,790.00	259.17
	NIBL	401,944,000.00	272,493,041.00	147.50
	HBL	1,119,416,527.00	1,040,757,823.00	107.56
	SBL	80,147,301.00	33,572,560.00	238.73
	KBL	115,932,088.00	64,353,706.00	180.15
<b>2006/2007</b>	EBL	418,604,424.00	113,178,936.00	369.86
	NIBL	482,673,000.00	421,971,549.00	147.50
	HBL	795,726,817.00	641,615,303.00	124.10
	SBL	97,140,384.00	21,541,583.00	450.94
	KBL	133,420,366.00	66,118,868.00	201.79
<b>2007/2008</b>	EBL	497,346,200.00	63,067,450.00	788.59
	NIBL	532,652,000.00	309,471,549.00	172.11
	HBL	673,171,938.00	470,730,728.00	143.05
	SBL	145,189,205.00	65,178,511.00	222.76
	KBL	186,474,239.00	15,247,500.00	1222.98
<b>2008/2009</b>	EBL	584,881,910.00	117,985,232.00	495.72
	NIBL	585,950,852.00	309,470,983.00	189.40
	HBL	726,363,812.00	551,309,634.00	131.75
	SBL	176,174,186.00	60,302,357.00	292.15
	KBL	201,914,411.00	64,542,683.00	312.84
<b>2009/2010</b>	EBL	600,043,812.00	43,705,982.00	1372.91
	NIBL	630,131,971.00	254,034,452.00	248.05
	HBL	1,143,126,129.00	1,024,831,962.00	111.54
	SBL	241,496,407.00	127,586,580.00	189.28
	KBL	200,167,544.00	75,510,176.00	265.086
<b>2010/2011</b>	EBL	604,151,295.00	1,008,512,928.00	59.90
	NIBL	792,179,392.00	395,282,853.00	200.41
	HBL	1,401,293,543.00	1,391,747,983.00	100.68
	SBL	263,162,450.00	147,741,065.00	178.12
	KBL	300,159,481.00	167,895,925.00	178.77
<b>2011/2012</b>	EBL	705,856,854.00	307,492,696.00	229.55
	NIBL	1,269,692,237.00	1,425,394,070.00	89.07
	HBL	1,003,038,939.00	751,164,917.00	133.53
	SBL	389,715,567.00	312,906,599.00	124.55
	KBL	486,988,042.00	399,960,499.00	121.75

Chart: 4.2.2.3.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Non-Performing Loan Ratio among Five banks.

**Chart: 4.2.2.3.a Loan Loss Coverage Ratio (%) in percentage**



As shown in the above Table 4.2.2.3 Loan Loss Coverage Ratio and Chart: 4.2.2.3.a Loan Loss Coverage Ratio we can analyze the Assets quality Ratio over the 10 years

During the FY year 2002/2003 the EBL of 126.92% is the highest Ratio among the other banks, the SBL of 0.00% is the lowest ratio than other banks, and the KBL of 87.68% is the middle position.

During the FY year 2003/2004 the EBL of 202.11% is the highest Ratio among the other banks, the HBL of 84.03% is the lowest ratio than other banks, and the NIBL of 114.88% is the middle position.

During the FY year 2004/2005 the EBL of 218.48% is the highest Ratio among the other banks, the HBL of 87.62% is the lowest ratio than other banks, and the NIBL of 115.77% is the middle position.

During the FY year 2005/2006 the EBL of 259.17% is the highest Ratio among the other banks, the HBL of 107.56% is the lowest ratio than other banks, and the KBL of 180.15% is the middle position.

During the FY year 2006/2007 the SBL of 450.94% is the highest Ratio among the other banks, the HBL of 124.10% is the lowest ratio than other banks, and the KBL of 201.79% is the middle position.

During the FY year 2007/2008 the KBL of 1222.98% is the highest Ratio among the other banks, the HBL of 143.05% is the lowest ratio than other banks, and the SBL of 222.76% is the middle position.

During the FY year 2008/2009 the EBL of 495.72% is the highest Ratio among the other banks, the HBL of 131.75% is the lowest ratio than other banks, and the SBL of 292.15% is the middle position.

During the FY year 2009/2010 the EBL of 1372.91% is the highest Ratio among the other banks, the HBL of 111.54% is the lowest ratio than other banks, and the NIBL of 248.05% is the middle position.

During the FY year 2010/2011 the NIBL of 200.41% is the highest Ratio among the other banks, the EBL of 59.90% is the lowest ratio than other banks, and the SBL of 178.12% is the middle position.

During the FY year 2011/2012 the EBL of 229.55% is the highest Ratio among the other banks, the NIBL of 89.07% is the lowest ratio than other banks, and the SBL of 124.55% is the middle position.

#### **4.2.2.4 Loan Loss Provision Ratio:**

Out of the main functions of the bank one of them is to provide loans to customers. It is important to take note that non-performing loan signals risk of non-recovery of the loan which is invested from the pool fund of deposits taken from general public. So, when bank provides loan to customer then there will be chance to convert those loans to Pass Loan, Sub Standard Loan, Doubtful Loan and Bad Loan. In all cases the banks have to keep the provision to protect the public interest as well as taking the preventive measure for the sound health of financial. It reflects adequacy to absorb estimated credit losses associated with the loan and lease portfolio of the bank or it shows the percentage of the provision made to make good the default loans. The provision for loan losses is a charge to current earnings to build the Allowance for Loan and Lease Losses (ALLL). This ratio indicates the proportion of the loan loss provision on Total Loan and Advances. A high ratio is always better safety net to the general public but supposed to mean a bad quality of assets. Central bank has to protect rights of public and thus will be happy with the higher ratio of loan loss provision. However despite of safety net benefits, higher loan loss provision also indicates the banks profit is crunching down by this higher provision as well as poor credit management.

In fact provision made on loans depends on whether information on 'bad loans' is correctly revealed. For the purpose of this study following model is used to determine the Loan Loss Provision Ratio:

$$\text{Loan Loss Provision Ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Total Loan \& Advances}}$$

Where,

$$\text{Total Loan Loss Provision} = \text{Provision on (Pass Loan+ Restructured Loan + Sub Standard Loan + Doubtful Loan + Bad Loan)}$$

$$\text{Total Loan \& Advances} = \text{Total Performing Loan} + \text{Total Non-Performing Loan}$$

$$\text{Performing Loan} = \text{Pass Loan} + \text{Restructured Loan}$$

$$\text{Total Non-Performing Loan} = \text{Sub Standard Loan} + \text{Doubtful Loan} + \text{Bad Loan}$$

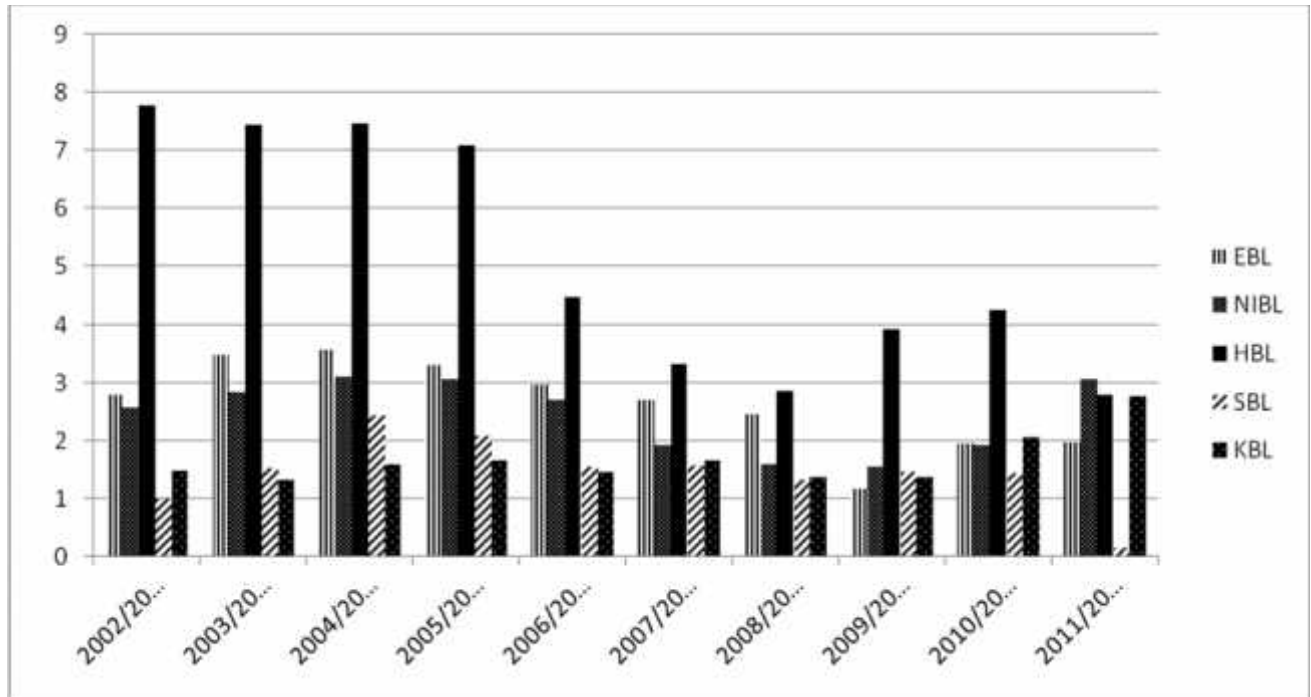
Table 4.2.2.4 is the observed Loan Loss Provision Ratio of five banks during the study period in numerical terms which is presented below:

**Table 4.2.2.4 Loan Loss Provision Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Loan Loss Provision "in Rs."</b>	<b>Total Loan &amp; Advances "in Rs."</b>	<b>Loan Loss Provision Ratio%</b>
<b>2002/2003</b>	EBL	141,120,662.00	5,049,581,309.00	2.79
	NIBL	148,394,238.00	5,772,140,251.00	2.57
	HBL	842,750,803.00	10,844,599,000.00	7.77
	SBL	6,290,249.69	629,024,968.48	1.00
	KBL	31,850,225.00	2,137,587,047.00	1.49
<b>2003/2004</b>	EBL	211,718,478.00	6,095,841,087.00	3.47
	NIBL	208,440,985.00	7,338,566,487.00	2.84
	HBL	962,454,736.00	12,919,631,000.00	7.44
	SBL	24,059,672.60	1,567,826,770.76	1.53
	KBL	48,975,805.00	3,697,984,528.00	1.32
<b>2004/2005</b>	EBL	281,418,795.00	7,900,090,271.00	3.56
	NIBL	325,159,170.00	10,453,163,997.00	3.11
	HBL	1,005,391,744.00	13,451,168,000.00	7.47
	SBL	64,154,594.28	2,634,930,609.08	2.43
	KBL	90,087,062.00	5,681,012,721.00	1.59
<b>2005/2006</b>	EBL	334,946,772.00	10,136,254,448.00	3.30
	NIBL	401,944,000.00	13,178,152,000.00	3.05
	HBL	1,119,416,527.00	15,761,976,000.00	7.10
	SBL	80,147,301.00	3,869,269,992.00	2.07
	KBL	115,932,088.00	7,007,787,514.00	1.65
<b>2006/2007</b>	EBL	418,604,424.00	14,082,686,087.00	2.97
	NIBL	48,2673,000.00	17,769,100,000.00	2.71
	HBL	795,726,817.00	17,793,724,000.00	4.47
	SBL	97,140,384.00	6,319,727,198.00	1.54
	KBL	133,420,366.00	9,062,433,481.00	1.47
<b>2007/2008</b>	EBL	497,346,200.00	18,339,085,562.00	2.71
	NIBL	532,652,000.00	27,529,305,000.00	1.93
	HBL	673,171,938.00	20,179,613,000.00	3.33
	SBL	145,189,205.00	9,335,600,000.00	1.56
	KBL	186,474,239.00	11,335,087,939.00	1.65
<b>2008/2009</b>	EBL	584,881,910.00	23,884,673,616.00	2.45
	NIBL	5,859,50,852.00	36,827,157,409.00	1.59
	HBL	726,363,812.00	25,519,519,000.00	2.85
	SBL	176,174,186.00	13,328,620,000.00	1.32
	KBL	201,914,411.00	14,593,346,830.00	1.38
<b>2009/2010</b>	EBL	600,043,812.00	27,556,356,032.00	1.18
	NIBL	630,131,971.00	40,948,440,033.00	1.54
	HBL	1,143,126,129.00	29,123,755,000.00	3.92
	SBL	241,496,407.00	16,653,850,000.00	1.45
	KBL	200,167,544.00	14,765,912,480.00	1.36
<b>2010/2011</b>	EBL	604,151,295.00	31,057,691,462.00	1.95
	NIBL	792,179,392.00	41,095,514,519.00	1.93
	HBL	1,401,293,543.00	32,968,270,000.00	4.25
	SBL	263,162,450.00	18,384,030,000.00	1.43
	KBL	300,159,481.00	14,626,073,558.00	2.05
<b>2011/2012</b>	EBL	705,856,854.00	35,910,974,673.00	1.97
	NIBL	1,269,692,237.00	41,636,998,817.00	3.05
	HBL	1,003,038,939.00	35,968,473,000.00	2.79
	SBL	389,715,567.00	273,341,602,000.00	0.14
	KBL	486,988,042.00	17,614,348,989.00	2.76

Chart 4.2.2.4.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Loan Loss Provision Ratio among five banks.

**Chart: 4.2.2.4.b of Loan Loss Provision Ratio (%) in percentage**



As shown in the above Table 4.2.2.4 Loan Loss Provision Ratio and Chart: 4.2.2.4.b of Loan Loss Provision Ratio we can analysis the Assets quality Ratio over the 10 years

During the FY year 2002/2003 the HBL of 7.77% is the highest Ratio among the other banks, the SBL of 1.00% is the lowest ratio than other banks, and the NIBL of 2.57% is the middle position.

During the FY year 2003/2004 the HBL of 7.44% is the highest Ratio among the other banks, the KBL of 1.32% is the lowest ratio than other banks, and the NIBL of 2.84% is the middle position.

During the FY year 2004/2005 the HBL of 7.47% is the highest Ratio among the other banks, the KBL of 1.59% is the lowest ratio than other banks, and the NIBL of 2.84% is the middle position.

During the FY year 2005/2006 the HBL of 7.10% is the highest Ratio among the other banks, the KBL of 1.65% is the lowest ratio than other banks, and the NIBL of 3.05% is the middle position.

During the FY year 2006/2007 the HBL of 4.47% is the highest Ratio among the other banks, the KBL of 1.47% is the lowest ratio than other banks, and the NIBL of 2.71% is the middle position.

During the FY year 2007/2008 the HBL of 3.33% is the highest Ratio among the other banks, the SBL of 1.56% is the lowest ratio than other banks, and the NIBL of 1.93% is the middle position. During the FY year 2008/2009 the HBL of 2.85% is the highest Ratio among the other banks, the SBL of 1.32% is the lowest ratio than other banks, and the NIBL of 1.59% is the middle position. During the FY year 2009/2010 the HBL of 3.92% is the highest Ratio among the other banks, the EBL of 1.18% is the lowest ratio than other banks, and the NIBL of 1.45% is the middle position. During the FY year 2010/2011 the HBL of 4.25% is the highest Ratio among the other banks, the SBL of 1.43% is the lowest ratio than other banks, and the EBL of 1.95% is the middle position. During the FY year 2011/2012 the NIBL of 3.05% is the highest Ratio among the other banks, the SBL of 0.14% is the lowest ratio than other banks, and the KBL of 2.76% is the middle position.

### ***Findings:***

Mentioned the above calculation and graphs, all the five banks' Total performing loan ratio is in increasing trend along with the total loan and advances increases. It has happened due to the good loan and credit management. On the other side, the amount of Non-performing loan all HBL, NIBL, EBL and KBL has increased the Non-performing loan ratio has decreased. It indicated the non-performing loan are fluctuated over the year. The reason behind this is percentage increase of Non-Performing loan is less than percentage increase in total loan and advances. But HBL is the highest ratio than other banks. In other hand we can say that banks are reducing their Sub Standard Loan, Doubtful Loan and Bad Loan by taking and implementing good credit policy. As on the one hand banks' total non-performing loan are increasing in decreasing rate on the other hand total loan and advances are increasing each year and provision on those loans are also increasing. This results in increment in loan loss provision ratio of all five banks which is good for banks health. Last couple of years, loan loss provision ratio is slightly in decreasing trend. The reason behind this is that total loan and advances are increasing each year, but on the other hand due to the decrement in non-performing loans compare to total loan and advances banks has to keep less provision on large part of its loans (i.e. for performing loan) which results the decrement in Total loan loss provision ratio. So, there is no point for investors to worry for their safeguard.

### **4.2.3 MANAGEMENT EFFICIENCY**

Management is a key functioning force of an institution that leads it towards its success. Policy determination, formulation of procurers, preparation of business plan, and implementation of the planned projects are some of the core functions of management. In financial institutions like banks, policies related to deposits, loans and other services are rendered by management that is essential to achieve organizational objectives. Efficiency of the policies set by the board of directors, implementation by the management, and other human resources is evaluated under their

mgmt.analysis section. Sound management is a key to bank performance but is difficult to measure. The performance of the other four CAMEL components will depend on the vision, capability, agility, professionalism, integrity, and competence of the FI's management and can be quantified fairly easily from current financial statements. Management quality is a somewhat elusive and subjective measure. It will be evaluated through technical efficiency. As sound management is crucial for the success of any institution, management quality is generally accorded greater weighting in the assessment of the overall CAMEL composite rating. It is primarily a qualitative factor applicable to individual institutions. Management performance can be measured up by two ways. One, observing the physical facilities in place and another is measuring the organizational systems and efficiency factors. Though not compressive, following points generally points out the quality of management skills.

- Structure and authority distribution among employees
- Abilities to meet sufficient expenses
- Robust internal control / check, reporting systems include.
- Diversified human resources (combination of managers and experts)
- Formal work flow and effective communication system
- Service excellence, good customer relations
- Good working environment
- Well-functioning, set of functional sub systems.

Several indicators, however, can jointly serve as an indicator of management soundness. Operating Expenses Ratio, Earning per Employee, Cost per Loan, Average Loan size and Cost per unit of Money Lent can be used as a proxy of the management quality. ADB recommends cost per unit of money lent as a proxy of management quality and can be computed by:

$$\text{Cost per unit of Money Lent} = \frac{\text{Operating Cost}}{\text{Total Amount Dishursed}}$$

But this cannot be used as an indicator of management quality in Nepal. Since the data on amount of the total loan mobilized during a particular FY is not available in published financial statements and annual reports. As stated earlier, NRB has skipped up this component of CAMELS in the performance evaluation of commercial banks. So here are some basic formulas that are used to measure Management Quality:

### 4.2.3.1 Total Expense to Total Income Ratio

The ratio of total expenses to total revenue is used as a proxy measure of the management quality and the expression of numerical relationship between total expenses to total incomes of the bank. A high or increasing ratio of expenses to total revenues can indicate that FIs may not be operating efficiently. This can be due to management deficiencies. In any case, it is likely to negatively affect profitability. (IMF 2000)

Commercial banks earnings originate from interest earned loans and advances, investments, commissions and discounts; foreign exchange rate gains and other miscellaneous income. Conversely, it expends on depositors interest, staff salary, provident fund allowances and other operating expenses like rent, water and electricity, fuel expenses, audit fee expenses, management expenses, depreciation, miscellaneous expenses and all other expenses direct related to the operation of the bank. Expenses such as loss on sale of assets, write off exp, losses shortage, written off, provision for income tax are non-operating expenses.

$$\text{Total Expenses to Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Income}}$$

Where,

$$\text{Total Expenses} = \text{Interest Expenses} + \text{Employee Expenses} + \text{Other Operating Expenses} + \text{Exchange Loss} + \text{Non-Operating Loss}$$

$$\text{Total Income} = \text{Interest Income} + \text{Commission \& Discount Income} + \text{Other Operating Income} + \text{Exchange Gain} + \text{Non-Operating Income}$$

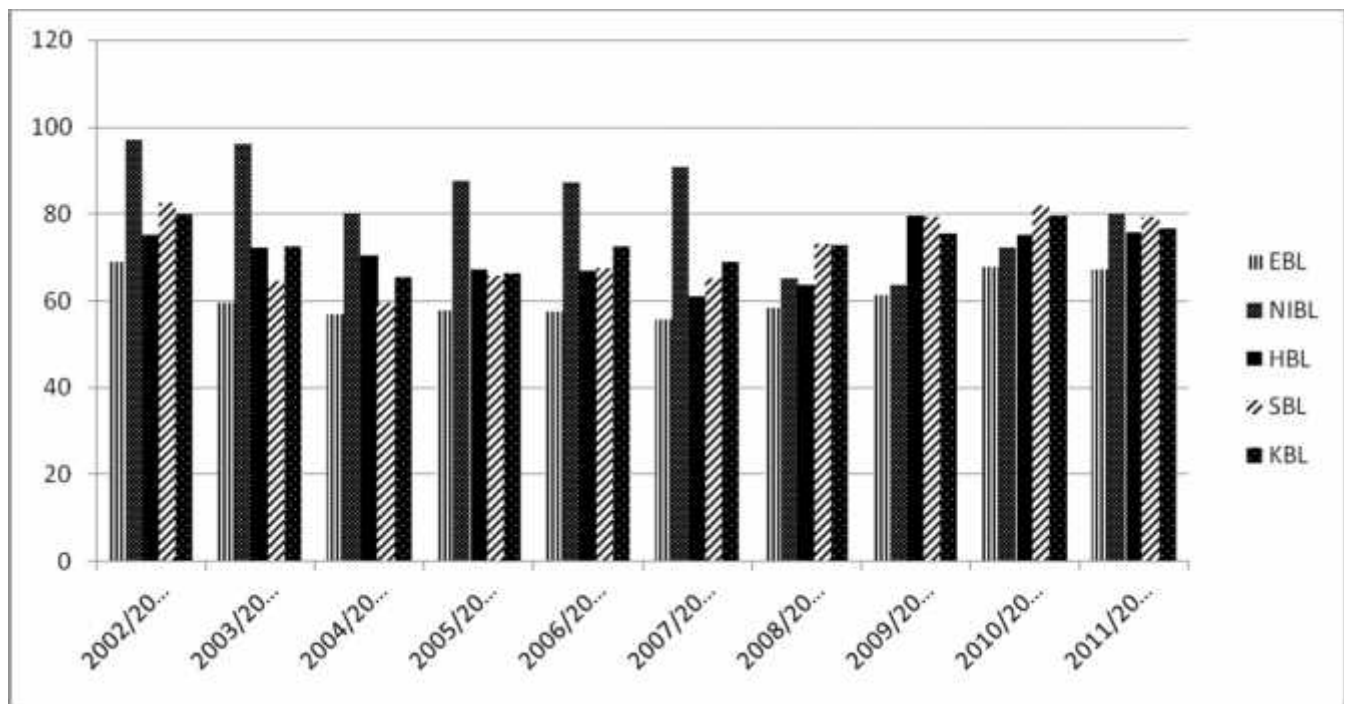
Table 4.2.3.1 is the observed Total Expenses to Total Income Ratio of five banks during the study period in numerical terms which is presented below

**Table 4.2.3.1 Total Expenses to Total Income Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Expenses "inRs."</b>	<b>Total Income "inRs."</b>	<b>Total Expenses to Total Income Ratio%</b>
<b>2002/2003</b>	EBL	438,592,032.00	635,332,348	69.03
	NIBL	377414343.00	388700000.00	97.10
	HBL	1094280000.00	1454380000.00	75.24
	SBL	23,821,531.67	28,827,527	82.63
	KBL	161,702,999.00	202,233,513	79.96
<b>2003/2004</b>	EBL	468,704,084.00	785,058,755	59.70
	NIBL	565430157.00	587512000.00	96.24
	HBL	1099044000.00	1519618000.00	72.32
	SBL	83,631,299.90	129,758,524	64.45
	KBL	248,920,112.00	342,849,125	72.60
<b>2004/2005</b>	EBL	489,229,861.00	858,958,981	56.96
	NIBL	634468428.00	791079000.00	80.20
	HBL	1238139000.00	1760681000.00	70.32
	SBL	143,189,168.26	240,259,437	59.60
	KBL	354,337,190.00	540,604,139	65.54
<b>2005/2006</b>	EBL	615,884,193.00	1,066,510,219	57.75
	NIBL	852706961.00	970482000.00	87.64
	HBL	1371865000.00	2044264000.00	67.11
	SBL	223,921,017.00	341,090,978	65.65
	KBL	575,376,224.00	869,110,498	66.20
<b>2006/2007</b>	EBL	780,830,116.00	1,360,608,994	57.39
	NIBL	1146669264.00	1314233000.00	87.25
	HBL	1446863000.00	2164266000.00	66.85
	SBL	361,052,612.00	534,641,892	67.53
	KBL	485,597,702.00	668,184,603	72.67
<b>2007/2008</b>	EBL	1024332993.00	1842507351.00	55.59
	NIBL	1594458398.00	1758249000.00	90.68
	HBL	1482102000.00	2430941000.00	60.97
	SBL	527917026.00	810108456.00	65.17
	KBL	736447798.00	1065353190.00	69.13
<b>2008/2009</b>	EBL	1491804745.00	2557839951.00	58.32
	NIBL	2439428000.00	3750284000.00	65.05
	HBL	1860030000.00	2926636000.00	63.56
	SBL	1007820712.00	1375582131.00	73.26
	KBL	1100982970.00	1514868250.00	72.68
<b>2009/2010</b>	EBL	2151665546.00	3500766359.00	61.46
	NIBL	3360351000.00	5288777000.00	63.54
	HBL	2968145000.00	3723872000.00	79.71
	SBL	1685905050.00	2123912220.00	79.34
	KBL	1549802366.00	2050942092.00	75.56
<b>2010/2011</b>	EBL	3212118173.00	4728815555.00	67.93
	NIBL	4670268000.00	6453931000.00	72.36
	HBL	3779673000.00	5017407000.00	75.33
	SBL	2346423934.00	2859285209.00	82.10
	KBL	1947479245.00	2441854275.00	79.75
<b>2011/2012</b>	EBL	3692677634.00	5483069922.00	67.35
	NIBL	5367158000.00	6724254000.00	79.82
	HBL	4346568000.00	5735659000.00	75.78
	SBL	2559136307.00	3224579741.00	79.36
	KBL	2029329836.00	2645437950.00	76.71

Chart 4.2.3.1.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Total Expenses to Total Income Ratio among five banks.

**Chart: 4.2.3.1.a Total Expenses to Total Income Ratio (%) in percentage**



As shown in the above Table 4.2.3.1 Total Expenses to Total Income Ratio and Chart: 4.2.3.1.a Total Expenses to Total Income Ratio we can analysis the Management Efficiency of Five commercial banks over the 10 years.

During the FY year 2002/2003 the NIBL of 97.10% is the highest Ration among the other banks, the EBL of 69.03% is the lowest ratio than other banks, and the KBL of 79.96% is the middle position.

During the FY year 2003/2004 the NIBL of 96.24% is the highest Ration among the other banks, the EBL of 59.70% is the lowest ratio than other banks, and the HBL of 72.32% is the middle position.

During the FY year 2004/2005 the NIBL of 80.20% is the highest Ration among the other banks, the EBL of 56.96% is the lowest ratio than other banks, and the KBL of 65.54% is the middle position.

During the FY year 2005/2006 the NIBL of 87.64% is the highest Ration among the other banks, the EBL of 57.75% is the lowest ratio than other banks, and the KBL of 66.20% is the middle position.

During the FY year 2006/2007 the NIBL of 87.25% is the highest Ratio among the other banks, the EBL of 57.39% is the lowest ratio than other banks, and the SBL of 67.53% is the middle position. During the FY year 2007/2008 the NIBL of 90.68% is the highest Ratio among the other banks, the EBL of 55.59% is the lowest ratio than other banks, and the SBL of 65.17% is the middle position. During the FY year 2008/2009 the SBL of 73.26% is the highest Ratio among the other banks, the EBL of 58.32% is the lowest ratio than other banks, and the NIBL of 65.05% is the middle position. During the FY year 2009/2010 the HBL of 79.71% is the highest Ratio among the other banks, the EBL of 61.46% is the lowest ratio than other banks, and the KBL of 75.56% is the middle position. During the FY year 2010/2011 the SBL of 82.10% is the highest Ratio among the other banks, the EBL of 67.93% is the lowest ratio than other banks, and the HBL of 75.33% is the middle position. During the FY year 2011/2012 the NIBL of 79.82% is the highest Ratio among the other banks, the EBL of 67.35% is the lowest ratio than other banks, and the KBL of 76.71% is the middle position.

#### **4.2.3.2 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:

$$\text{Earning Per Employee} = \frac{\text{Net Profit After Tax}}{\text{Total No. of Employees}}$$

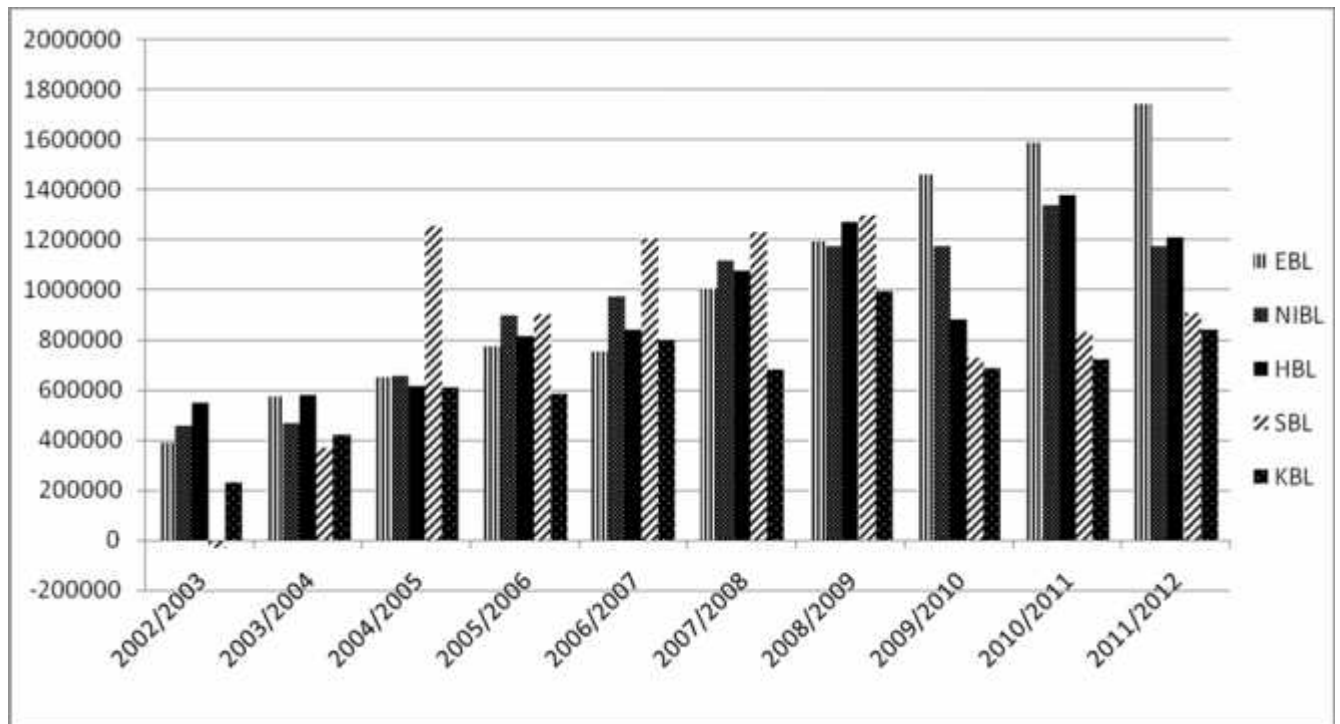
Table 4.2.3.2 is the observed Earning per Employee of five banks during the study period in numerical terms which is presented below:

**Table 4.2.3.2 Earning per Employee**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Net Profit after Tax "in Rs."</b>	<b>No of Employees</b>	<b>Earning Per Employee "in Rs"</b>
<b>2002/2003</b>	EBL	94,180,428.00	239	394060.37
	NIBL	116800000.00	254	459842.52
	HBL	212132000.00	385	550992.21
	SBL	(1,284,254.81)	43	-29866.39
	KBL	12,474,065.00	53	235359.72
<b>2003/2004</b>	EBL	143,566,683.00	250	574266.73
	NIBL	152671000.00	325	469756.92
	HBL	263052000.00	455	578136.263
	SBL	17,482,584.62	47	371969.89
	KBL	48,685,822.00	115	423354.97
<b>2004/2005</b>	EBL	168,214,611.00	257	654531.56
	NIBL	232147000.00	353	657640.23
	HBL	308277000.00	501	615323.35
	SBL	70,279,794.13	56	1254996.32
	KBL	87,880,557.00	143	614549.35
<b>2005/2006</b>	EBL	237,290,936.00	306	775460.58
	NIBL	350536000.00	390	898810.25
	HBL	457458000.00	561	815433.16
	SBL	65,252,813.00	72	906289.07
	KBL	103,666,767.00	177	585687.95
<b>2006/2007</b>	EBL	296,409,281.00	393	754222.09
	NIBL	501399000.00	514	975484.43
	HBL	491823000.00	584	842162.67
	SBL	95,305,326.00	79	1206396.53
	KBL	170,262,909.00	212	803126.93
<b>2007/2008</b>	EBL	451218613.00	449	1004941.23
	NIBL	696732000.00	622	1120147.91
	HBL	635869000.00	591	1075920.47
	SBL	143170000.00	116	1234224.14
	KBL	174930227.00	256	683321.20
<b>2008/2009</b>	EBL	638732757.00	534	1196128.76
	NIBL	900619000.00	766	1175742.82
	HBL	752835000.00	591	1273832.49
	SBL	217920000.00	168	1297142.86
	KBL	258379191.00	260	993766.20
<b>2009/2010</b>	EBL	831765632.00	568	1464376.11
	NIBL	1265949588.00	877	1443500.10
	HBL	508798000.00	577	881798.96
	SBL	240850000.00	329	732066.86
	KBL	316542342.00	364	689621.82
<b>2010/2011</b>	EBL	931303628.00	586	1589255.34
	NIBL	1176410000.00	877	1341402.50
	HBL	893115000.00	647	1380394.00
	SBL	311410000.00	375	830426.67
	KBL	251236970.00	347	724025.85
<b>2011/2012</b>	EBL	1090564222.00	625	1744902.76
	NIBL	1039276000.00	883	1176893.01
	HBL	958630000.00	793	1208865.07
	SBL	330456383.00	363	910348.16
	KBL	275504670.00	327	842521.93

Chart 4.2.3.2.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Earning per Employee among five banks.

**Chart: 4.2.3.2.a Earning per EmployeeRs.**



As shown in the above Table 4.2.3.2 Earning per Employee and Chart: 4.2.3.2.a Earning per Employee we can analysis the Management Efficiency of Five commercial banks over the 10 years.

During the FY year 2002/2003 the earning per employee the HBL of 550992.21 is the highest Amount among the other banks, the SBL of -29866.39 is the lowest Amount than other banks, and the EBL of 394060.37 is the middle amount of other banks.

During the FY year 2003/2004 the earning per employee the HBL of 578136.26 is the highest Amount among the other banks, the SBL of 371969.89 is the lowest Amount than other banks, and the NIBL of 469756.92 is the middle amount of other banks.

During the FY year 2004/2005 the earning per employee the NIBL of 657640.23 is the highest Amount among the other banks, the SBL of 1254996.32 is the lowest Amount than other banks, and the HBL of 615323.35 is the middle amount of other banks.

During the FY year 2005/2006 the earning per employee the SBL of 906289.07 is the highest Amount among the other banks, the KBL of 585687.95 is the lowest Amount than other banks and the HBL of 815433.16 is the middle amount of other banks.

During the FY year 2006/2007 the earning per employee the SBL of 1206396.53 is the highest Amount among the other banks, the EBL of 754222.09 is the lowest Amount than other banks and the HBL of 842162.67 is the middle amount of other banks.

During the FY year 2007/2008 the earning per employee the SBL of 1234224.14 is the highest Amount among the other banks, the KBL of 683321.20 is the lowest Amount than other banks and the HBL of 1075920.47 is the middle amount of other banks.

During the FY year 2008/2009 the earning per employee the SBL of 1297142.86 is the highest Amount among the other banks, the KBL of 993766.20 is the lowest Amount than other banks and the EBL of 1196128.76 is the middle amount of other banks.

During the FY year 2009/2010 the earning per employee the EBL of 1464376.11 is the highest Amount among the other banks, the KBL of 689621.82 is the lowest Amount than other banks and the HBL of 881798.96 is the middle amount of other banks.

During the FY year 2010/2011 the earning per employee the EBL of 1589255.34 is the highest Amount among the other banks, the KBL of 724025.85 is the lowest Amount than other banks and the NIBL of 1341402.50 is the middle amount of other banks.

During the FY year 2011/2012 the earning per employee the EBL of 1744902.76 is the highest Amount among the other banks, the KBL of 842521.93 is the lowest Amount than other banks and the NIBL of 1176893.01 is the middle amount of other banks.

#### **4.2.3.3 Efficiency Ratio**

Efficiency Ratio is a measure of productivity of the bank, and is targeted at the middle to low 50% range. This may seem like break-even but it is not; what this is saying is that for every dollar the bank is earning it gets to keep 50 cents and it has to spend 50 cents to earn that dollar. Efficiency improves as the ratio decreases, which is obtained by increasing net interest income, increasing non-interest revenues and/or reducing operating expenses. Non-interest expenses (expenses other than interest expense and loan loss provisions, such as salaries and employee benefits plus occupancy plus depreciation and amortization) tend to rise faster than income in a time of inflation. As it is a measure of productivity of the bank, and is targeted at the middle to low 50% range. This may seem like break-even but it is not; what this is saying is that for every dollar the bank is earning it gets to keep 50 cents and it has to spend 50 cents to earn that dollar. The ratio can be as low as the mid to

low 40% range, which means that for every dollar the bank earns it gets to keep 60 cents and spends 40 cents, a very efficient bank. Ratios in excess of 75% mean the bank is very expensive to operate. Following model is used to calculate this ratio:

$$\text{Efficiency Ratio} = \frac{\text{Total Non Interest Expenses}}{\text{Total Net Interest Income}^* + \text{Total Non Interest Income}}$$

$$\text{Total Non-Interest Expenses} = \text{Exchange Loss} + \text{Employee Expenses} + \text{Other Operating Expenses} + \text{Non-Operating Loss}$$

$$\text{Total Net Interest Income}^* = \text{Total Net Interest Income (before provisions)}$$

$$\text{Total Net Interest Income (before provision)} = \text{Total Interest Income} - \text{Total Interest Expenses}$$

$$\text{Total Non-Interest Income} = \text{Commission and Discount Income} + \text{Other Operating Income} + \text{Exchange Gain} + \text{Non-Operating Income}$$

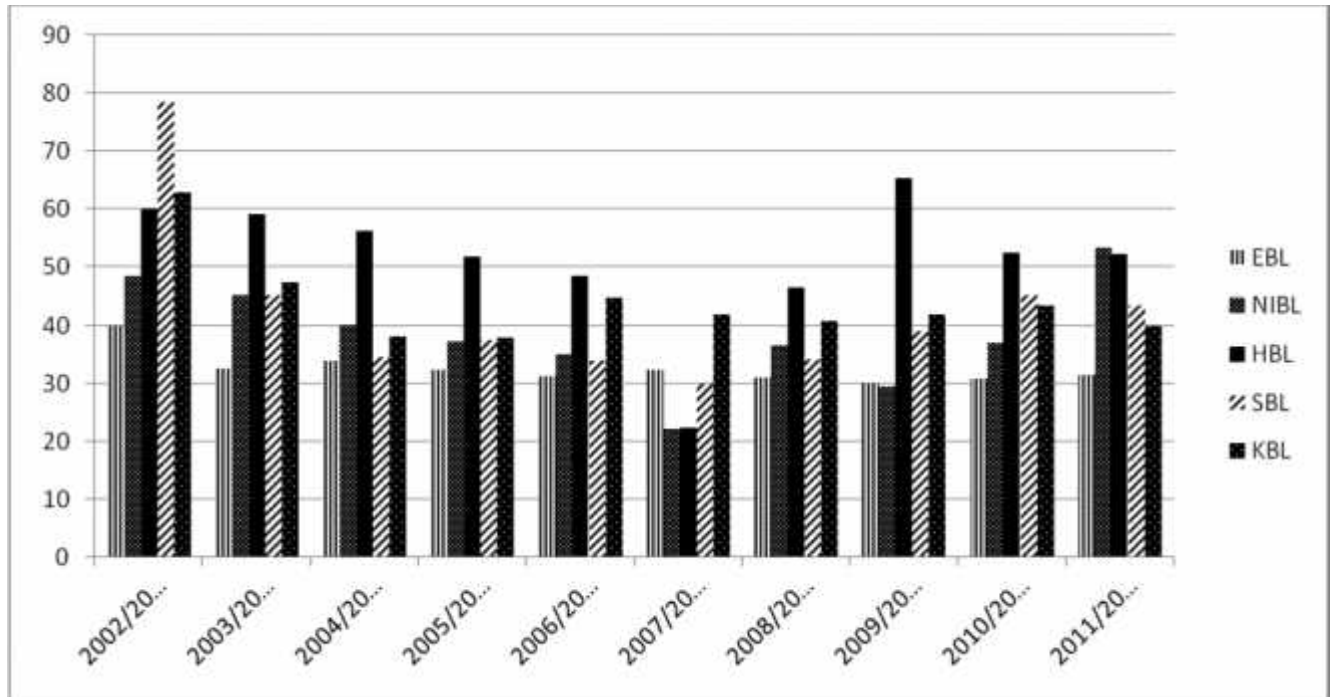
Table 4.2.3.3 is the observed Efficiency Ratio of five banks during the study period in numerical terms which is presented below:

**Table 4.2.3.3 Efficiency Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Total Non-Interest Expenses "inRs."</b>	<b>Total Net Interest Income* + Total Non-Interest income "inRs."</b>	<b>Efficiency Ratio %</b>
<b>2002/2003</b>	EBL	130,953,130.00	327,693,446	39.96
	NIBL	188200000.00	388700000	48.42
	HBL	540152000.00	900180000	60.00
	SBL	18,202,758.36	23,208,753	78.43
	KBL	68,757,692.00	109,288,203	62.91
<b>2003/2004</b>	EBL	152,337,821.00	468,692,492	32.50
	NIBL	264947000.00	587512000	45.10
	HBL	607501000.00	1028075000	59.10
	SBL	38,125,732.57	84,252,957	45.25
	KBL	85,017,449.00	178,946,462	47.51
<b>2004/2005</b>	EBL	189,664,592.00	559,393,712	33.91
	NIBL	316994000.00	791079000	40.07
	HBL	676175000.00	1198717000	56.41
	SBL	51,208,214.59	148,278,483	34.54
	KBL	114,207,011.00	300,470,960	38.01
<b>2005/2006</b>	EBL	214,486,842.00	665,112,868	32.25
	NIBL	361760000.00	970482000	37.27
	HBL	723023000.00	1395422000	51.81
	SBL	70,212,055.00	187,382,016	37.47
	KBL	178,323,104.00	472,057,378	37.78
<b>2006/2007</b>	EBL	263,663,875.00	843,442,733	31.26
	NIBL	461139000.00	1314233000	35.08
	HBL	679452000.00	1396855000	48.64
	SBL	89,341,662.00	262,930,942	33.98
	KBL	148,541,557.00	331,128,458	44.86
<b>2007/2008</b>	EBL	391723729.00	1209898087	32.37
	NIBL	602300000.00	2731625000	22.05
	HBL	358357000.00	1607196000	22.29
	SBL	119728071.00	401919501	29.79
	KBL	237713576.00	566618968	41.95
<b>2008/2009</b>	EBL	478930392.00	1544965598	31.00
	NIBL	752455000.00	2063311000	36.47
	HBL	925252000.00	1991858000	46.45
	SBL	194201670.00	569547294	34.09
	KBL	284780080.00	698665360	40.76
<b>2009/2010</b>	EBL	578875240.00	1927976053	30.02
	NIBL	806504000.00	2734930000	29.49
	HBL	1417614000.00	2170341000	65.31
	SBL	279415478.00	717422648	38.95
	KBL	360884193.00	862023919	41.86
<b>2010/2011</b>	EBL	676242621.00	2192940003	30.83
	NIBL	1049931000.00	2833594000	37.05
	HBL	1364866000.00	2602600000	52.44
	SBL	421280835.00	934042110	45.10
	KBL	380927647.00	875302677	43.52
<b>2011/2012</b>	EBL	819342952.00	2609735240	31.39
	NIBL	1552747000.00	2909843000	53.36
	HBL	1530127000.00	2919218000	52.41
	SBL	510223602.00	1175666036	43.39
	KBL	406838076.00	1022972035	39.77

Chart 4.2.3.3.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Efficiency Ratio among the Five banks.

**Chart: 4.2.3.3.a Efficiency Ratio (%) in percentage**



As shown in the above Table 4.2.3.3 Efficiency Ratio and Chart: 4.2.3.3.a Efficiency Ratio, we can analysis the Management Efficiency of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the SBL of 78.43% is the highest Ratio among the other banks, the EBL of 39.96% is the lowest ratio than other banks, and the HBL of 60.00% is the middle position.

During the FY year 2003/2004 the HBL of 59.10% is the highest Ratio among the other banks, the EBL of 32.50% is the lowest ratio than other banks, and the SBL of 45.25% is the middle position.

During the FY year 2004/2005 the HBL of 56.41% is the highest Ratio among the other banks, the EBL of 33.91% is the lowest ratio than other banks, and the KBL of 38.01% is the middle position.

During the FY year 2005/2006 the HBL of 51.81% is the highest Ratio among the other banks, the EBL of 32.25% is the lowest ratio than other banks, and the SBL of 37.47% is the middle position.

During the FY year 2006/2007 the HBL of 48.64% is the highest Ratio among the other banks, the EBL of 31.26% is the lowest ratio than other banks, and the NBL of 35.08% is the middle position.

During the FY year 2007/2008 the KBL of 41.95% is the highest Ratio among the other banks, the NIBL of 22.05% is the lowest ratio than other banks, and the SBL of 29.79% is the middle position.

During the FY year 2008/2009 the HBL of 46.45% is the highest Ratio among the other banks, the EBL of 31.00% is the lowest ratio than other banks, and the NIBL of 36.47% is the middle position.

During the FY year 2009/2010 the HBL of 65.31% is the highest Ratio among the other banks, the NIBL of 29.49% is the lowest ratio than other banks, and the SBL of 38.95% is the middle position. During the FY year 2010/2011 the HBL of 52.44% is the highest Ratio among the other banks, the EBL of 30.83% is the lowest ratio than other banks, and the KBL of 43.52% is the middle position. During the FY year 2011/2012 the NIBL of 53.36% is the highest Ratio among the other banks, the EBL of 31.39% is the lowest ratio than other banks, and the SBL of 43.39% is the middle position.

### ***Findings:***

In the conclusion above the calculation and chart shows its management efficiency of all the five banks, although the net profit after taxes increases of all banks each year. The NIBL, Total Expenses to total income ratio is more than other banks around 97% in the study period from 2002/2003 up to 2008/2009. This is not the good sign of effective and efficient management. This is due to the high proportion of incensement in total expenses compare to total income. But the earning per employee of all banks is in increasing trend, but the some of the year the bank's earning per employee has decreased due to increased number of staff. Similarly, Efficiency ratio of all banks is in decreasing trend which is good sign for the bank due to the high percentage increment in Total Net interest income plus total non-interest income compare to Total non-interest Expenses, and Efficiency ratio volatile by the way the banks are trying to maintain it which is good sign for Nepalese commercial banks.

### **4.2.4 EARNING**

Earnings determine the ability of a bank to retain capital, absorb loan losses, support the future growth of assets, and provide a return to investors. The largest source of income for a bank is net interest revenue (interest income from lending activity less interest paid on deposits and debt). The second most important source is from investing activity. A substantial source of income also comes from foreign exchange and precious metal trading, and commissions/transaction fees and trust operations.

Earning capacity largely counts on the efficiency of management. The quality and trend of earnings of an institution depend largely on how well the management manages the assets and liabilities of the institution. An FI must earn reasonable profit to support asset growth, build up adequate reserves and enhance shareholders' value. Good earnings performance would inspire the confidence of depositors, investors, creditors, and the public at large. Chronically, loss making commercial banks reduces their capital base, risk the solvency and eventually bring down the wealth of their shareholders.

Conversely, constantly profit making banks add equity to the total capital fund, reduce the risk of insolvency, and finally increase the wealth of their shareholders. Since, chronically unprofitable FI risks insolvency on one hand and on the others, unusually high profitability can reflect excessive risk taking of an FI, management and decision making body has to be conscious about it.

Earning capacity or profitability keeps up the sound health of an FI. So, earning capacity is one of the indicators of the sound health of a commercial bank. Though different indicators can be used to measure the profitability of banks, NRB uses return on total assets as an indicator of profitability of a commercial bank. In addition, it uses the absolute measures such as interest income, net interest income, noninterest income, net non-interest income, non-operating income, net non-operating income and net profit, to evaluate the profitability of a commercial bank (NRB 2005). Here we use the following tools to measures the earning

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

The return on equity indicates the relationship between net profits after taxes to total equity capital. Return on equity reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the balance sheet. In other words, It measures a firm's efficiency at generating profits from every dollar of net assets (assets minus liabilities), and shows how well a company uses investment dollars to generate earnings growth. So, it measures the ability to augment capital internally (increase net worth), pay a dividend to the shareholders and also measures the return on the stockholder's investment. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. ROE encompasses the three pillars of corporate management -- profitability, asset management, and financial leverage. By seeing how well the executive team balances these components, investors can not only get an excellent sense of whether they will receive a decent return on equity but can also assesses management's ability to get the job done. For the most part, the higher a company's return on equity compared to its industry, the better. For the purpose of the study following model is used to determine the return on equity ratio:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income after Tax}}{\text{Share holders' Fund}}$$

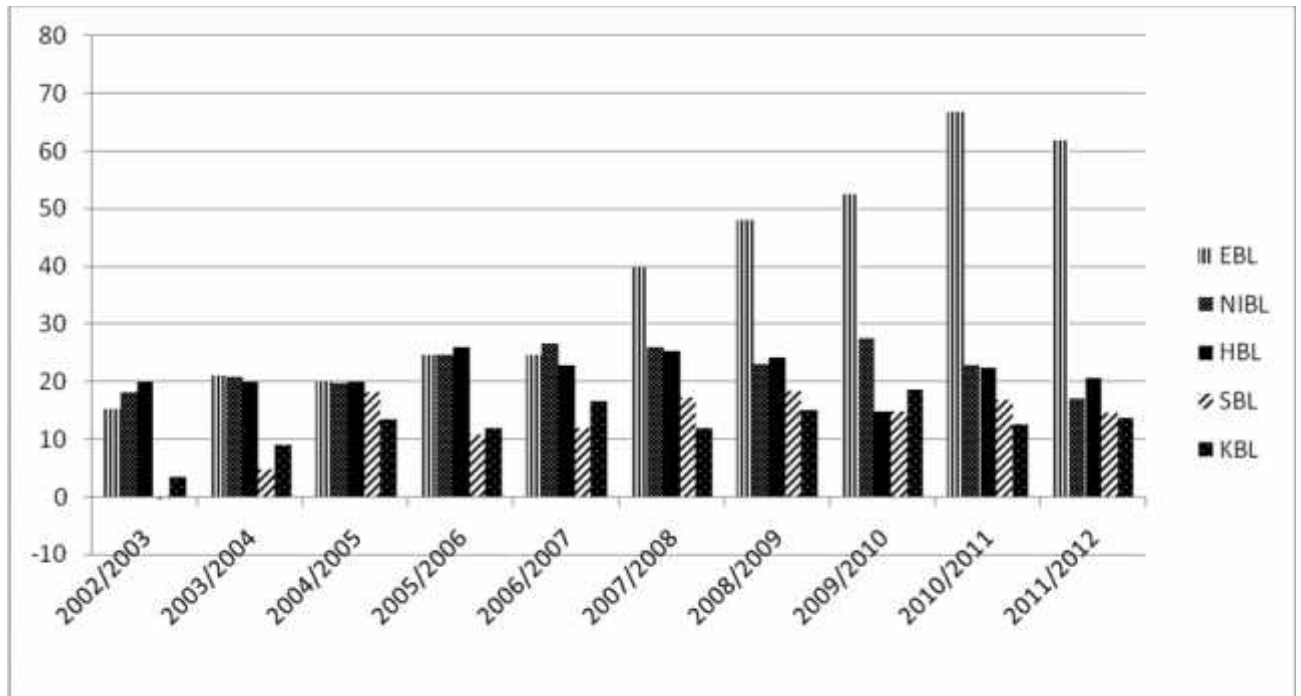
Table 4.2.4.1 is the observed Return on Equity of five banks during the study period in numerical terms which is presented below:

**Table 4.2.4.1 Return on Equity (ROE)**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Net Profit after Tax "in Rs."</b>	<b>Share Holder's Fund "in Rs."</b>	<b>Return on Equity (ROE) %</b>
<b>2002/2003</b>	EBL	94,180,428.00	612,824,701.00	15.37
	NIBL	116,800,000.00	638,540,000.00	18.29
	HBL	212,132,000.00	1,063,132,000.00	19.95
	SBL	(1,284,254.81)	348,715,745.19	-0.37
	KBL	12,474,065.00	361,033,148.00	3.46
<b>2003/2004</b>	EBL	143,566,683.00	680,318,543.00	21.10
	NIBL	152,671,000.00	729,048,000.00	20.94
	HBL	263,052,000.00	1,324,166,000.00	19.86
	SBL	17,482,584.62	366,198,329.81	4.77
	KBL	48,685,822.00	533,403,180.00	9.13
<b>2004/2005</b>	EBL	168,214,611.00	832,617,365.00	20.20
	NIBL	232,147,000.00	1,180,173,000.00	19.67
	HBL	308,277,000.00	1,541,747,000.00	19.99
	SBL	70,279,794.13	387,888,643.00	18.12
	KBL	87,880,557.00	645,441,536.00	13.62
<b>2005/2006</b>	EBL	237,290,936.00	962,808,301.00	24.65
	NIBL	350,536,000.00	1,415,440,000.00	24.76
	HBL	457,458,000.00	1,766,176,000.00	25.90
	SBL	65,252,813.00	603,141,455.00	10.82
	KBL	103,666,767.00	863,850,557.00	12.00
<b>2006/2007</b>	EBL	296,409,281.00	1,201,515,266.00	24.67
	NIBL	501,399,000.00	1,878,124,000.00	26.69
	HBL	491,823,000.00	2,146,500,000.00	22.91
	SBL	95,305,326.00	793,709,939.00	12.01
	KBL	170,262,909.00	1,025,630,159.00	16.60
<b>2007/2008</b>	EBL	451,218,613.00	1,131,400,000.00	39.88
	NIBL	696,732,000.00	2,686,786,000.00	25.93
	HBL	635,869,000.00	2,512,992,000.00	25.30
	SBL	143,170,000.00	828,000,000.00	17.29
	KBL	174,930,227.00	1,470,000,000.00	11.90
<b>2008/2009</b>	EBL	638,732,757.00	1,330,467,300.00	48.00
	NIBL	900,619,000.00	3,907,840,000.00	23.05
	HBL	752,835,000.00	3,119,981,000.00	24.13
	SBL	217,920,000.00	1,179,970,000.00	18.47
	KBL	258,379,191.00	1,704,935,920.00	15.15
<b>2009/2010</b>	EBL	831,765,632.00	1,579,607,490.00	52.65
	NIBL	1,265,949,588.00	4,585,393,000.00	27.61
	HBL	508,798,000.00	3,439,547,800.00	14.79
	SBL	240,850,000.00	1,610,664,219.00	14.95
	KBL	316,542,342.00	1,706,015,920.00	18.55
<b>2010/2011</b>	EBL	931,303,628.00	1,391,570,477.00	66.92
	NIBL	1,176,410,000.00	5,159,760,000.00	22.80
	HBL	893,115,000.00	3,995,478,000.00	22.35
	SBL	311,410,000.00	1,846,033,900.00	16.87
	KBL	251,236,970.00	2,003,800,000.00	12.53
<b>2011/2012</b>	EBL	1,090,564,222.00	1,761,126,410.00	61.92
	NIBL	1,039,276,000.00	6,049,941,000.00	17.17
	HBL	958,630,000.00	4,632,010,000.00	20.69
	SBL	330,456,383.00	2,247,014,300.00	14.70
	KBL	275,504,670.00	2,003,800,000.00	13.75

Chart 4.2.4.1.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Return on Equity among five banks.

**Chart: 4.2.4.1.a Return on Equity (ROE), (%) in percentage**



As shown in the above Table 4.2.4.1 Return on Equity (ROE) and Chart: 4.2.4.1.a Return on Equity (ROE) we can analyze the Earnings determined of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the HBL of 19.95% is the highest Ratio among the other banks, the SBL of -0.37% is the lowest ratio than other banks, and the EBL of 15.37% is the middle position.

During the FY year 2003/2004 the EBL of 21.10% is the highest Ratio among the other banks, the SBL of 4.77% is the lowest ratio than other banks, and the HBL of 19.86% is the middle position.

During the FY year 2004/2005 the EBL of 20.20% is the highest Ratio among the other banks, the KBL of 13.62% is the lowest ratio than other banks, and the NIBL of 19.67% is the middle position.

During the FY year 2005/2006 the HBL of 25.90% is the highest Ratio among the other banks, the SBL of 10.82% is the lowest ratio than other banks, and the EBL of 24.65% is the middle position.

During the FY year 2006/2007 the NIBL of 26.69% is the highest Ratio among the other banks, the SBL of 12.01% is the lowest ratio than other banks, and the HBL of 22.91% is the middle position.

During the FY year 2007/2008 the EBL of 39.88% is the highest Ratio among the other banks, the KBL of 11.90% is the lowest ratio than other banks, and the HBL of 25.30% is the middle position.

During the FY year 2008/2009 the EBL of 48.00% is the highest Ratio among the other banks, the KBL of 15.15% is the lowest ratio than other banks, and the NIBL of 23.05% is the middle position. During the FY year 2009/2010 the EBL of 52.65% is the highest Ratio among the other banks, the HBL of 14.79% is the lowest ratio than other banks, and the KBL of 18.55% is the middle position. During the FY year 2010/2011 the EBL of 66.92% is the highest Ratio among the other banks, the KBL of 12.53% is the lowest ratio than other banks, and the HBL of 22.35% is the middle position. During the FY year 2011/2012 the EBL of 61.92% is the highest Ratio among the other banks, the KBL of 13.75% is the lowest ratio than other banks, and the NIBL of 17.17% is the middle position.

#### **4.2.4.2 Return on Assets (ROA)**

Net income after taxes to total assets of a bank. It measures how the assets are utilized by indicating the profitability of the assets base or asset mix. ROA gives an idea as to how efficient management is at using its assets to generate earnings. The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors and potential investors an idea of how effectively the company is converting the money it has to invest into net income. A comparison of net income and average total assets, the ROA ratio reveals how much income has been able to squeeze from each dollar's worth of a company's assets. Higher the ROA, the better is the quality of assets and efficient asset utilization; because the company is earning more money on less investment It is calculated by using the following model.

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income after Tax}}{\text{Total Assets}}$$

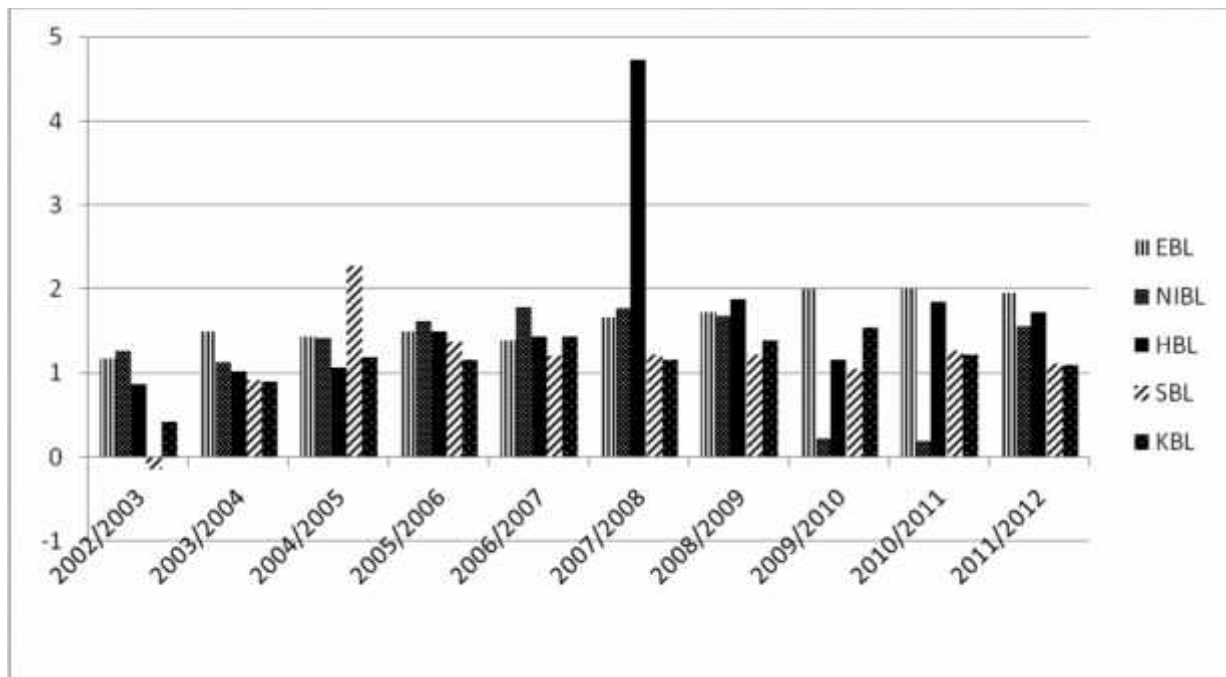
Table 4.2.4.2 is the observed Return on Assets of five banks during the study period in numerical terms which is presented below:

**Table 4.2.4.2 Return on Assets (ROA)**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Net Profit after Tax "in Rs."</b>	<b>Total Asset "inRs."</b>	<b>Return on Asset (ROA) %</b>
<b>2002/2003</b>	EBL	94,180,428.00	8,052,209,125	1.17
	NIBL	116,800,000.00	9,163,900,000	1.27
	HBL	212,132,000.00	24,197,974,000	0.87
	SBL	(1,284,254.81)	863,735,348	-0.15
	KBL	12,474,065.00	2,986,175,454	0.42
<b>2003/2004</b>	EBL	143,566,683.00	9,608,570,861	1.49
	NIBL	152,671,000.00	13,463,937,000	1.13
	HBL	263,052,000.00	25,729,787,000	1.02
	SBL	17,482,584.62	1,912,039,287	0.91
	KBL	48,685,822.00	5,494,176,578	0.89
<b>2004/2005</b>	EBL	168,214,611.00	11,732,516,418	1.43
	NIBL	232,147,000.00	16,390,652,000	1.42
	HBL	308,277,000.00	28,871,343,000	1.06
	SBL	70,279,794.13	3,091,102,752	2.27
	KBL	87,880,557.00	7,437,882,125	1.18
<b>2005/2006</b>	EBL	237,290,936.00	15,959,284,687	1.49
	NIBL	350,536,000.00	21,730,800,000	1.61
	HBL	457,458,000.00	30,579,808,000	1.49
	SBL	65,252,813.00	4,756,935,449	1.37
	KBL	103,666,767.00	9,010,276,184	1.15
<b>2006/2007</b>	EBL	296,409,281.00	21,432,574,300	1.38
	NIBL	501,399,000.00	28,073,517,000	1.78
	HBL	491,823,000.00	34,314,888,000	1.43
	SBL	95,305,326.00	7,954,664,475	1.20
	KBL	170,262,909.00	11,918,311,429	1.43
<b>2007/2008</b>	EBL	451,218,613.00	27,149,342,884	1.66
	NIBL	696,732,000.00	39,405,959,000	1.77
	HBL	635,869,000.00	36,857,624,000	4.72
	SBL	143,170,000.00	11,668,360,000	1.22
	KBL	174,930,227.00	15,026,599,175	1.16
<b>2008/2009</b>	EBL	638,732,757.00	36,916,848,654	1.73
	NIBL	900,619,000.00	53,596,754,000	1.68
	HBL	752,835,000.00	40,046,686,000	1.88
	SBL	217,920,000.00	17,881,750,000	1.22
	KBL	258,379,191.00	18,538,565,109	1.39
<b>2009/2010</b>	EBL	831,765,632.00	41,382,760,711	2.00
	NIBL	126,595,000.00	57,305,413,000	0.22
	HBL	508,798,000.00	43,860,251,000	1.16
	SBL	240,850,000.00	22,802,430,000	1.05
	KBL	316,542,342.00	20,522,474,688	1.54
<b>2010/2011</b>	EBL	931,303,628.00	46,236,212,262	2.01
	NIBL	117,641,000.00	59,107,754,000	0.19
	HBL	893,115,000.00	48,137,497,000	1.85
	SBL	311,410,000.00	24,405,870,000	1.27
	KBL	251,236,970.00	20,491,785,309	1.22
<b>2011/2012</b>	EBL	1,090,564,222.00	55,813,129,057	1.95
	NIBL	1,039,276,000.00	66,925,124,000	1.55
	HBL	958,630,000.00	55,367,467,000	1.73
	SBL	330,456,383.00	29,579,198,888	1.11
	KBL	275,504,670.00	25,131,400,971	1.09

Chart 4.2.4.2.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Return on Assets among the five banks.

**Chart: 4.2.4.2.a Return on Assets (ROA), (%) in percentage**



As shown in the above Table 4.2.4.2 Return on Assets (ROA) and Chart: 4.2.4.2.a Return on Assets (ROA) we can analyze the Earnings determined of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the NIBL of 1.27% is the highest Ratio among the other banks, the SBL of -0.15% is the lowest ratio than other banks, and the HBL of 0.87% is the middle position.

During the FY year 2003/2004 the EBL of 1.49% is the highest Ratio among the other banks, the KBL of 0.89% is the lowest ratio than other banks, and the HBL of 1.02% is the middle position.

During the FY year 2004/2005 the SBL of 2.27% is the highest Ratio among the other banks, the HBL of 1.06% is the lowest ratio than other banks, and the NIBL of 1.42% is the middle position.

During the FY year 2005/2006 the NIBL of 1.61% is the highest Ratio among the other banks, the KBL of 1.15% is the lowest ratio than other banks, but the EBL and the HBL are equal value of 1.49% are the middle position.

During the FY year 2006/2007 the NIBL of 1.78% is the highest Ratio among the other banks, the SBL of 1.20% is the lowest ratio than other banks, and the KBL of 1.43% is the middle position.

During the FY year 2007/2008 the HBL of 4.72% is the highest Ratio among the other banks, the KBL of 1.16% is the lowest ratio than other banks, and the EBL of 1.66% is the middle position.

During the FY year 2008/2009 the HBL of 1.88% is the highest Ratio among the other banks, the SBL of 1.22% is the lowest ratio than other banks, and the NIBL of 1.68% is the middle position. During the FY year 2009/2010 the EBL of 2.00% is the highest Ratio among the other banks, the NIBL of 0.22% is the lowest ratio than other banks, and the HBL of 1.16% is the middle position. During the FY year 2010/2011 the EBL of 2.01% is the highest Ratio among the other banks, the NIBL of 0.19% is the lowest ratio than other banks, and the SBL of 1.27% is the middle position. During the FY year 2011/2012 the EBL of 1.95% is the highest Ratio among the other banks, the KBL of 1.09% is the lowest ratio than other banks, and the NIBL of 1.55% is the middle position.

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

Earnings per share are generally considered to be the single most important variable in determining a share's price. It is the portion of a company's profit allocated to each outstanding share of common stock. An important aspect of EPS that's often ignored is the capital that is required to generate the earnings (net income) in the calculation. Two companies could generate the same EPS number, but one could do so with less equity (investment) - that company would be more efficient at using its capital to generate income and, all other things being equal would be a "better" company. Following is the expression of earning per share:

$$\text{Earning per Share (EPS)} = \frac{\text{Net Income after Tax}}{\text{No. of Shares Outstanding}}$$

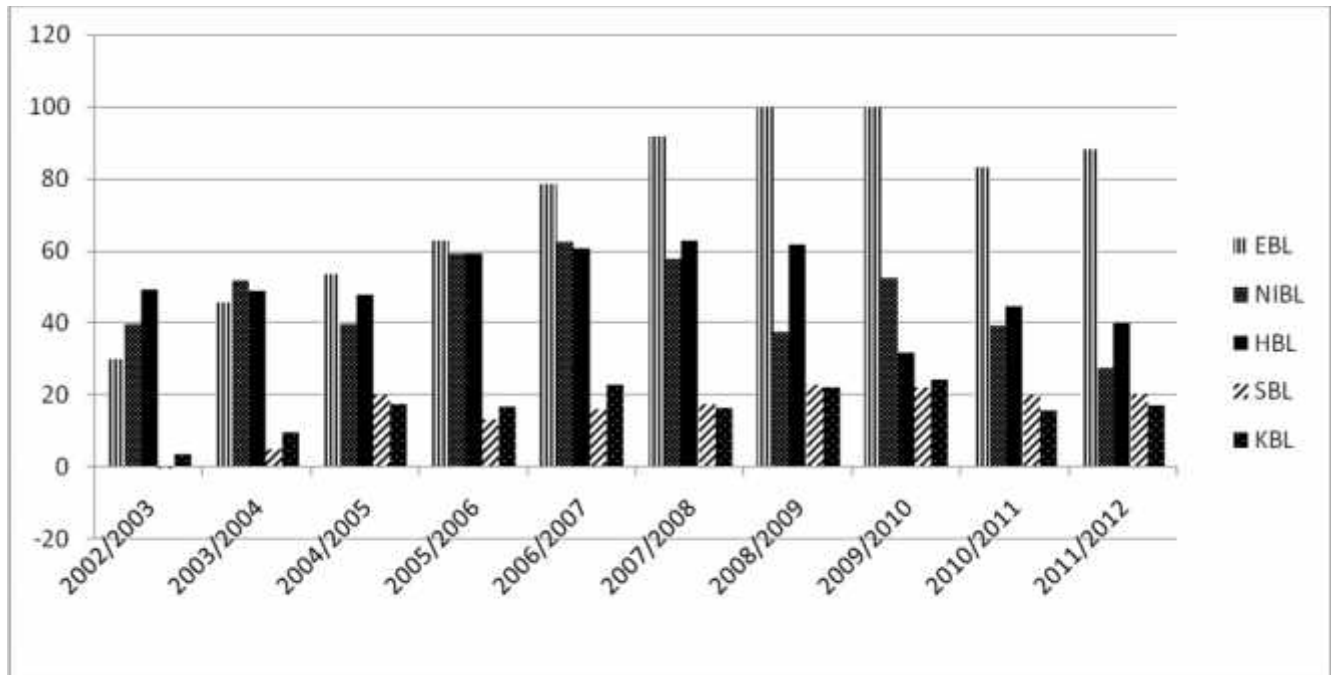
Table 4.2.4.3 is the observed Earning per Share of five banks during the study period in numerical terms which is presented below

**Table 4.2.4.3 Earning per Share (EPS)**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Net Profit after Tax "inRs."</b>	<b>No of shares outstanding</b>	<b>Earning Per Share "in Rs"</b>
<b>2002/2003</b>	EBL	94,180,428.00	3,150,000	29.90
	NIBL	116,800,000.00	2,952,930	39.56
	HBL	212,132,000.00	4,290,000	49.45
	SBL	(1,284,254.81)	3,500,000	-0.37
	KBL	12,474,065.00	3,500,000	3.56
<b>2003/2004</b>	EBL	143,566,683.00	3,150,000	45.58
	NIBL	152,671,000.00	2,952,300	51.71
	HBL	263,052,000.00	5,362,500	49.05
	SBL	17,482,584.62	3,500,000	5.00
	KBL	48,685,822.00	5,000,000	9.74
<b>2004/2005</b>	EBL	168,214,611.00	3,150,000	53.40
	NIBL	232,147,000.00	5,877,385	39.50
	HBL	308,277,000.00	6,435,000	47.91
	SBL	70,279,794.13	3,500,000	20.08
	KBL	87,880,557.00	5,000,000	17.58
<b>2005/2006</b>	EBL	237,290,936.00	3,780,000	62.78
	NIBL	350,536,000.00	5,905,860	59.35
	HBL	457,458,000.00	7,722,000	59.24
	SBL	65,252,813.00	5,000,000	13.05
	KBL	103,666,767.00	6,250,000	16.59
<b>2006/2007</b>	EBL	296,409,281.00	3,780,000	78.42
	NIBL	501,399,000.00	8,013,526	62.57
	HBL	491,823,000.00	8,108,100	60.66
	SBL	95,305,326.00	6,000,000	15.88
	KBL	170,262,909.00	7,500,000	22.70
<b>2007/2008</b>	EBL	451,218,613.00	4,914,000	91.82
	NIBL	696,732,000.00	12,039,154	57.87
	HBL	635,869,000.00	10,135,125	62.74
	SBL	143,170,000.00	8,280,000	17.29
	KBL	174,930,227.00	10,700,000	16.35
<b>2008/2009</b>	EBL	638,732,757.00	6,388,210	99.99
	NIBL	900,619,000.00	24,070,689	37.42
	HBL	752,835,000.00	12,162,150	61.90
	SBL	217,920,000.00	9,522,000	22.89
	KBL	258,379,191.00	11,860,992	22.04
<b>2009/2010</b>	EBL	831,765,632.00	8,304,673	100.16
	NIBL	126,595,000.00	24,090,977	52.55
	HBL	508,798,000.00	16,000,000	31.80
	SBL	240,850,000.00	10,950,300	21.99
	KBL	316,542,342.00	13,060,159	24.24
<b>2010/2011</b>	EBL	931,303,628.00	11,196,095	83.18
	NIBL	117,641,000.00	30,113,721	39.10
	HBL	893,115,000.00	20,000,000	44.66
	SBL	311,410,000.00	15,711,300	19.82
	KBL	251,236,970.00	16,038,000	15.67
<b>2011/2012</b>	EBL	1,090,564,222.00	12,316,357	88.18
	NIBL	1,039,276,000.00	37,661,553	27.6
	HBL	958,630,000.00	24,000,000	39.94
	SBL	330,456,383.00	16,192,443	20.41
	KBL	275,504,670.00	16,038,000	17.18

Chart 4.2.4.3.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Earning per Share among five banks.

**Chart: 4.2.4.3.a Earning per Share (EPS) in RS.**



As shown in the above Table 4.2.4.3 Earning per Share (EPS) in Rs. and Chart: 4.2.4.3.a Earning per Share (EPS) in Rs. we can analysis the Earning determined of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the Earning per Share (EPS), the HBL of 49.45 is the highest Amount among the other banks, the SBL of -0.37 is the lowest Amount than other banks and the EBL of 29.90 is the middle amount of other banks.

During the FY year 2003/2004 the Earning per Share (EPS), the NIBL of 51.71 is the highest Amount among the other banks, the SBL of 5.00 is the lowest Amount than other banks and the EBL of 45.58 is the middle amount of other banks.

During the FY year 2004/2005 the Earning per Share (EPS), the EBL of 53.40 is the highest Amount among the other banks, the KBL of 17.58 is the lowest Amount than other banks and the HBL of 47.91 is the middle amount of other banks.

During the FY year 2005/2006 the Earning per Share (EPS), the EBL of 62.78 is the highest Amount among the other banks, the SBL of 13.05 is the lowest Amount than other banks and the HBL of 59.24 is the middle amount of other banks.

During the FY year 2006/2007 the Earning per Share (EPS), the EBL of 78.42 is the highest Amount among the other banks, the SBL of 15.88 is the lowest Amount than other banks and the HBL of 60.66 is the middle amount of other banks.

During the FY year 2007/2008 the Earning per Share (EPS), the EBL of 91.82 is the highest Amount among the other banks, the KBL of 16.35 is the lowest Amount than other banks and the NIBL of 57.87 is the middle amount of other banks.

During the FY year 2008/2009 the Earning per Share (EPS), the EBL of 99.99 is the highest Amount among the other banks, the KBL of 22.04 is the lowest Amount than other banks and the NIBL of 37.42 is the middle amount of other banks.

During the FY year 2009/2010 the Earning per Share (EPS), the EBL of 100.16 is the highest Amount among the other banks, the SBL of 21.99 is the lowest Amount than other banks and the HBL of 31.80 is the middle amount of other banks.

During the FY year 2010/2011 the Earning per Share (EPS), the EBL of 83.18 is the highest Amount among the other banks, the KBL of 15.67 is the lowest Amount than other banks and the NIBL of 39.10 is the middle amount of other banks.

During the FY year 2011/2012 the Earning per Share (EPS), the EBL of 88.18 is the highest Amount among the other banks, the KBL of 17.18 is the lowest Amount than other banks and the NIBL of 27.6 is the middle amount of other banks.

#### **4.2.4.4 Price Earning (P/E) Ratio**

The P/E gives an idea of what the market is willing to pay for the company's earnings or an indication of how many times you are paying for a company's stock verse a company's earnings. The higher the P/E the more the market is willing to pay for the company's earnings. Some investors read a high P/E as an overpriced stock and that may be the case, however it can also indicate the market has high hopes for this stock's future and has bid up the price. It is simply a company's stock price divided by a company's earnings per share. P/E ratios can be used to compare against other companies, or against a company's own historical P/E ratio. It is believed by some that a company with a high (large) P/E ratio is expensive verse a company with a low P/E ratio, since with a high P/E ratio you are paying a larger multiple verses a company's earnings.

$$\text{Price Earning (P / E)Ratio} = \frac{\text{Market Price Per Share}}{\text{Earning Price Pre Share}}$$

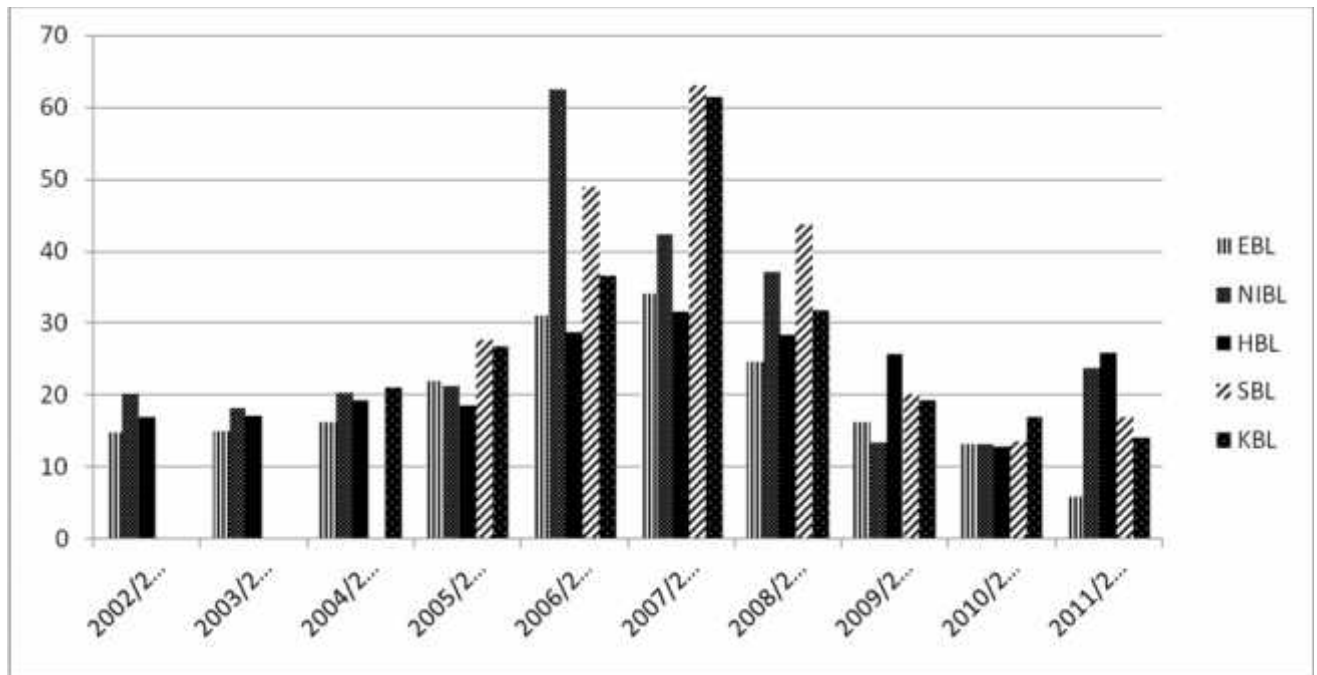
Table 4.2.4.4 is the observed Price Earnings Ratio of five banks during the study period in numerical terms which is presented below.

**Table 4.2.4.4 Price Earning (P/E) Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Market Price Per Share "in Rs"</b>	<b>Earning Price Per Share "in Rs"</b>	<b>P/E Ratio</b>
<b>2002/2003</b>	EBL	445	29.90	14.88
	NIBL	795	39.56	20.09
	HBL	836	49.45	16.90
	SBL	-	-0.37	-
	KBL	-	3.56	-
<b>2003/2004</b>	EBL	680	45.58	14.92
	NIBL	940	51.70	18.18
	HBL	840	49.05	17.12
	SBL	-	5.00	-
	KBL	-	9.74	-
<b>2004/2005</b>	EBL	870	53.40	16.29
	NIBL	800	39.50	20.25
	HBL	920	47.91	19.20
	SBL	-	20.08	-
	KBL	369	17.58	20.99
<b>2005/2006</b>	EBL	1,379	62.78	21.97
	NIBL	1,260	59.35	21.22
	HBL	1,100	59.24	18.57
	SBL	360	13.05	27.59
	KBL	443	16.59	26.70
<b>2006/2007</b>	EBL	2,430	78.42	30.99
	NIBL	1,729	27.63	62.57
	HBL	1,740	60.66	28.68
	SBL	778	15.88	48.99
	KBL	830	22.70	36.56
<b>2007/2008</b>	EBL	3,132	91.82	34.11
	NIBL	2,450	57.87	42.34
	HBL	1,980	62.74	31.56
	SBL	1,090	17.29	63.04
	KBL	1,005	16.35	61.47
<b>2008/2009</b>	EBL	2,455	99.99	24.55
	NIBL	1,388	37.42	37.09
	HBL	1,760	61.90	28.43
	SBL	1,000	22.89	43.68
	KBL	700	22.04	31.76
<b>2009/2010</b>	EBL	1,630	100.16	16.27
	NIBL	705	52.55	13.41
	HBL	816	31.80	25.66
	SBL	444	21.99	20.19
	KBL	468	24.24	19.30
<b>2010/2011</b>	EBL	1,094	83.18	13.15
	NIBL	515	39.10	13.17
	HBL	576	44.66	12.88
	SBL	270	19.82	13.62
	KBL	266	15.67	16.97
<b>2011/2012</b>	EBL	511	88.18	5.79
	NIBL	653	27.6	23.66
	HBL	1,033	39.94	25.86
	SBL	345	20.41	16.90
	KBL	242	17.18	14.08

Chart 4.2.4.4.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Price Earnings Ratio among five banks.

**Chart: 4.2.4.4.a Price Earnings Ratio**



As shown in the above Table 4.2.4.4 Price Earning (P/E) Ratio. And Chart: 4.2.4.4.a Price Earnings Ratio, we can analysis the Earning determined of the five commercial banks over the 10 years.

During the FY year 2002/2003 the NIBL of 18.18 is the highest Ration among the other banks, the KBL and SBL of 0.00 is the lowest ratio than other banks, and the HBL of 16.90 is the middle position.

During the FY year 2003/2004 the NIBL of 20.09 is the highest Ration among the other banks, the KBL and SBL of 0.00 is the lowest ratio than other banks, and the EBL of 14.92 is the middle position.

During the FY year 2004/2005 the KBL of 20.99 is the highest Ration among the other banks, the SBL of 0.00 is the lowest ratio than other banks, and the HBL of 19.20 is the middle position.

During the FY year 2005/2006 the SBL of 27.59 is the highest Ration among the other banks, the HBL of 28.68 is the lowest ratio than other banks, and the EBL of 21.97 is the middle position.

During the FY year 2006/2007 the NIBL of 62.57 is the highest Ratio among the other banks, the HBL of 28.68 is the lowest ratio than other banks, and the KBL of 36.56 is the middle position.

During the FY year 2007/2008 the SBL of 63.04 is the highest Ratio among the other banks, the HBL of 31.56 is the lowest ratio than other banks, and the NIBL of 42.34 is the middle position.

During the FY year 2008/2009 the SBL of 43.68 is the highest Ratio among the other banks, the EBL of 24.55 is the lowest ratio than other banks, and the KBL of 31.76 is the middle position.

During the FY year 2009/2010 the HBL of 25.66 is the highest Ratio among the other banks, the NIBL of 13.41 is the lowest ratio than other banks, and the KBL of 19.30 is the middle position.

During the FY year 2010/2011 the KBL of 16.97 is the highest Ratio among the other banks, the EBL of 13.15 is the lowest ratio than other banks, and the NIBL of 13.17 is the middle position.

During the FY year 2011/2012 the HBL of 25.86 is the highest Ratio among the other banks, the EBL of 5.79 is the lowest ratio than other banks, and the SBL of 16.90 is the middle position.

#### **4.2.4.5 Net Interest Margin**

Net interest margin is net interest income expressed as a percentage of average earning assets. So it 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). The lower the net interest margin, approximately 3.0% or lower, generally it is reflective of a bank with a large volume of non-earning or low-yielding assets. For the purpose of the study following model is used to determine net interest margin:

$$\text{Net Interest Margin} = \frac{\text{Net Interest Income}}{\text{Total Earning Assets}}$$

Where,

Net interest income = Interest Income – Interest Expenses

Total Earning assets = Total Interest bearing Assets

= Money at Call and Short Notice + Investment + Loans, Advances and Bills Purchase

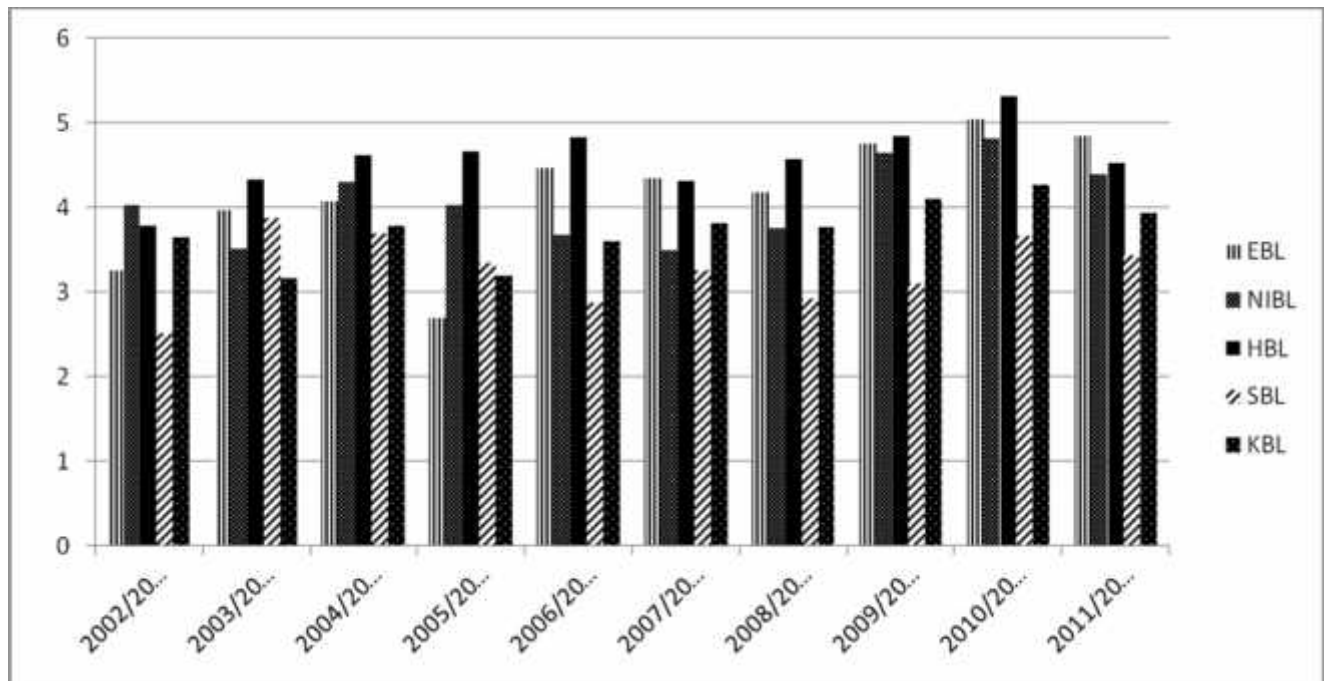
Table 4.2.4.5 is the observed Net Interest Margin of five banks during the study period in numerical terms which is presented below:

**Table 4.2.4.5 Net interest Margin**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Net Interest Income “inRs.”</b>	<b>Total Earning Assets “inRs.”</b>	<b>Net Interest Margin %</b>
<b>2002/2003</b>	EBL	212,534,566.00	6,562,437,707	3.24
	NIBL	270,300,000.00	6,717,292,558.00	4.02
	HBL	647,105,000.00	17,117,405,047.00	3.78
	SBL	18,270,383.64	728,582,657	2.51
	KBL	92,145,100.00	2,528,891,702	3.64
<b>2003/2004</b>	EBL	340,882,810.00	8,607,225,303	3.96
	NIBL	405,201,000.00	11,524,679,645.00	3.51
	HBL	754,352,000.00	17,439,865,165.00	4.32
	SBL	68,124,346.52	1,760,647,658	3.87
	KBL	146,313,432.00	4,632,513,126	3.16
<b>2004/2005</b>	EBL	419,732,586.00	10,317,603,328	4.07
	NIBL	532,251,000.00	12,385,514,319.00	4.29
	HBL	884,504,000.00	19,182,807,640.00	4.61
	SBL	106,203,584.01	2,879,870,450	3.69
	KBL	259,788,286.00	6,871,196,670	3.78
<b>2005/2006</b>	EBL	502,013,786.00	18,648,396,250	2.69
	NIBL	681,795,000.00	16,943,161,657.00	4.02
	HBL	977,932,000.00	20,974,669,523.00	4.66
	SBL	151,851,934.00	4,540,101,862	3.34
	KBL	268,470,712.00	8,431,803,179	3.18
<b>2006/2007</b>	EBL	627,242,067.00	14,068,782,896	4.46
	NIBL	899,457,000.00	244,88,855,696.00	3.67
	HBL	1,008,171,000.00	24,083,811,202.00	4.82
	SBL	209,812,857.00	7,317,221,679	2.87
	KBL	394,231,089.00	10,979,646,530	3.59
<b>2007/2008</b>	EBL	916,047,868.00	21,110,686,241.00	4.34
	NIBL	1,202,117,000.00	34,451,726,191.00	3.49
	HBL	113,9903,000.00	26,413,386,497.00	4.31
	SBL	321,683,529.00	9,906,551,341.00	3.24
	KBL	458,510,000.00	12,062,921,208.00	3.80
<b>2008/2009</b>	EBL	1,173,940,639.00	28,126,315,123.00	4.17
	NIBL	1,580,968,000.00	42,213,539,236.00	3.74
	HBL	1,407,420,000.00	30,797,946,781.00	4.56
	SBL	45,1963,089.00	15,445,299,705.00	2.92
	KBL	558,520,000.00	14,832,408,478.00	3.76
<b>2009/2010</b>	EBL	1,529,661,178.00	3,223,118,842.00	4.74
	NIBL	2,099,674,000.00	45,289,430,685.00	4.64
	HBL	1,595,075,000.00	32,918,705,886.00	4.84
	SBL	611,802,241.00	19,721,851,912.00	3.10
	KBL	682,150,000.00	16,610,886,346.00	4.10
<b>2010/2011</b>	EBL	1,795,150,535.00	35,651,092,514.00	5.03
	NIBL	2,183,103,000.00	45,436,626,133.00	4.80
	HBL	1,911,333,000.00	36,007,012,331.00	5.30
	SBL	765,051,042.00	20,907,658,455.00	3.66
	KBL	685,240,000.00	16,057,691,905.00	4.26
<b>2011/2012</b>	EBL	2,086,663,733.00	43,228,931,427.00	4.83
	NIBL	2,168,230,000.00	49,528,177,273.00	4.38
	HBL	1,908,446,000.00	42,175,463,831.00	4.52
	SBL	857,351,753.00	24,951,077,401.00	3.43
	KBL	819,090,000.00	20,850,012,246.00	3.93

Chart 4.2.4.5.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Net Interest Margin among five banks.

**Chart: 4.2.4.5.a Net Interest Margin (%) in percentage**



As shown in the above Table 4.2.4.5 Net interest Margin and Chart: 4.2.4.5.a Net Interest Margin we can analyze the Earnings determined of the five commercial banks over the 10 years.

During the FY year 2002/2003 the NIBL of 4.02% is the highest Ratio among the other banks, the SBL of 2.51% is the lowest ratio than other banks, and the KBL of 3.64% is the middle position.

During the FY year 2003/2004 the HBL of 4.32% is the highest Ratio among the other banks, the KBL of 3.16% is the lowest ratio than other banks, and the SBL of 3.87% is the middle position.

During the FY year 2004/2005 the HBL of 4.61% is the highest Ratio among the other banks, the SBL of 3.69% is the lowest ratio than other banks, and the EBL of 4.07% is the middle position.

During the FY year 2005/2006 the HBL of 4.66% is the highest Ratio among the other banks, the EBL of 2.69% is the lowest ratio than other banks, and the SBL of 3.34% is the middle position.

During the FY year 2006/2007 the HBL of 4.82% is the highest Ratio among the other banks, the SBL of 2.87% is the lowest ratio than other banks, and the NIBL of 3.67% is the middle position.

During the FY year 2007/2008 the EBL of 4.34 % is the highest Ratio among the other banks, the SBL of 3.24% is the lowest ratio than other banks, and the KBL of 3.80% is the middle position.

During the FY year 2008/2009 the HBL of 4.56% is the highest Ratio among the other banks, the SBL of 2.92% is the lowest ratio than other banks, and the KBL of 3.76% is the middle position.

During the FY year 2009/2010 the HBL of 4.84% is the highest Ratio among the other banks, the SBL of 3.10% is the lowest ratio than other banks, and the NIBL of 4.64% is the middle position.

During the FY year 2010/2011 the HBL of 4.84% is the highest Ratio among the other banks, the SBL of 3.10% is the lowest ratio than other banks, and the NIBL of 4.64% is the middle position.

During the FY year 2011/2012 the EBL of 4.83% is the highest Ratio among the other banks, the SBL of 3.43% is the lowest ratio than other banks, and the HBL of 4.52% is the middle position.

### ***Findings:***

The conclusion of above the calculation of five bank's earning. ROE of all five banks is in increment trend. Here EBL and HBL is highly increased rate than other banks. The KBL and SBL is less increase rate than all banks. On the other hand ROE is fluctuated its increased rate. The reason is happening is that the percentage change of Net Profit after Tax is less than Shareholder's fund compare previous year. At the last of couple of year all the bank's ROE is growing in good condition. Similarly ROA of all banks is in fluctuating but in general in increasing trend. Above the figure and table shows that ROA is increasing but some year it decrease than the previous year in overall it is increasing way. The reasons is fluctuation same as ROE. But the earning per share of all banks is in increasing trend by the way it is also fluctuated because the increase of number of share and decrease in Net profit after tax than the previous year.

Likewise, lack of availability of market price per share of SBL and KBL for some FYs we are not be able to calculate and analyze P/E ratio for all study period but for rest of FYs there is increment in P/E ratio of all banks.

Lastly, the un-even increment trend in net profit after tax and total earning assets of all banks the net interest margin ratio is also in fluctuating trend.

### **4.2.5 LIQUIDITY**

Liquidity refers to reserves of cash, securities, a bank's ability to convert an asset into cash, and unused bank lines of credit. Liquidity shows ability of institution to meet projected near term obligations. Liquidity must be sufficient to meet all maturing unsecured debt obligations due within a

one-year time horizon without incremental access to the unsecured markets. An FI must always be liquid to meet depositors' and creditors' demand to maintain public confidence. There needs to be an effective asset and liability management system to minimize maturity mismatches between assets and liabilities and to optimize returns.

Liquidity risk threatens the solvency of FIs. Much more liquidity surplus hurts the profitability of the commercial bank by reducing the return on assets. Similarly, liquid deficit also costs much to the commercial banks in term of the higher purchasing price of liquidity and hurt in the reputation of the banks. In the case of commercial banks, first type of liquidity risk arises when depositors of commercial banks seek to withdraw their money and the second type does when commitment holders want to exercise the commitments recorded off the balance sheet. Commercial banks have to borrow the additional funds or sell the assets at fire sale price to pay off the deposit liabilities. They become insolvent if sale price of the assets are not enough to meet the liability withdrawals. The second type of liquidity risk arises when demand for unexpected loans cannot be met due to the lack of the funds. Commercial banks can raise the funds by running down their cash assets, borrowing additional funds in the money markets and selling off other assets at distressed price. Both liability side liquidity risk (first type risk) and asset side liquidity risk (second type risk) affect the health of commercial banks adversely. But maintaining the high liquidity position to minimize such risks also adversely affects the profitability of FIs. Return on highly liquid assets is almost zero. Therefore, FIs should strike the tradeoff between liquidity position and profitability so that they could maintain their health sound. Commercial bank's liquidity exposure can be measured by analyzing the sources and uses of liquidity. In this approach, total net liquidity is worked out by deducting the total of uses of liquidity from the total of sources of liquidity. Current and quick ratios are inappropriate for measuring FI liquidity.

NRB uses total loan to total deposit ratio (LDR), cash and equivalents to total assets ratio (CETAR), cash and equivalents to total deposit ratio (CETDR), and cash balance with NRB to total deposit ratio (CBNRBR) to measure the liquidity position of commercial banks.

As directed by NRB, commercial banks had to maintain 3 percent cash of the total deposits in their vault in the FY 2001 and 2002, and 2 percent in the FY 2003 (NRB 2003a). NRB withdrew the provision of maintaining 2.0 percent balance in commercial banks' vault as part of CRR (NRB 2004).

#### 4.2.5.1 Cash Reserve Ratio (CRR)

It is the minimum amount of reserves a bank must hold in the form account balance with NRB. This ratio ensures minimum level of the bank's first line of defense in meeting depositor's obligations. It is the mandatory reserve that the commercial bank has to keep in the form of cash in their account in NRB for depositors' assurance and safety of bank which also reflects the bank's goodwill. As per the regulation made by NRB, Cash Reserve Ratio is to be maintained 5% on average of total deposits of bank on weekly basis. It is calculated as

$$\text{NRB Balance to Total Deposit Ratio} = \frac{\text{Local Currency Balance in NRB}}{\text{Total Local Currency Deposit} - \text{Margin Deposit}}$$

Since, we cannot find the daily deposit amount in annual report and also cannot access it, we cannot find cash reserve ratio and compare it as mandatory set by NRB of 5% on average of total deposit of bank on weekly basis. So, it will give false information or mislead to others if we calculate it on the figure that is given on year ending Balance Sheet.

#### 4.2.5.2 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. Cash at vault facilitates the commercial banks to meet their daily operational activities and solve the immediate liquidity crisis or we can say that this ratio measures the immediate obligation mainly cash withdraw by the depositors. Lower ratio indicates that the company might face a liquidity crunch while paying its obligation; whereas a very high ratio indicates that the company has been keeping its idle fund and not deploying them properly. It is worked out by using the following model:

$$\text{Cash in Vault to Total Deposit Ratio} = \frac{\text{Cash in Vault}}{\text{Total Deposits}}$$

Where,

Cash in vault = Local Currency in Hand + Foreign Currency in Hand

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency + Foreign Currency)

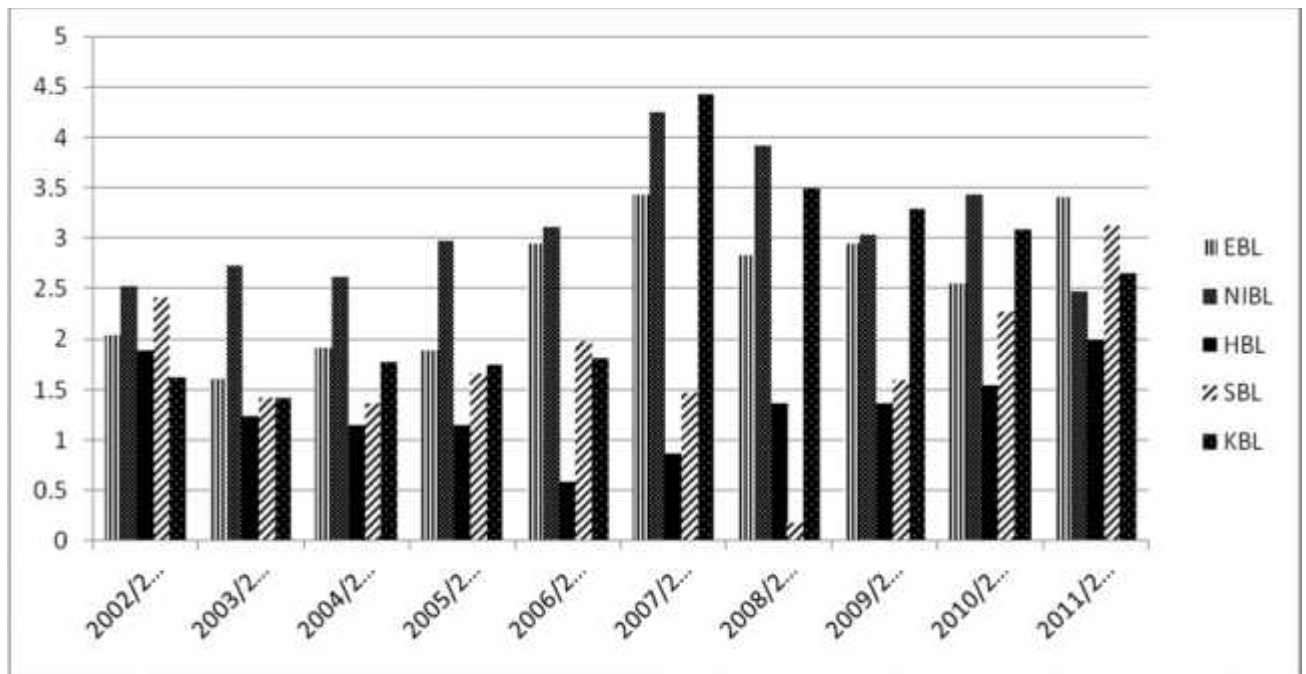
Table 4.2.5.2 is the observed Cash in Vault to Total Deposit Ratio of five banks during the study period in numerical terms which is presented below:

**Table 4.2.5.2 Cash in Vault to Total Deposit Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Cash in Vault "inRs."</b>	<b>Total Deposit "inRs."</b>	<b>Cash in Vault to Total Deposit Ratio %</b>
<b>2002/2003</b>	EBL	136,658,509.00	6,694,963,060	2.04
	NIBL	200,970,759.00	7,922,800,000	2.53
	HBL	397,189,317.00	21,007,379,000	1.89
	SBL	9,438,897.00	391,677,605	2.41
	KBL	40,800,041.00	2,513,144,223	1.62
<b>2003/2004</b>	EBL	128,757,118.00	8,063,902,086	1.60
	NIBL	315,382,825.00	11,524,679,645	2.73
	HBL	274,235,328.00	22,010,330,000	1.24
	SBL	18,214,418.75	1,291,313,880	1.41
	KBL	68,471,908.00	4,807,936,964	1.42
<b>2004/2005</b>	EBL	192,590,297.00	10,097,690,989	1.91
	NIBL	374,265,663.00	14,254,573,663	2.62
	HBL	286,5299,34.00	24,814,012,000	1.15
	SBL	33,459,440.75	2,461,922,522	1.36
	KBL	111,249,095.00	6,268,954,481	1.77
<b>2005/2006</b>	EBL	259,347,645.00	13,802,444,988	1.88
	NIBL	562,560,620.00	18,927,306,000	2.97
	HBL	305,428,144.00	26,490,852,000	1.15
	SBL	64,977,328.00	3,918,076,217	1.66
	KBL	135,794,991.00	7,768,957,276	1.75
<b>2006/2007</b>	EBL	534,996,791.00	18,186,253,541	2.94
	NIBL	763,984,320.00	24,488,856,000	3.11
	HBL	177,242,226.00	30,048,418,000	0.59
	SBL	130,442,580.00	6,625,078,506	1.97
	KBL	190,748,210.00	10,557,416,461	1.81
<b>2007/2008</b>	EBL	822,989,425.00	23,976,298,535	3.43
	NIBL	1,464,482,719.00	34,451,726,000	4.25
	HBL	278,183,489.00	31,842,789,000	0.87
	SBL	149,006,950.00	10,191,440,000	1.46
	KBL	565,641,118.00	12,780,150,000	4.42
<b>2008/2009</b>	EBL	944,695,793.00	33,322,946,246	2.83
	NIBL	1,833,462,494.00	46,698,810,000	3.92
	HBL	473,759,695.00	34,681,345,000	1.36
	SBL	27,095,787.00	15,854,800,000	0.17
	KBL	549,108,504.00	15,710,930,000	3.49
<b>2009/2010</b>	EBL	1,091,500,407.00	36,932,310,008	2.95
	NIBL	1,525,441,872.00	50,094,725,000	3.04
	HBL	514,223,569.00	37,611,202,000	1.36
	SBL	320,910,607.00	20,197,030,000	1.59
	KBL	574,065,903.00	17,432,250,000	3.29
<b>2010/2011</b>	EBL	1,048,998,721.00	41,127,914,399	2.55
	NIBL	1,718,665,705.00	50,138,120,000	3.43
	HBL	632,046,156.00	40,920,627,000	1.54
	SBL	49,124,942.00	21,575,650,000	2.27
	KBL	524,780,914.00	16,986,280,000	3.09
<b>2011/2012</b>	EBL	1,700,991,770.00	50,006,100,272	3.40
	NIBL	1,963,968,825.00	79,228,000,000	2.47
	HBL	951,333,515.00	47,730,994,000	1.99
	SBL	813,180,031.00	25,948,505,780	3.13
	KBL	584,140,254.00	21,985,200,000	2.65

Chart 4.2.5.2.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Cash in Vault to Total Deposit Ratio among the five banks.

**Chart: 4.2.5.2.a Cash in Vault to Total Deposit Ratio**



As shown in the above Table 4.2.5.2 Cash in Vault to Total Deposit Ratio and Chart: 4.2.5.2.a Cash in Vault to Total Deposit Ratio we can analysis the Liquidity of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the NIBL of 2.53% is the highest Ration among the other banks, the KBL of 1.62% is the lowest ratio than other banks, and the EBL of 2.04% is the middle position.

During the FY year 2003/2004 the NIBL of 2.73% is the highest Ration among the other banks, the HBL of 1.24% is the lowest ratio than other banks, and the KBL of 1.42% is the middle position.

During the FY year 2004/2005 the NIBL of 2.62% is the highest Ration among the other banks, the HBL of 1.15% is the lowest ratio than other banks, and the KBL of 1.77% is the middle position.

During the FY year 2005/2006 the NIBL of 2.97% is the highest Ration among the other banks, the HBL of 1.15% is the lowest ratio than other banks, and the KBL of 1.75% is the middle position.

During the FY year 2006/2007 the NIBL of 3.11% is the highest Ration among the other banks, the HBL of 0.59% is the lowest ratio than other banks, and the SBL of 1.97% is the middle position.

During the FY year 2007/2008 the KBL of 4.42% is the highest Ration among the other banks, the HBL of 0.87% is the lowest ratio than other banks, and the EBL of 3.43% is the middle position.

During the FY year 2008/2009 the NIBL of 3.92% is the highest Ratio among the other banks, the SBL of 0.17% is the lowest ratio than other banks, and the EBL of 2.83% is the middle position.

During the FY year 2009/2010 the KBL of 3.29% is the highest Ratio among the other banks, the HBL of 1.36% is the lowest ratio than other banks, and the EBL of 2.95% is the middle position.

During the FY year 2010/2011 the NIBL of 3.43% is the highest Ratio among the other banks, the HBL of 1.54% is the lowest ratio than other banks, and the EBL of 2.55% is the middle position.

During the FY year 2011/2012 the EBL of 3.40% is the highest Ratio among the other banks, the HBL of 1.99% is the lowest ratio than other banks, and the KBL of 2.65% is the middle position.

#### **4.2.5.3 Cash & Bank Balance to Total Deposit Ratio**

This ratio tests cash balance kept in the bank required to meet depositors day to day withdraw. Banks earning is result of floating or investing depositors money but also necessary to maintain adequate cash balance to meet daily operation as well. This need to strike out a balance and not tying up of fund more than need that will adversely affect bank's profitability. It is calculated as:

$$\text{Cash and Bank Balance Ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Total Deposits}}$$

Where,

Total Cash & Bank Balance = Cash Balance + Balance with NRB + Balance with Bank/Financial Institution (Local Currency +Foreign Currency)

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

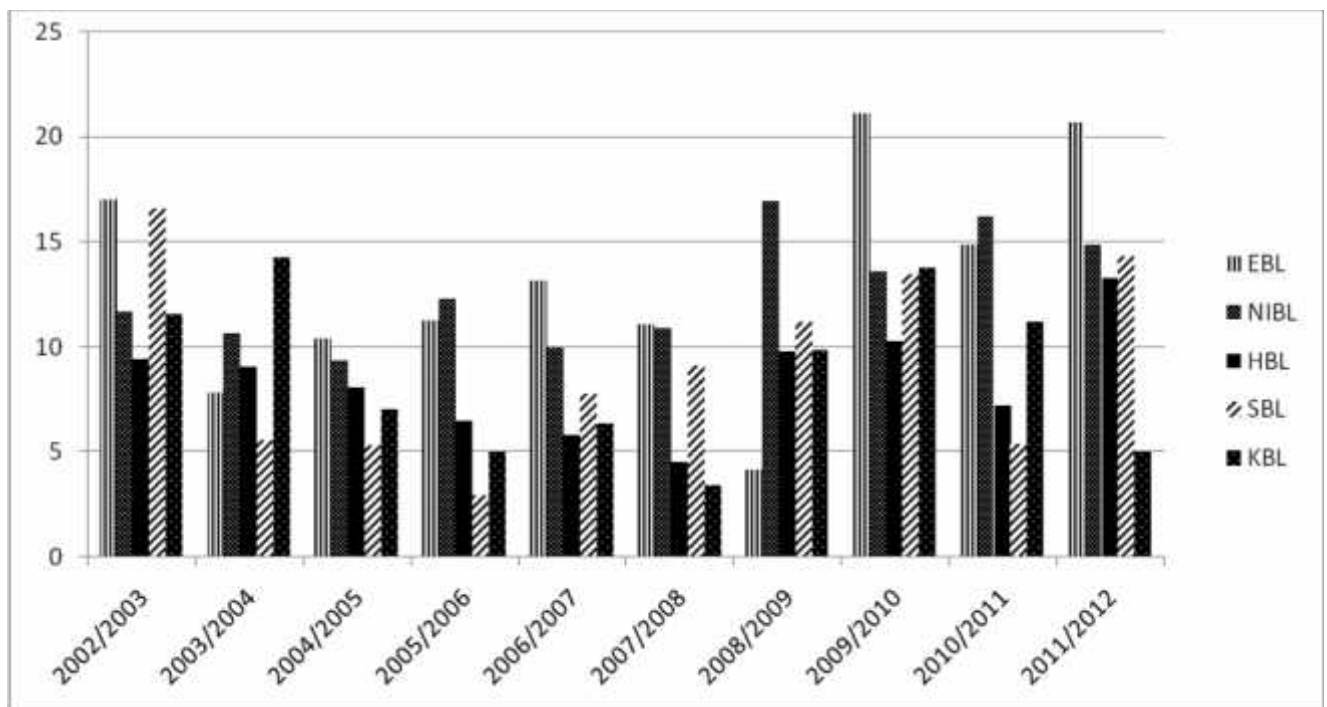
Table 4.2.5.3 is the observed Cash and Bank Balance to Total Deposit Ratio of five banks during the study period in numerical terms which is presented below:

**Table 4.2.5.3 Cash and Bank Balance to Total Deposit Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Cash &amp; Bank Balance "in Rs."</b>	<b>Total Deposit "inRs."</b>	<b>Cash &amp; Bank Balance to Total Deposit Ratio%</b>
<b>2002/2003</b>	EBL	1,139,568,776.00	6,694,963,060	17.02
	NIBL	926,600,000.00	7,922,800,000	11.69
	HBL	1,979,209,000.00	21,007,379,000	9.42
	SBL	65,086,751.45	391,677,605	16.62
	KBL	291,705,250.00	2,513,144,223	11.61
<b>2003/2004</b>	EBL	631,804,931.00	8,063,902,086	7.83
	NIBL	1,226,923,000.00	11,524,679,645	10.64
	HBL	2,001,184,000.00	22,010,330,000	9.09
	SBL	71,846,215.48	1,291,313,880	5.56
	KBL	685,477,911.00	4,807,936,964	14.26
<b>2004/2005</b>	EBL	1,049,989,208.00	10,097,690,989	10.40
	NIBL	1,340,481,000.00	14,254,573,663	9.40
	HBL	2,014,471,000.00	24,814,012,000	8.11
	SBL	130,729,164.82	2,461,922,522	5.31
	KBL	443,371,369.00	6,268,954,481	7.07
<b>2005/2006</b>	EBL	1,552,967,494.00	13,802,444,988	11.25
	NIBL	2,335,521,000.00	18,927,306,000	12.34
	HBL	1,717,352,000.00	26,490,852,000	6.48
	SBL	115,946,306.00	3,918,076,217	2.96
	KBL	389,629,745.00	7,768,957,276	5.02
<b>2006/2007</b>	EBL	2,391,420,594.00	18,186,253,541	13.15
	NIBL	2,441,514,000.00	24,488,856,000	9.97
	HBL	1,757,341,000.00	30,048,418,000	5.84
	SBL	517,226,354.00	6,625,078,506	7.81
	KBL	672,112,951.00	10,557,416,461	6.37
<b>2007/2008</b>	EBL	2,667,971,830.00	23,976,298,535	11.12
	NIBL	3,754,942,000.00	34,451,726,000	10.90
	HBL	1,448,143,000.00	31,842,789,000	4.55
	SBL	933,841,677.00	10,191,440,000	9.16
	KBL	437,425,269.00	12,780,150,000	3.42
<b>2008/2009</b>	EBL	1,381,995,326.00	33,322,946,246	4.15
	NIBL	7,918,003,000.00	46,698,810,000	16.95
	HBL	3,048,527,000.00	34,681,345,000	9.79
	SBL	1,776,298,800.00	15,854,800,000	11.20
	KBL	1,547,684,101.00	15,710,930,000	9.85
<b>2009/2010</b>	EBL	7,818,815,003.00	36,932,310,008	21.17
	NIBL	6,815,890,000.00	50,094,725,000	13.60
	HBL	3,866,491,000.00	37,611,202,000	10.28
	SBL	2,723,829,299.00	20,197,030,000	13.48
	KBL	2,406,610,205.00	17,432,250,000	13.80
<b>2010/2011</b>	EBL	6,122,862,952.00	41,127,914,399	14.88
	NIBL	8,140,371,000.00	50,138,120,000	16.23
	HBL	2,964,651,000.00	40,920,627,000	7.24
	SBL	1,168,524,334.00	21,575,650,000	5.41
	KBL	1,905,684,978.00	16,986,280,000	11.22
<b>2011/2012</b>	EBL	10,363,306,310.00	50,006,100,272	20.72
	NIBL	11,803,751,000.00	79,228,000,000	14.90
	HBL	6,362,296,000.00	47,730,994,000	13.32
	SBL	3,722,627,593.00	25,948,505,780	14.34
	KBL	1,108,264,367.00	21,985,200,000	5.05

Chart 4.2.5.3.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Cash and Bank Balance to Total Deposit Ratio among five banks.

**Chart: 4.2.5.3.a Cash and Bank Balance to Total Deposit Ratio (%) in percentage**



As shown in the above Table 4.2.5.3 Cash and Bank Balance to Total Deposit Ratio and Chart: 4.2.5.3.a Cash and Bank Balance to Total Deposit Ratio we can analysis the Liquidity of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the EBL of 17.02% is the highest Ration among the other banks, the HBL of 9.42% is the lowest ratio than other banks, and the NIBL of 11.69% is the middle position.

During the FY year 2003/2004 the KBL of 14.26% is the highest Ration among the other banks, the SBL of 5.56% is the lowest ratio than other banks, and the HBL of 9.09% is the middle position.

During the FY year 2004/2005 the EBL of 10.40% is the highest Ration among the other banks, the SBL of 5.31% is the lowest ratio than other banks, and the HBL of 8.11% is the middle position.

During the FY year 2005/2006 the NIBL of 12.34% is the highest Ration among the other banks, the SBL of 2.96% is the lowest ratio than other banks, and the HBL of 6.48% is the middle position.

During the FY year 2006/2007 the EBL of 13.15% is the highest Ratio among the other banks, the HBL of 5.84% is the lowest ratio than other banks, and the KBL of 7.81% is the middle position. During the FY year 2007/2008 the EBL of 11.12% is the highest Ratio among the other banks, the KBL of 3.42% is the lowest ratio than other banks, and the SBL of 9.16% is the middle position. During the FY year 2008/2009 the NIBL of 16.95% is the highest Ratio among the other banks, the EBL of 4.15% is the lowest ratio than other banks, and the KBL of 9.85% is the middle position. During the FY year 2009/2010 the EBL of 21.17% is the highest Ratio among the other banks, the HBL of 10.28% is the lowest ratio than other banks, and the NIBL of 13.60% is the middle position. During the FY year 2010/2011 the NIBL of 16.23% is the highest Ratio among the other banks, the SBL of 5.41% is the lowest ratio than other banks, and the KBL of 11.22% is the middle position. During the FY year 2011/2012 the EBL of 20.72% is the highest Ratio among the other banks, the KBL of 5.05% is the lowest ratio than other banks, and the SBL of 14.34% is the middle position.

#### **4.2.5.4 Investment in Government Security to Total Deposit Ratio**

Government security refers to the securities issued by the government or through NRB. It can be in the form of treasury bills, government bond, NRB Bond etc. Government securities are least risky, highly liquid and moderately paying instruments and usually short term in nature. Although they generate a low return but in the need of liquidity they play a vital role to save the bank from solvency as they can be traded in the market easily at any time when the bank need fund immediately. It not only protect the banks from the solvency but also useful to absorb the excess liquidity of banks for the short periods. This ratio indicates how much portion of the fund is utilized in the least risky investment and calculated as:

$$\text{Investment in Gov. Security to Total Deposit} = \frac{\text{Investment in Government Security}}{\text{Total Deposits}}$$

Where,

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

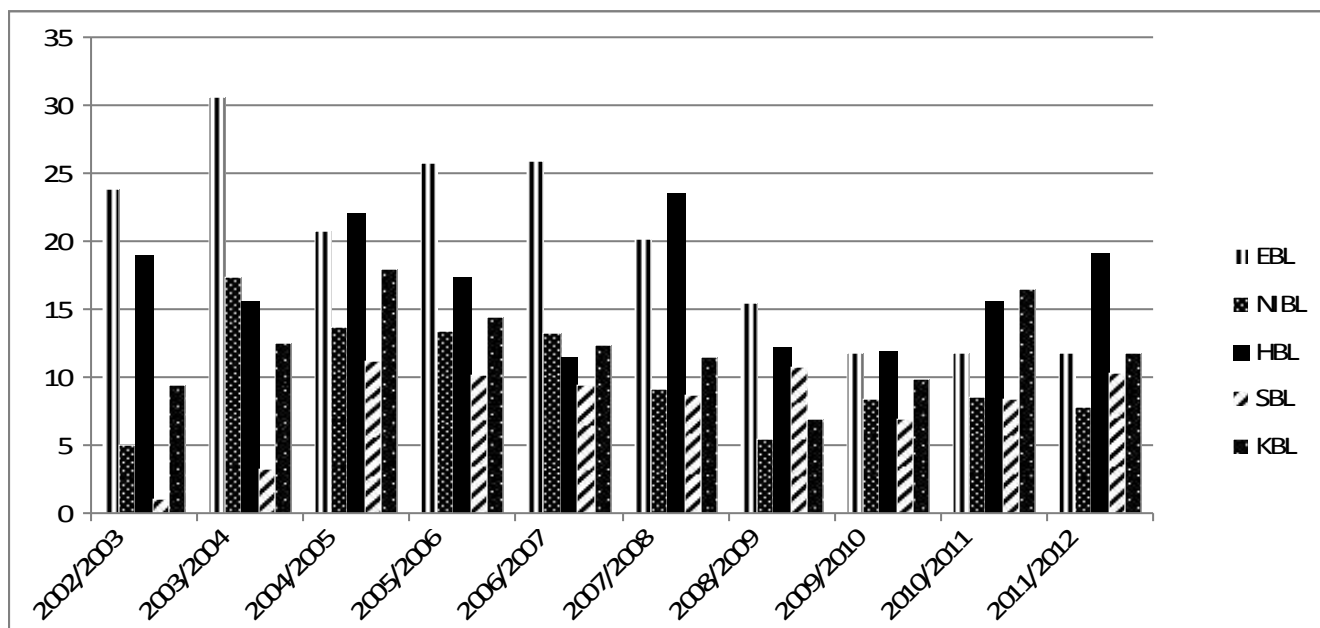
Table 4.2.5.4 is the observed Investment in Government Security to Total Deposit Ratio of five banks during the study period in numerical terms which is presented below.

**Table 4.2.5.4 Investment in Government Security to Total Deposit Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Investment in Government Security "in Rs"</b>	<b>Total Deposit "in Rs"</b>	<b>Investment in Government Security to Total Deposit Ratio%</b>
<b>2002/2003</b>	EBL	1,599,350,560.00	6,694,963,060	23.89
	NIBL	400,000,000.00	7,922,800,000	5.05
	HBL	3,998,870,490.00	21,007,379,000	19.03
	SBL	3,775,000.00	391,677,605	0.96
	KBL	235,629,880.00	2,513,144,223	9.38
<b>2003/2004</b>	EBL	2,466,428,694.00	8,063,902,086	30.59
	NIBL	2,001,100,000.00	11,524,679,645	17.36
	HBL	3,431,728,940.00	22,010,330,000	15.59
	SBL	42,050,560.00	1,291,313,880	3.26
	KBL	601,609,403.00	4,807,936,964	12.51
<b>2004/2005</b>	EBL	2,100,289,702.00	10,097,690,989	20.80
	NIBL	1,948,500,000.00	14,254,573,663	13.67
	HBL	5,469,728,940.00	24,814,012,000	22.04
	SBL	276,270,433.40	2,461,922,522	11.22
	KBL	1,119,994,196.00	6,268,954,481	17.87
<b>2005/2006</b>	EBL	3,548,616,968.00	13,802,444,988	25.71
	NIBL	2,522,300,000.00	18,927,306,000	13.32
	HBL	4,577,656,000.00	26,490,852,000	17.28
	SBL	398,364,670.00	3,918,076,217	10.17
	KBL	1,114,319,438.00	7,768,957,276	14.34
<b>2006/2007</b>	EBL	4,704,632,426.00	18,186,253,541	25.87
	NIBL	3,256,400,000.00	24,488,856,000	13.3
	HBL	3,454,873,471.00	30,048,418,000	11.50
	SBL	625,748,040.00	6,625,078,506	9.45
	KBL	1,297,867,040.00	10,557,416,461	12.29
<b>2007/2008</b>	EBL	4,821,604,744.00	23,976,298,535	20.10
	NIBL	3,155,000,000.00	34,451,726,000	9.15
	HBL	7,471,667,904.00	31,842,789,000	23.46
	SBL	884,084,470.00	10,191,440,000	8.67
	KBL	1,469,095,002.00	12,780,150,000	11.49
<b>2008/2009</b>	EBL	5,146,045,773.00	33,322,946,246	15.44
	NIBL	2,531,300,000.00	46,698,810,000	5.42
	HBL	4,212,300,379.00	34,681,345,000	12.14
	SBL	1,693,573,056.00	15,854,800,000	10.68
	KBL	1,080,064,990.00	15,710,930,000	6.87
<b>2009/2010</b>	EBL	4,354,353,089.00	36,932,310,008	11.79
	NIBL	4,201,850,000.00	50,094,725,000	8.38
	HBL	4,465,372,409.00	37,611,202,000	11.87
	SBL	1,401,360,661.00	20,197,030,000	6.93
	KBL	1,729,916,633.00	17,432,250,000	9.92
<b>2010/2011</b>	EBL	7,145,017,521.00	41,127,914,399	17.37
	NIBL	4,294,600,000.00	50,138,120,000	8.56
	HBL	6,407,362,541.00	40,920,627,000	15.66
	SBL	1,795,361,026.00	21,575,650,000	8.32
	KBL	2,806,105,608.00	16,986,280,000	16.52
<b>2011/2012</b>	EBL	6,068,876,365.00	50,006,100,272	12.13
	NIBL	6,169,485,967.00	79,228,000,000	7.78
	HBL	9,162,223,297.00	47,730,994,000	19.19
	SBL	2,673,273,133.00	25,948,505,780	10.30
	KBL	2,574,618,509.00	21,985,200,000	11.71

Chart 4.2.5.4.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Investment in Government Security to Total Deposit Ratio among five banks.

**Chart: 4.2.5.4.a Investment in Government Security to Total Deposit Ratio (%) in percentage**



As shown in the above Table 4.2.5.4 Investment in Government Security to Total Deposit Ratio and Chart: 4.2.5.4.a Investment in Government Security to Total Deposit Ratio we can analysis the Liquidity of the Five commercial banks over the 10 years.

During the FY year 2002/2003 the EBL of 23.89% is the highest Ratio among the other banks, the SBL of 0.96% is the lowest ratio than other banks, and the KBL of 9.38% is the middle position.

During the FY year 2003/2004 the EBL of 30.59% is the highest Ratio among the other banks, the SBL of 3.26% is the lowest ratio than other banks, and the HBL of 15.59% is the middle position.

During the FY year 2004/2005 the HBL of 22.04% is the highest Ratio among the other banks, the SBL of 11.22% is the lowest ratio than other banks, and the KBL of 17.87% is the middle position.

During the FY year 2005/2006 the EBL of 25.77% is the highest Ratio among the other banks, the SBL of 10.17% is the lowest ratio than other banks, and the KBL of 14.34% is the middle position.

During the FY year 2006/2007 the EBL of 25.87% is the highest Ratio among the other banks, the SBL of 9.45% is the lowest ratio than other banks, and the KBL of 12.29% is the middle position. During the FY year 2007/2008 the HBL of 23.46% is the highest Ratio among the other banks, the SBL of 8.67% is the lowest ratio than other banks, and the KBL of 11.49% is the middle position. During the FY year 2008/2009 the EBL of 15.44% is the highest Ratio among the other banks, the NIBL of 5.42% is the lowest ratio than other banks, and the SBL of 10.68% is the middle position. During the FY year 2009/2010 the HBL of 11.87% is the highest Ratio among the other banks, the SBL of 6.93% is the lowest ratio than other banks, and the KBL of 9.92% is the middle position. During the FY year 2010/2011 the EBL of 17.37% is the highest Ratio among the other banks, the HBL of 15.66% is the lowest ratio than other banks, and the SBL of 8.32% is the middle position. During the FY year 2011/2012 the HBL of 19.19% is the highest Ratio among the other banks, the NIBL of 7.78% is the lowest ratio than other banks, and the KBL of 17.71% is the middle position.

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

Total liquid assets to total deposits ratio is a numerical relationship between total liquid assets and total deposits of a bank. The higher ratio implies better liquidity position. But when the bank keep much liquid asset to safe from liquidity risk, it impact in profitability because the return is low on liquid assets. Therefore bank has to maintain the balance between liquidity and profitability. It is calculated by using the following model:

$$\text{Total Liquid Asset to Total Deposit Ratio} = \frac{\text{Total Liquid Asset}}{\text{Total Deposits}}$$

Where,

Total Liquid assets = Cash in hand + NRB Balance + Domestic bank balance + Foreign currency bank balance + Money at call & short notice+ Investments in Government securities.

Total Deposit = Total Deposit of Non-Interest Bearing Accounts + Total Deposits of interest Bearing Accounts (Local Currency +Foreign Currency)

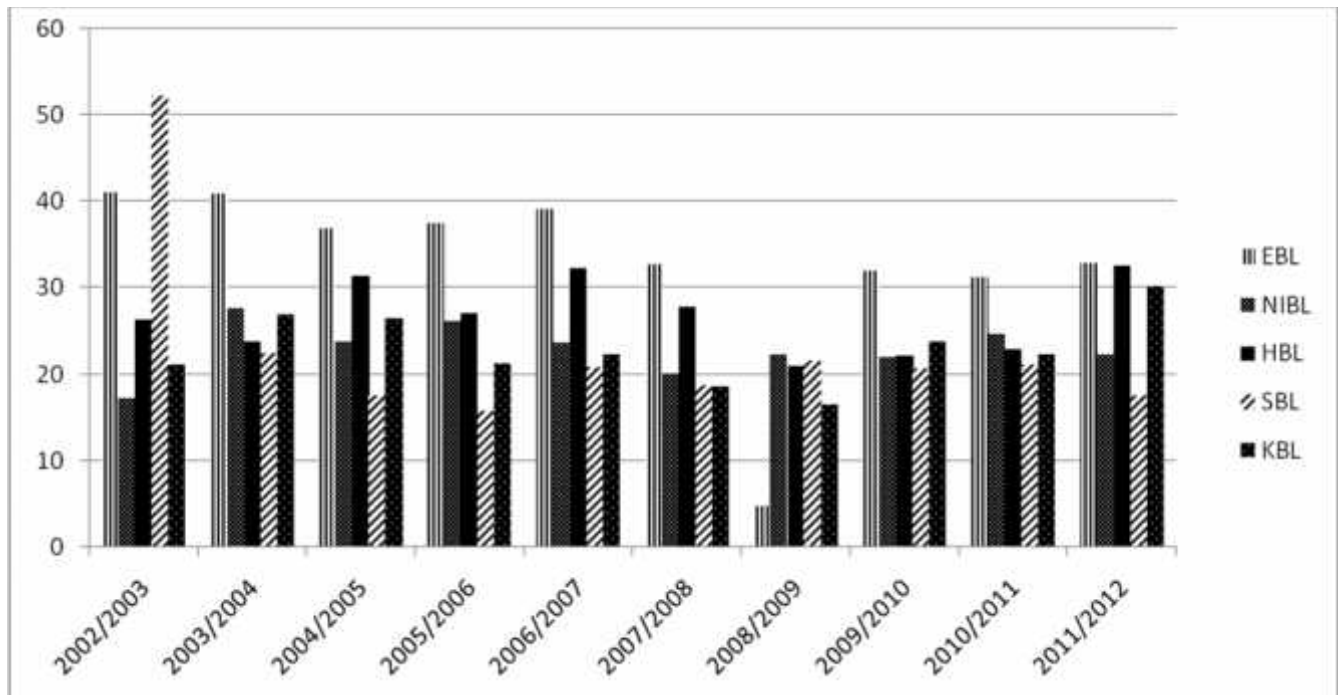
Table 4.2.5.5 is the observed Liquid Assets to Total Deposit Ratio of five banks during the study period in numerical terms which is presented below.

**Table 4.2.5.5 Liquid Assets to Total Deposit Ratio**

<b>Fiscal Year</b>	<b>Banks</b>	<b>Liquid Asset "in Rs"</b>	<b>Total Deposit "in Rs"</b>	<b>Liquid Asset to Total Deposit Ratio%</b>
<b>2002/2003</b>	EBL	2,738,919,336.00	6,694,963,060	40.91
	NIBL	1,359,706,695.00	7,922,800,000	17.16
	HBL	5,520,047,028.00	21,007,379,000	26.27
	SBL	204,234,689.69	391,677,605	52.14
	KBL	527,335,130.00	2,513,144,223	20.98
<b>2003/2004</b>	EBL	3,285,678,625.00	8,063,902,086	40.75
	NIBL	3,176,522,910.00	11,524,679,645	27.56
	HBL	5,232,807,280.00	22,010,330,000	23.77
	SBL	288,726,775.48	1,291,313,880	22.36
	KBL	1,287,087,314.00	4,807,936,964	26.77
<b>2004/2005</b>	EBL	3,720,278,910.00	10,097,690,989	36.84
	NIBL	3,378,990,845.00	14,254,573,663	23.70
	HBL	7,779,232,511.00	24,814,012,000	31.35
	SBL	429,470,600.46	2,461,922,522	17.44
	KBL	1,653,365,565.00	6,268,954,481	26.37
<b>2005/2006</b>	EBL	5,168,544,462.00	13,802,444,988	37.45
	NIBL	4,928,821,296.00	18,927,306,000	26.04
	HBL	7,155,663,439.00	26,490,852,000	27.01
	SBL	614,310,976.00	3,918,076,217	15.68
	KBL	1,648,949,183.00	7,768,957,276	21.22
<b>2006/2007</b>	EBL	7,096,053,020.00	18,186,253,541	39.02
	NIBL	5,764,705,876.00	24,488,856,000	23.54
	HBL	9,686,270,771.00	30,048,418,000	32.23
	SBL	1,372,420,699.00	6,625,078,506	20.72
	KBL	2,342,194,991.00	10,557,416,461	22.19
<b>2007/2008</b>	EBL	7,835,576,574.00	23,976,298,535	32.68
	NIBL	6,909,941,568.00	34,451,726,000	20.05
	HBL	8,836,632,821.00	31,842,789,000	27.75
	SBL	1,906,245,623.00	10,191,440,000	18.70
	KBL	2,358,293,379.00	12,780,150,000	18.45
<b>2008/2009</b>	EBL	15,860,410,990.00	33,322,946,246	47.60
	NIBL	10,410,503,890.00	46,698,810,000	22.29
	HBL	7,260,827,379.00	34,681,345,000	20.93
	SBL	3,398,497,157.00	15,854,800,000	21.43
	KBL	2,592,943,790.00	15,710,930,000	16.50
<b>2009/2010</b>	EBL	11,768,568,090.00	36,932,310,008	31.86
	NIBL	10,980,425,010.00	50,094,725,000	21.92
	HBL	8,331,863,409.00	37,611,202,000	22.15
	SBL	4,162,012,877.00	20,197,030,000	20.61
	KBL	4,144,016,395.00	17,432,250,000	23.77
<b>2010/2011</b>	EBL	12,785,880,470.00	41,127,914,399	31.09
	NIBL	12,304,206,630.00	50,138,120,000	24.54
	HBL	9,362,013,541.00	40,920,627,000	22.88
	SBL	4,538,827,388.00	21,575,650,000	21.04
	KBL	3,765,224,942.00	16,986,280,000	22.17
<b>2011/2012</b>	EBL	16,432,182,680.00	50,006,100,272	32.86
	NIBL	17,611,020,550.00	79,228,000,000	22.22
	HBL	15,524,519,300.00	47,730,994,000	32.52
	SBL	4,549,180,309.00	25,948,505,780	17.53
	KBL	6,613,086,243.00	21,985,200,000	30.08

Chart 4.2.5.5.a is a bar diagram which represents the above tabulated numerical data which helps to compare the Liquid Assets to Total Deposit Ratio among Five banks.

**Chart: 4.2.5.5.a Liquid Assets to Total Deposit Ratio (%) in percentage**



As shown in the above Table 4.2.5.5 Liquid Assets to Total Deposit Ratio and Chart: 4.2.5.5.a Liquid Assets to Total Deposit Ratio we can analysis the Liquidity of the five commercial banks over the 10 years

During the FY year 2002/2003 the SBL of 52.14% is the highest Ration among the other banks, the NIBL of 17.16% is the lowest ratio than other banks, and the HBL of 26.27% is the middle position.

During the FY year 2003/2004 the EBL of 40.75% is the highest Ration among the other banks, the SBL of 22.36% is the lowest ratio than other banks, and the KBL of 26.77% is the middle position.

During the FY year 2004/2005 the EBL of 36.84% is the highest Ration among the other banks, the SBL of 17.44% is the lowest ratio than other banks, and the KBL of 26.37% is the middle position.

During the FY year 2005/2006 the EBL of 37.45% is the highest Ration among the other banks, the SBL of 26.04% is the lowest ratio than other banks, and the NIBL of 26.04% is the middle position.

During the FY year 2006/2007 the EBL of 39.02% is the highest Ration among the other banks, the SBL of 20.72% is the lowest ratio than other banks, and the NIBL of 23.54% is the middle position.

During the FY year 2007/2008 the EBL of 32.68% is the highest Ratio among the other banks, the KBL of 18.45% is the lowest ratio than other banks, and the NIBL of 20.05% is the middle position. During the FY year 2008/2009 the EBL of 47.60% is the highest Ratio among the other banks, the KBL of 16.50% is the lowest ratio than other banks, and the SBL of 21.43% is the middle position. During the FY year 2009/2010 the EBL of 31.86% is the highest Ratio among the other banks, the SBL of 20.61% is the lowest ratio than other banks, and the HBL of 22.15% is the middle position. During the FY year 2010/2011 the EBL of 31.09% is the highest Ratio among the other banks, the SBL of 21.04% is the lowest ratio than other banks, and the HBL of 22.88% is the middle position. During the FY year 2011/2012 the EBL of 32.86% is the highest Ratio among the other banks, the SBL of 17.53% is the lowest ratio than other banks, and the KBL of 30.08% is the middle position.

### Findings:

All the liquidity ratio of banks is in very much fluctuating trend. This may be the reason of liquidity risk associated with it and NRB directions regarding the liquidity and deposits. There is increment in total deposit as well as in cash at vault, cash and bank balance, investment in government in security and also in liquid assets. Although, all those variables are increased over the study period, but in uneven pattern, it caused to fluctuate in trend line of all the ratios. By the way EBL and HBL is the highest investment in Government securities. Among all the banks EBL has the highest liquidity ratio which is the safe from the liquidity side.

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