

# Chapter-I

## 1. INTRODUCTION

### 1.1. Background of the Study

Financial institution is the lifeblood of economic development of the country. Generally, an institution established by law, they simply comes out the work of exchanging money, providing loan, accepting deposit and transferring the money. They help to mobilize the frizzed and scattered saving of the people and play an intermediary role to make investment of the collected fund in different productive sectors. They purse economic growth rapidly developing the banking habit among the people by collecting the small scattered resource in one bulk, using them in the future productive purpose and rendering other valuable service to the country.

Financial market and institutions play a predominant role in the transmission of the macro-financial policy actions to the various sectors of the economy. The role of financial sector has made everyone to have their specific goals attuned to take tangible financial benefits from the efficient functioning of the financial system. In broader understanding prosperity and development of every nation depend much on the manner how financial market plays a role in the transfer of funds from savers to users. The total networks of the financial system in the economy constitute financial institutions and countless cooperatives. These institutions differ in age, scope, size, capital base, magnitude, function, and risk-return consideration. Because of the government's economic and financial liberalization policies, funds transfer effects between users and suppliers of capital tend to be positive.

Banks are the most important and essential financial institution in nay nation. A bank can play an important role in the development of the nation. Without economic development, we cannot get a certain economic growth rate. Bank helps to utilize the capital and provide loan for the business sector. There is no possibility of economic development of a banking system. Therefore, a bank is necessary to make all round economic development.

A bank is one who is ordinary course of his business receives money which repays by honouring cheque of person from whom of on whose he receive it.

“A banker or a bank is person firm or company having a place of business where credits are opened by the deposit or collection of money or currency subject to be paid or remitted upon draft cheque or order of where money is advanced or loaned on stocks, bonds, billions of bills of exchange, and promissory notes are received for discount and sale.” (Upadhy & Tiwari, 1982, pg- 167)

A single banking institution cannot offer all the services hence different types of banks, e.g., commercial banks, development bank, merchant bank, industrial bank, insurance company, etc emerged in the financial institution to concentrating in particular sectors.

Taking the case of our own country, financial system is slowly bringing significant macro-economic policy transformation effect as well as multiplying financial fortunes of the individual investors actively participating in financial markets. Moreover, the government’s role is proving vital to the growth of financial institutions and financial market. In our own country, the short financial history shows totally government initiated and to what extent there has been a major dominance of the single commercial bank namely, Nepal Bank Limited for a number of consecutive years to perform the major banking functions.

## **1.2 Commercial Bank**

Commercial banks are one of the major financial intermediaries whose primary function is the transfer of monetary resources from the savers to users. They have widest range of activities and they provide a large amount of the money supply. Commercial banks act as dominant depository institutions accepting demand liabilities and making loan. Bank hold cash assets to meet legal reserve requirements and daily transaction need. Bank also holds government securities for both liquidity and income reasons.

Commercial bank occupies a very important position in the banking structure of every country. They are established on joint stock basis mainly to facilitate promotion of trade and commerce in the economy. Nepal Bank Limited in 1994 B.S. is the first commercial bank of Nepal.

Commercial bank is the important part of financial sector. Commercial banks are very important for the development of national economy. Commercial

banks operates currency, accepts deposit, provides loan, performs dealing relating to the commerce except the bank which have been specified for the cooperative agricultural industry of similar other specific objective.

“Commercial bank is a corporation, which accepts demand deposits subject to check and make short-term loans to business enterprise regardless of the scope of its other services.” (American Institution of Banking, 1992, p. 345)

“A commercial bank means bank which deals in exchanging currency accepting deposits giving loans and performing commercial banking transaction.” (Commercial Bank Act 2031 B.S.)

The main functions of commercial bank are as follows:

- To accept deposit
- To create credits
- To provide loans and advance
- To provide safe custody
- To assist in foreign trade
- To render financial guidance
- To perform agency function
- To carry out utility function

Nepalese commercial banks are presented in the following table

**Table 1**

**Commercial Banks in Nepal**

SN	Name of Bank	Date of estd.	Central Office
1	Nepal Bank Limited	1994/07/30	Dharmapath, Kathmandu
2	Rastriya Banijaya Bank	2022/10/10	Singhadurbar, Kathmandu
3	Agricultural Development Bank Ltd.	2024/10/07	Ram Shah Path, Kathmandu
4	NABIL Bank Ltd.	2041/03/29	Kantipath, Kathmandu

5	Nepal Investment Bank Ltd.	2042/11/26	Durbar Marg, Kathmandu
6	Standard Charter Bank Nepal Ltd.	2043/10/16	Naya Baneshwore, Kathmandu
7	Himalaya Bank Ltd.	2049/10/05	Thamel, Kathmandu
8	Nepal SBI Bank Ltd.	2050/03/23	Hattisar, Kathmandu
9	Nepal Bangladesh Bank Ltd.	2051/02/23	New Baneshwore, Kathmandu
10	Everest Bank Ltd.	2051/07/01	Lazimpat, Kathmandu
11	Bank of Kathmandu Ltd.	2051/11/28	Kamaladi, Kathmandu
12	Nepal Credit & Commercial Bank Ltd.	2053/06/28	Siddharthanagar, Kathmandu
13	Lumbini Bank Ltd.	2055/04/01	Narayangarh, Chitwan
14	Nepal Industrial & Commercial Bank Ltd.	2055/04/05	Biratnagar, Morang
15	Machhapuchhre Bank Ltd.	2057/06/17	Prithivi Chowk, Pokhara
16	Kumari Bank Ltd.	2057/12/21	Putalisadak, Kathmandu
17	Laxmi Bank Ltd.	2058/12/21	Adharshanagar, Birgunj, Parsa
18	Siddhartha Bank Ltd.	2059/9/9	Kamaladi, Kathmandu
19	Global Bank Ltd.	2063/09/18	Birgunj, Parsa
20	Citizens Bank International Ltd.	2064/01/0	Kamaladi, Kathmandu
21	Prime Commercial Bank Ltd.	2064/06/07	Nayasadak, Kathmandu
22	Sunrise Bank Ltd.	2064/06/25	Gairidhara, Kathmandu
23	Bank of Asia Nepal Ltd.	2064/06/25	Tripureswore, Kathmandu
24	DCBL Bank Ltd.	2065/02/12	Kamaladi, Kathmandu
25	NMB Bank Ltd.	2065/02/20	Babarmahal, Kathmandu
26	KIST Bank Ltd.	2066/01/24	Anamnagar, Kathmandu
27	Janata Bank Ltd.	2066/12/23	New Baneshwore, Kathmandu
28	Mega Bank Ltd.	2067/04/07	Kantipath, Kathmandu
29	Commerz and Trust Bank Ltd.	2067/05/30	Kamaladi, Kathmandu

30	Civil Bank Ltd.	2067/08/10	Kamaladi, Kathmandu
31	Century Bank Ltd.	2068/11/27	Putalisadak, Kathmandu

Sources: NRB's Report

## **1.3 Profile of the Bank**

### **1.3.1 Nabil Bank Limited**

Nabil Bank Ltd. is the first foreign joint venture bank of Nepal, which started operations in 29/03/2041 B.S under the Commercial Bank Act 2021. Nabil Bank Ltd. is one of the leading commercial bank in the banking scenario of Nepal. Nabil Bank commenced operations 25 years ago through a joint venture with Dubai Bank Ltd. Initially, Dubai Bank Ltd. invested 50% of equity share of Nabil Bank.

Nabil Bank provide a full range of commercial banking services through its 19 points of representation across the kingdom and over 170 reputed correspondent banks across the globe. Nabil is fully equipped with modern technologies, which include ATMs, credit cards, state of art, world renowned software from Infosys Technologies System, Bangalore, India, internet banking system and telebanking system. Operation of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team.

### **1.3.2 Kumari Bank Limited**

KBL stepped in the private banking sector in the country as a new entrant since Chaitra 21, 2057 B.S. The bank was promoted by some of the largest renowned business houses in the country. At present, the bank is running its operation from its head office situated at Putalisadak, Kathmandu and many branches

KBL, the first national level bank managed by Nepali management, is also the bank with highest capital base. It took the initiative of establishing itself when the country was going through major economic and financial crisis. It stands with a vision to be world class Nepalese bank and to be a leading financial institution of the country. Its goal is to create its own niche in the market and get recognition as the most preferred organization among its customers, shareholders, regularity authorities and all its stakeholders.

So far, they have been able to associate their customers with banking products like interest banking, mobile banking and auto sweep facilities which has helped them to meet their objectives of adapting modern technologies and coming up with innovative banking products. The sources of the achievement relay on their organization values of good team work and high professionalism.

### **1.3.3 Everest Bank Limited**

Everest Bank Ltd. started its operation in 2051/07/01 B.S. from its head office Lazimpat, Kathmandu with a view of objective of extending professionalized and efficient banking services to various segments of the society. In the beginning of its establishment, it was managed by United Bank of India Limited. Later on EBL joined hands with Punjab National Bank (PNB), India as its joint venture partner in 1997 A.D.

The shareholding of Everest Bank Limited is considered of three different investors namely the Nepalese promoters 50%, Punjab National Bank 20% and general public 30% initially at the time of establishment.

The bank was successful to register operating profit in the very first year of its operations which is indeed historical. EBL provides a full range of commercial banking services through its outlets stored across the nation and reputed correspondent banks across the global.

### **1.3.4 Nepal SBI Bank Limited**

Nepal SBI Bank Ltd. started its operations in 2050/03/23 B.S. from its head office at Kathmandu. Nepal SBI Bank Ltd. (NSBL) is the first Indo-Nepal joint venture in the financial sector sponsored by three institutional promoters, namely State Bank of India, Employee Provident Fund and Agricultural Development Bank of Nepal through a memorandum of understanding signed on 17<sup>th</sup> July 1992. The bank operates with the objectives of providing loan to industry, commerce and trade.

The bank has more than 10 branches in various places. SBI Bank also provides management support as per the technical services agreement. The main objective of the bank is to carry out modern banking business in the country. The bank provides loans to agriculture, commerce and industrial sectors. This has not only helped the bank to constantly improve its service level, but has also kept it prepared for future adaptation of new technology.

## **1.4 Focus of the Study**

This study focuses on the trade off between liquidity and profitability of the four banks namely, Kumari Bank Ltd., Nabil Bank Ltd., Nepal SBI Bank Ltd., and Everest Bank Ltd. from the period of 2004/05 to 2009/10. In this study, attempts are made to get knowledge about the relationship between liquidity and profitability, operational efficiency of the management, efficient use of total assets by the management, etc. by identifying the strengths and weakness of respective banks for the purpose of this study, evaluation of the bank is made with respect to liquidity and profitability ratios.

## **1.5 Statement of the Problem**

To avoid the developed countries' problems and contribute to welfare of national economy, various commercial banks have established. The main role of their bank is to act as the bridge between the savers and users. Banks are inevitable for the resource mobilization and all round development of a country.

The present study seeks to explore the efficiency and weakness of Nabil Bank, Nepal SBI Bank, Kumari Bank and Everest Bank Ltd. with the help of liquidity and profitability ratio. These banks are competing in the same economic environment and financial market and are operating fully under computerized system to meet the growing competition in banking system.

Liquidity and profitability management is an important function of any business because it is the determinant of whether the entity will be in operation in the foreseeable future. Moreover, a position considered adequate for a bank in one time period may not be so in another. This study especially answers the following questions:

- i) What is the liquidity and profitability position of the banks?
- ii) How is the financial performance of the company?
- iii) Are the stakeholders being benefited by the liquidity and profitability performance of the banks?
- iv) Whether all four banks are using accounting rules and regulations?

## **1.6 Objectives of the Study**

The basic objectives of the study are to evaluate the financial performance of bank comparison of various financial approaches of current year regarding with previous year will be more appropriate.

In the absence of specific objective, the study loses its value. The general purpose of the study is to discuss, examine and evaluate the trade off between liquidity and profitability position of various commercial banks in Nepal. The basic objective of the study is to evaluate the financial performance of different banks in different year. The specific objectives of the studies are as follows:

- ) To analyze the liquidity and profitability position of Nabil Bank, Kumari Bank, Nepal SBI Bank, and Everest Bank.
- ) To measure the efficient in management and utilization of the assets.
- ) To find out the correlation and regression analysis.
- ) To lookout the financial strength and weakness of the bank.
- ) To make necessary suggestion and recommendation of financial performance of bank.
- ) To find out the average liquidity and profitability position of each bank.
- ) To analyze the coefficient of variation for choosing the banks by more consistency or less consistency.

## **1.7 Significance of the Study**

Liquidity and profitability position plays vital role in the economic growth of an organization. Every organization has to analyse its financial performance in every step of its operation, promotion, and expansion. There should be an appropriate equilibrium between the earning and non-earning assets. Commercial banks are always guided by the objective of profitability. There should be an effective system of funds allocation in order to safeguard the banks from the danger of liquidity. An appropriate level must be achieved between them.



The study like this will be most important for the bankers, economists, shareholders, financial agencies, stock exchange, stock traders, customers, depositors, and debtors who can objectively identify the better banks to deal with. It provides the literature to the researcher who wants to carry research in the future in this field.

Thus, it realizes the necessity to evaluate the liquidity and profitability position and this study will be a helpful tool for maintaining balance between principalities of liquidity and profitability.

## **1.8 Limitations of the Study**

The study of liquidity and profitability is based on the secondary data which has been prepared. In the context of Nepal, problem of reliable data is the major problem for research study. There is considerable place for arguing about its accuracy and reliability. Every study has limitations due to different factors of institutions, time period taken, reliability of statistical data tools ad variance.

Thus, the present study of liquidity and profitability position of banks has the following limitations:

- ) The study is mostly based on secondary data which may or may not provide the exact vision of the field.
- ) The data used in the study are modified as per need of the study.
- ) The study will be done according to the information provided by the banks and not with the help of experience gained on actual working environment.
- ) All the information gathered through primary sources will be assumed to be true and correct.
- ) Difficult to forecast future on the basis of past facts.
- ) The study focuses on banking performance only so the study may not be sufficient for depth analysis.
- ) Basically, the lack of researcher experience is the main limitation.
- ) Misleading results in the absence of absolute data.

- ) The ratio and tools that is going to be used in the study may vary due to different definition of terms given by different authors.
- ) The study focused only on the liquidity and profitability analysis and does not cover oilier aspects of activities.

## **1.9 Organization of the Study**

After selecting the title and collection of data, it should be analyzed properly by making thesis. This study has been divided into five chapters.

### **Chapter I Introduction**

The introduction chapter deals with the general background and the subject matters of the study. It consists of background of the study, profile of banks, focus of the study, statement of the problem, objective of the study, significance of the study, hypothesis, questions and limitation of the study.

### **Chapter II Review of Literature**

This chapter deals with the review of literature relating to the concept of liquidity and profitability ratio, types of ratio, determination of liquidity and profitability ratio.

### **Chapter III Research Methodology**

The third chapter explains about the research methodology, which has been used to evaluate the liquidity and profitability position of banks under consideration. This chapter consists of research design, sample and population sources of data and statistical and financial tools and techniques to measure the liquidity and profitability position of JVBs.

### **Chapter IV Presentation and Analysis of Data**

The fourth chapter deals with the presentation and analysis of relevant data and information through defined course of research. The chapter also presents the results relating to liquidity and profitability ratio.

### **Chapter V Summary, Conclusion and Recommendation**

The fifth chapter is concerned with the summary of the study. Various conclusions are drawn from the study and provided recommendations for improving the future performance.

## **Chapter-II**

### **2. REVIEW OF LITERATURE**

The review of literature for the concerned subject matter for the present study has been presented in this chapter. Here, in this chapter review of concept of financial performance tools and techniques of concept of liquidity and profitability performance related research studies, regulating relating to commercial banks is strived to present briefly. The main purpose of doing research is reviewing and gaining new knowledge and the reviewing. The literature of the related documents helps the researcher to reach near his purpose. This chapter highlights upon the existing literature.

#### **2.1 Literature Survey of Concept**

##### **2.1.1 Financial Statement Analysis**

Financial analysis means the analysis of financial statement. It is the process of identifying the financial strength and weakness of the firm by properly establishing the relationship between the items of the balance sheet and the income statement. It also provides the framework for financial planning and control. A financial manager needs t information provided by the analysis both to evaluate the firm's past performance and to framework for future planning and policies. Financial analysis is not possible without availability of the financial statements, but what information to be picked from financial statements depends upon the wisdom and the skill of the financial analyst. Financial information helps to analyze the performance and position of the company in a right way.

Financial statement analysis is important not only for the firm's mangers, but also for the other stakeholders like employees, researcher, government and their agents, but it is more useful to the managers internally and to the stakeholders externally. Internally, the financial managers use the information provided by the financial analysis to help to take financing and investment decisions. Externally, the other stakeholders use financial statement analysis to evaluate the attractiveness of the firm.

### **2.1.2 Income Statement**

Income statement is a statement summarizing the firm's revenues and expenses over an accruing period, generally a quarter or a year. The income statement is also known as profit and loss account.

The income statement of commercial banks is a statement of banks earning power and cost. Banks have to be efficient to prove their viability depending upon their income generating power and cost minimizing strategy. The success or failure of a bank is determined by the difference between income and expenditure. Income statement shows the net result of the business operations. The income statement reflects the earning capacity of the bank. Generally, banks earn profit by providing a higher rate of interest on loans than the rate of interest paid on deposits. The income statement also includes non-interest income and non-interest expenses.

### **2.1.3 Balance Sheet**

Balance sheet is a statement of the firm's financial position at a specific point and time. The balance sheet is a list of the firm's assets and liabilities at that moment. The difference in assets and liabilities is the net worth of the firm, also called stockholders' or stockholders' equity. Like the income statement, the balance sheet is standardized in presentation.

The balance sheet of a commercial bank is a statement of the total assets and liabilities of a bank at a particular date, usually the last day of the accounting period. In fact, commercial banks are able to form a concrete opinion about the interest-earning assets that include mostly loans and investments and interest-paying liabilities that cover mainly deposits and borrowings. As such, the balance sheet is the most important financial statement that helps the bank to have an indicative signal of its financial condition and position. Further, a thorough study of the balance sheet provides and contributes more information about the resources and obligations of a bank.

### **2.1.4 Financial Ratio Analysis**

A ratio without relation is meaningless. The relationship between one side of the balance sheet with the other side of the balance sheet as well as the relationship with the income statement provides an implication regarding how one item is related to another. The failure to make an analysis of this relationship makes no sense in

the use of financial statement. It can be expressed in terms of % times and proportion.

According to Robert N. Anthony (1964, Pg-297);

“A ratio is simply one number expressed in term of analysis. It is found by dividing one number by another. A percentage is a kind of ratio in which the base is taken as equally the 500 and the quotient is expressed as per hundred of the base.”

According to R. Chopra (1995, Pg-220);

“Ratio serves as a measure of the merits of several aspects of an enterprise when data for one accounting period are compared with similar data from another.”

Ratio is very useful for the purpose of taking decision from simple analysis to empirical research in predicting the performance of the company to show the directions of success or failure. To determine the financial condition and performance of a firm, its ratio may be compared with average ratios to the industry of which the firm is involved. Another way of ratio analysis is comparison of the current ratios with the past ratio or with the future or the projected ratios. Financial ratios can be grouped into the following 4 categories:

- Liquidity ratios
- Leverage ratios
- Activity or turnover ratios
- Profitability ratios

### **2.1.5 Concept of Liquidity Ratios**

Liquidity measures the firm’s ability to meet its short-term obligation when they become due. It tests the short-term solvency position for the payments of short-term liabilities. Liquidity can be viewed in terms of liquidity stored in the balance sheet and in terms of liquidity available through purchase funds. Generally, the definition of liquidity cannot be found in the same way in the countries of whole world because it is known as much as the development of the monetary section take place or the use of monetary devices increase. So

much the definition of it does wider liquidity means the whole money stock of money.

Liquidity refers to the speed and ease with which assets can be converted to cash. Gold is relatively liquid assets. A custom manufacturing facility is not. Liquidity actually has two dimensions, ease of conversion versus loss of value. Assets are normally listed on the balance sheet in order of decreasing liquidity meaning that the most liquid assets are listed first. Current assets are relatively liquid and include cash and those assets than we expect to convert to cash over the next 12 months. Accounts receivables, for example, represents amount not yet collected from customers on sales already made. Naturally, we hope these will convert to cash in the near future. Inventory is probably the least liquid of the current assets at least for many businesses. Liquid assets are the one that cannot be quickly converted to cash without a substantial price reduction.

According to Reed, Edward (2002, Pg-115);

“The amount of liquidity that a commercial banking system should maintain is one of the basic problems of the bank system. As for going income, too little, however may be fatal not only to an individual bank, but to the commercial banking system as a whole, the financial structure of the country and the economy of the nation. Too little liquidity and the demands of the depositors in the form of ‘ruins’ on the banks are like oil and water, they do not mix well.”

Liquidity suggests that a liquid bank either has the right amount of immediately spendable funds on hand when they are required or can quickly raise liquid funds by borrowing or by selling assets. Liquidity management is much more important than we may realize because a bank can be closed if it cannot raise enough liquidity even though technically it may still be solvent. Many banks assume that liquid funds can be borrowed virtually without limit any time they are needed. Therefore, they see little need to store liquidity in the form of easily marketed stable price assets. The enormous cash shortages experienced in recent years by banks in trouble make clear that liquidity needs cannot be ignored.

Liquidity ratio attempts to reflect the picture of the capacity of an enterprise to meet short-term obligation out of its short-term resources. If the company is unable to meet its short-term obligations due to lack of sufficient

liquidity it will result in bad credit ratings and loss of degree of liquidity. High liquidity means as idle assets and unnecessary tied up funds in current assets. Therefore, it can be said that liquidity is a prerequisite for the survival of a firm.

According to M.Y. Khan and P.K. Jain (1993, Pg-215);

“In fact, liquidity is a prerequisite for the very survival of firm. The short-term creditors of the firm are interested in the solvency or liquidity of a firm, but liquidity implies from the view point of utilization of the funds of the firm that funds idle or they earn very little.”

Different types of ratios have been used to measure the liquidity position of an enterprise. In concern with commercial banks different liquidity ratio such as cash and bank balance to total deposit (as per NRB directive) ratio, cash and bank balance to current deposit ratio, current ratio, quick ratio, etc. are used to measure the liquidity position of banks. The central NRB also directs all the commercial banks to maintain certain percentage of cash and bank balance for the purpose of maintenance of liquidity. Brief description of these ratios is mentioned below:

i) Cash and Bank Balance to Total Deposit Ratio:

ii) Current Ratio:

iii) Cash and Bank Balance to current assets ratio:

**i) Cash and Bank Balance to Total Deposit Ratio:**

This ratio measures the percentage of most liquid fund with the bank to immediate payment to depositors. This ratio measures the availability of bank highly liquid funds to meet its unanticipated calls on different types of deposits. This ratio is compared by:

$$\text{Cash and bank balance to total deposit ratio} \times \frac{\text{Cash and bank balance}}{\text{Total deposits}}$$

Higher ratio indicates the greater ability to meet the sudden demand of deposits and vice versa, but too high ratio is undesirable since capital will be tied up and it will maximize the opportunity cost.

**ii) Current Ratio:**

Current ratio (CR) is the quantitative relationship between total current assets and total current liabilities which measures the firm's ability to meet its short-term obligation as they fall due. This ratio is computed by

$$\text{Current ratio} \times \frac{\text{Current assets}}{\text{Current liabilities}}$$

Current ratio indicates the extent to which the short-term claims are converted than the current assets within one year. Neither more nor less value of the current ratio is desired than the industry. The excessive current ratio increases the liquidity, but reduces the profitability and vice versa. Thus, a financial manager must try to maintain CR as the industry. Note that the standard of CR is the ratio of the industry. When industry average is not given then 2:1 is taken as the standard to interpretation.

**iii) Cash and Bank Balance to current assets ratio:**

Cash and bank balance to total deposit ratio measures the proportion of cash and bank balance help by bank out of its total current assets. This ratio examines the banks liquidity capacity on the basis of its most liquid assets i.e. cash and bank balance. The ratio shows the percentage of readily available funds within the bank.

This ratio is calculated by using the following formula:

$$\text{Cash and bank balance to current assets ratio} \times \frac{\text{Cash and bank balance}}{\text{Total current assets}}$$

Higher ratio indicates the sound ability to meet their daily cash requirement of their customer and some earning may be lost.

**Importance of Liquidity Ratio**

A financial institution cannot be run with liquidity. The commercial banks and other financial institutions should keep the stock of liquid assets in the ratio of their deposit liability as fixed by the NRB. If commercial banks and financial institutions does not keep the stock of liquid properly as per the law and policy of the central bank then there is a provision to find them. So there is no dispute that liquidity is the most important thing for a bank.



People deposit their saving into bank to safeguard them, earn interest, and get back whenever they need. Therefore, bank must maintain liquidity to refund the deposit when account holders withdraw deposit. Hence, liquidity is the lifeblood of bank. The purpose of managing liquid assets is therefore to minimize the returns on the portion of the funds that is not required immediately. The basic importance of banks liquidity can be presented as follows:

- To meet the expenses of the bank's daily administrative work
- Liquidity is necessary for the efficient and healthy competition among banks
- To control the economic fluctuation
- To gain trust or faith from the public including other sectors
- To provide security to the banks
- To fulfil the demand of the debtors, etc

#### **2.1.6 Concept of Profitability Ratio**

Profitability ratio indicates the degree of success in achieving desired profit. It furnishes answers to how efficiently the bank is being managed. Although profitability ratio mainly studies earning power of the bank, it depicts almost entire performance of the bank. The bank should be able to earn income from the medium of investment because it is a legal person.

Profitability is net result a large number of policies and decisions. A profitability ratio is essentially related to the profit earned by an enterprise during a particular period to various parameters like sales, shareholder's equity, capital employed and total assets. Profit is necessary to survive in any business field for its successful operation and further expansion. It measures management's overall effective on investment. It also measures the earning power as well as operating efficiency of a firm. So profit is regarded as the engine that drives the business and indicates economic progress. Profit is a reward for risk taking. Profit for a bank is the difference between borrowing rate of interest. Appropriate investment portfolio which ensures both liquidity and profitability is essential.

Profit is the difference between revenue and expenses over a period of time. Commercial banks are established to earn profit without profit they cannot survive for the long period of time. All the stakeholders of the bank put pressure on the bank management to earn profit for their own sake. So banks want to invest all of its funds in those sectors which ensure higher return. Furthermore, there is always a positive attitude of depositors and other lenders towards the highly profitable banks.

According to Khan and Jain (1992, Pg-198);

“Profitability ratios are designed to provide answers to questions such as

- Is the profit earned by the firm adequate?
- What rate of return does it represent?
- What is the rate of profit for various divisions and segments of the firm?
- What is the earning per share?
- What amount was paid in dividends?
- What is the rate of return on equity holders? and so on

“The word profitability is composed of two words ‘profit’ and ‘ability’. On this basis, the concept of profitability may be defined as the ability of a given investment to earn a return from its use.” (Bion B. Howard and Miller Option: 1953, pg- 147)

“Profit is not the surplus of receipts over payments, but the surplus there will be loss. By revenue is meant what the business earns in the period under view usually what goods or services it has sold.” (F. P. Langley: 1978, pg- 21)

Therefore, profitability measures the success of a firm in earning a net return on sale or investment. It also determines whether the firm will be concluded over a long period of time or is going out of business. Profitability measures the operating efficiency of a business enterprise.

The profitability ratios are calculated to measure the operation efficiency as well as earning ability of the firm. Besides the management of the company, creditors, owners and potential investors are also interested in the profitability of the firm. Higher profitability ratio ensures to the creditors, owners, and potential

investors that their investment is safe and they can get regular return. Profitability ratios show the combined effect of liquidity, assets management and debt management on operating results.

The following ratios are calculated to measure profitability of a firm:

**(I) Profit Margin:-**

Net profit ratio is one of the important tools for the measurement of profitability i.e. efficiency of the bank. Higher the net profit ratio, the better it is considered. This ratio is also useful in making inter firm comparison of the profitability. Net profit ratio is the ratio of net income to operating income. Operating income includes the interest income, commission and discount, other operating income and exchange gain. This ratio is given as:

$$\text{Net profit ratio} \times \frac{\text{Net profit}}{\text{Operating income}} | 100$$

**(II) Return on Assets (ROA):-**

The ratio of net income to total assets measured the return on total assets (ROA) after interest and taxes. The ROA is also called return on investment (ROI). It measures the overall effectiveness in generating profit with its available assets. It also shows the effectiveness of the utilization of assets. It is calculated by dividing net income or earning available to common stockholders by total assets.

$$\text{Return on assets (ROA)} \times \frac{\text{Net income}}{\text{Total assets}} | 100$$

The higher ratio indicates the efficiency financial resources invested in the firm's assets to generate profitability. Therefore, the higher the ROA, the better will be the performance and vice versa.

**(III) Return on Equity (ROE):-**

The ratio of net income to common equity measures the return on common equity or the rate of return on stockholder investment. It is the relationship between net income after tax and common equity which is calculated by net income divided by common equity or earning available

to common stockholders divided by common equity. This is the most commonly used ratio for measuring the return on owner's investment. Common equity includes the share capital and reserve and surplus.

$$\text{Return on equity (ROE)} \times \frac{\text{Net income}}{\text{Common equity}} \mid 100$$

Higher the return on equity, the better it is. It indicates how well the firm has utilized the resources of the owners. Increasing ratios are favourable since they reveal the efficient use of owner's investment and vice versa.

#### **(IV) Net Profit to Total Deposit Ratio:-**

This ratio is also known as return on total deposit. This ratio measures how efficiently the deposit has been mobilized. Utilization of deposits is an important way to earn profit for the commercial banks. An explanation of the ability of management in efficient utilization of deposits. This ratio gives clear vision ascertains whether total deposit is being properly utilized or not.

$$\text{Return on deposit ratio} \times \frac{\text{Net income}}{\text{Total deposit}} \mid 100$$

High percentage is the index of strong profitability position and lower percentage is the index of weak profitability position.

#### **(V) Return on Total Investment:-**

This head of analysis measures the proportion of returned earned of the bank on its total investment. It measures whether the banks have earned satisfactory return on their total investment or not. Moreover, it reflects how well the firm has invested their funds for profit generating purpose.

This ratio is calculated by using the following formula:

$$\text{Return on total investment} \times \frac{\text{Net income}}{\text{Total investment}} \mid 100$$

Higher percentage represents the appropriate investment policy for profit generating purpose and vice versa.

### **(VI) Interest Efficiency Ratio:-**

Interest efficiency ratio is also known as interest expenses to interest income ratio. It is that ratio which is relationship between interest paid on paying liabilities and interest income from earning assets. Interest paying liabilities that cover mainly deposit and borrowing and interest earning assets include mostly loan, advance and investment. It can be calculated as follows:

$$\text{Interest efficiency} \times \frac{\text{Total interest expenses}}{\text{Total interest income}} | 100$$

Higher ratio indicates that the bank has paid higher amount of interest on liabilities in relation to interest income and vice versa.

### **(VII) Net Interest Margin:-**

Net interest margin measures the profitability of commercial banks. It is another most popular tool of profitability measurement. Net interest margin is the ratio of net interest income (NII) and interest earning assets. Net interest income is the difference between interest income and interest expenses. It can be calculated as follows:

$$\text{Net interest margin} \times \frac{\text{Net interest income}}{\text{Interest earning assets}} | 100$$

Higher percentage indicates the strong profitability position and vice versa.

### **(VIII) Interest Spread:-**

Interest spread is also popular tool to measure the profitability of commercial bank. Spread is the difference between average return on interest earning assets and average rate paid on interest paying liabilities. It can be calculated as follows:

$$\text{Interest spread} \times \frac{\text{Interest income}}{\text{Interest earning assets}} - \frac{\text{Interest expenses}}{\text{Interest paying liabilities}}$$

As above equation can be expressed as follows:

$$\text{Spread X} = \frac{\text{Interest income from security} \Gamma \text{ interest income from loan}}{\text{Security amount} \Gamma \text{ loan amount}}$$

$$\text{Z} = \frac{\text{Interest pain on time deposit} \Gamma \text{ interest paid on debt}}{\text{Time deposit} \Gamma \text{ long - term debt}}$$

Higher percentage indicates the strong profitability position of the organization and vice versa.

## **2.2 Review of Related Literature**

Review of related literature means reviewing research studies or relevant proportion in the related area of the study. In this section, review of book, articles, and regulation and review of thesis work are included.

### **2.2.1 Review of Book, Articles & Regulations**

A book of “Financial Markets & Institutions” written by Manohar K. Shrestha & Dipak Bahadur Bhandari, a readable book with a general overview of financial market and institution dividing into different topics. On their view, financial market is a place that facilitates financing and investment of financial assets. Financial market operates the economic functions and finance functions. Commercial bank is the main financial institution. These types of banks’ main functions are accepting deposits, providing loans and investments. Commercial banks have to maintain satisfactory level of liquid assets that are easy to sell at market price with less transaction cost. Nepal Rastra Bank has directed commercial banks not to have more than 0.5 percent spread difference between lending and deposit interest rate although at present the interest rate comes within the range of 5% to 6%. In Nepalese context, commercial banks investment in government treasury bill is more than 50% and then followed by 40% investment in foreign banks and other 10% in other sectors. The profitability of a commercial bank can be measured in various ways. Writer’s main focus is placed on understanding net interest margin, return on assets and return on equity. In addition, bankers follow very closely the spread between the average rate on interest, earning assets and the average rate on interest paying liabilities. If the spread becomes negative as happened during period of the 1980s, many banks may suffer losses. In our country, the failure of the local commercial banks like Nepal Bank Limited and Rastriya Banijaya Bank

compared to joint venture commercial banks lies in their gross incompetence in the management of assets and liabilities.

Morris (1980) in a paper on “Latin America’s Banking System in the 1980s,” has concluded that most of the books concentrated on compliance with central bank rules on reserve requirements, credit allocation and interest rates. While analyzing loan portfolio quality, operating efficiency and soundness of bank investment management has largely been overlooked. The author has further added that mismanagement in financial institutions has involved inadequate and over optimistic loan appraisal, high risk diversification of loan portfolio and investment, high risk concentration related parties lending, etc. are major cause of investment and loan that has gone bad.

Dr. Manohar K. Shrestha (2057) in his article “Commercial Banks Comparative Performance Evaluation” concluded that joint venture banks are new operationally more efficient having superior performance while comparing with local banks. Better performance of joint venture banks is due to their sophisticated technology, modern banking method and skill. Their better performance is also due to the government’s branching policy in rural areas and financing PEs. Local banks are efficient and expertise in rural sectors but having number of deficiencies. So local banks have faced growing constraints of socio-economic, political system on one hand spectrum and that of the issues and challenge of joint venture banks commanding significant banking business on other spectrum.

Monetary policy for fiscal year 2009/10 NRB, central office, Baluwatar, Kathmandu, Nepal

Under the provision in Nepal Rastra Bank (NRB) Act 2002, the NRB has formulated and implemented five annual monetary policies so far. The focus of monetary policy has been to insure price, external and financial sector stability so as to create the environment supportive for high and sustainable economic growth.

NRB issues new monetary policy on 2008 for F/Y 2008/09. The provisions under this policy are as follows:

- The compulsory cash reserve ratio (CRR) has been kept unchanged at minimum 5% on account.
- The bank rate has been kept unchanged at 6.25%. This rate has been used to impose penalty on the amount of shortfall of any commercial bank fails to maintain the CRR.
- The refinance rate on export credit in Nepalese currency has been lowered by 1% point to 2.5% from 3.5%. The refinance rate to rural development banks however has been kept unchanged at 3.5%.
- The sick industries refinance rate has been kept unchanged at 1.5%.
- The sick industry refinance facility of Rs. 2 billion has been continuing for 2008/09 as well. The sick industry refinance facility has been put in place since 2002/03.
- NRB will continue the refinance facility of R. 500 million, similar to sick industry refinance, on the loans used by dalits, indigenous backward madheshi and marginalized group as defined by the NGO and on the loans used for foreign employment with objectives of providing relief to these sections of society and promoting foreign employment.
- In the context of commercial banks providing substantial amount of short-term credit to the development banks and finance companies, the penal rate has been increased from 1.5% to 2% to check the misused of standing liquidity facility.

### **2.2.2 Review of Thesis**

In this section, different types of related research studies have been reviewed because change of duplication will be avoided from present study and some new change can be created for achieving the objective.

Vijay Kumar Yadav, MBS, 2011, on his unpublished thesis “A Comparative Study on Working Capital Management of NABIL and KBL,” he found that the current ratio of NABIL is greater than KBL, so NABIL is better



than KBL. Similarly, cash and bank balance to total deposit ratio of KBL is better. He found that net profit to total assets ratio of NABIL is better, it means NABIL utilizes its assets effectively than KBL, but KBL's ROA is more consistent on the view of interest earned to total assets, KBL is better than NABIL and return on deposit of NABIL is better but KBL is more consistent. Cash and bank balance of NABIL is getting better position.

Kishor Poudel's (2002) on his unpublished thesis "Liquidity and Investment Position of Joint Venture Commercial Bank in Nepal" had made an attempt to evaluate liquidity and investment of JVBs' special reference to EBL and NABIL. He has concluded that liquidity position of EBL is comparatively better than NABIL. Growth rate of investment is higher in EBL than NABIL. A commercial bank at its own judgement may decide to maintain an appropriate level of liquid assets. There is no standard and uniform rate or ratio for maintaining liquid assets by the commercial banks. He further found the banks do not have constant and consistent liquidity and investment policy. So he has recommended exploring such investment and to increase its investment so share and debenture and the bank should have laid policy for timely review of portfolio and to maintain risk and return.

Mr. Tika Joshi (2011) on his Master's thesis, "A Comparative Study of Financial Performance of Nepal Investment Bank Ltd. and EBL," found that the liquidity position of Nepal Investment Bank Ltd. (NIBL) is comparatively better than EBL. NIBL has highest current ratio, cash and bank balance to total deposit ratio and cash and bank balance to total deposit ratio and cash and bank balance to current assets ratio than EBL.

NIBL has been more successful in mobilization of its investment to total deposit saving deposit to total deposit ratio. On the other hand, EBL appears to be stronger in mobilization of total investment to total deposits.

The trend value of deposits, loan and advances, investment and net profit of EBL and NIBL are in an increasing trend.

Ashok Kumar Thakur (2010) on his thesis "Financial Performance Analysis of Commercial Banks of Nepal (Himalayan Bank Ltd. and NABIL) found the liquidity position of the banks is in fluctuating trend. The Himalayan bank's cash and bank balance to current assets, cash reserve ratio is more than NABIL, but current ratio of NABIL is more than Himalayan Bank. Return on

equity, return on assets, return on total deposits and interest earned to total assets of NABIL is better than Himalayan Bank Ltd. So NABIL's profitability position is better than HBL. Investment trend, total deposit trend, net profit, operating income, interest earned, etc. of NABIL is increasing trend than HBL throughout the study period. All of correlation is almost positive relation.

Shreedhar Adhikari (MBA 2001), on his thesis, "A Comparative Study of Financial Performance of Nepal SBI Bank Ltd. and Everest Bank Ltd.," found out the liquidity position of both banks. Overall liquidity position of EBL has found slightly stronger than the NSBI. It showed that EBL can to meet its current liabilities more efficiently than NSBI and concluded that both banks have used higher proportion of debt in their capital structure and also found that overall capital structure of NSBI appears more levered than the EBL. He suggested that both of banks have maintained NRB balance sheet to deposit ratio remarkable higher than the standard by NRB.

Shankar Bahadur Limbu (2006), on his thesis, "A Comparative Study of Financial Performance of NSBI, EBL & NABIL," found that profitability position of NABIL is best, EBL has better position than NSBI. In terms of income structure, interest paid to interest income, ROA, ROE, etc reflects that NABIL is most capable to utilize the fund to productive sector and EBL pays highest amount of interest.

Liquidity position of three sample banks is good because cash and bank balance to deposit ratio of NSBI, EBL & NABIL shows that the three banks have constantly maintained liquidity ratio (i.e. cash reserve ratio) as defined by NRB. But on the view of current ratio, NABIL can maintain highest liquidity.

After the detailed study, it can be concluded that financial market is the place that facilitate financing and investment of financial assets. Commercial is the main financial institution. In our country, failure of local banks as compare to joint venture commercial banks lies in their gross incompetence in the management of assets and liabilities. Mismanagement in financial institutions is involved inadequate and over optimistic loan appraisal, high risk divaricating of loan portfolio and investment etc are major cause's investment and loan that has gone bad. NRB is focusing on monetary policy to insure prise, external and financial sector stability so as to create the environment supportive for high and sustainable economic growth.

Review of thesis is concluded that the working capital management of NABIL is better than KBL because of its efficient management. The ROA of NABIL is better due to the effective utilization of its assets. The growth rate of investment is higher in EBL than NABIL. There is no any fixation of standard and uniform rate for maintaining liquid assets by commercial banks so there is need of exploring the investment and to increase its investment so share and debenture of the bank should have laid policy for timely review of portfolio and to maintain risk and return. Liquidity position of four banks i.e. EBL, NABIL, NSBI and KBL is good as it has consistently maintained liquidity ratio defined by NRB. At last, it is better to say that NABIL can maintain highest liquidity from the view of current ratio.

## Chapter-III

### 3. RESEARCH METHODOLOGY

#### 3.1. Introduction

Research methodology may be defined as a technique for systematically solving a research problem. It is a science which tells how to scientifically study a research problem. It has several dimensions and as such research methods are only a part of research methodology. Thus, the scope of methodology is wider than that of the methods. Methodology covers not only methods but also logic behind the methods being used in the context of research study. Thus, research methodology covers not only why a particular method of studying a research problem has been identified but also why at all research work was undertaken, what are hypothesis, sources of data collection, techniques of data analysis, etc. In fact, research methodology refers to all those techniques that the researcher uses in performing research operation. Thus, all those methods which are used in performing research operations.

“Research Methodology is a way to systematically solve the research problem.” (C. R. Kothari: 2000, Pg-10)

“Research methodology is a vital and absolutely indispensable part of social scientific and educational research. Without research methodology modern social scientific and educational research would still be in the dark age.” (F.N. Kerlinger: 1986, Pg-32)

#### 3.2 Research Design

A research design is a procedural plan that is adopted by the researcher to answer questions validly, objectively, accurately, and economically. Research design sets up the framework for adequate test of the relationship among variables. It is a set of instructions to the researcher to collect and analyze the data in a systematic manner.

A research design is a blueprint (or detailed) plan for how a research study is to be completed operation of the variables so they can be measured selecting a sample of interest to study, collecting data to be used as a basis for lasting hypothesis and analyzing the results. Research design is the plan

structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. It is the outline, the scheme and the paradigm of the operation of the variables. It is the frame of plan, the basis of which a researcher performs his research work. Research design can be taken as strategy for the research work rather than plan. The research design is thus an integrated frame that guides the researchers to plan and execute the research work.

“A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.” (C. Selltitz, M. Jahodo, M. Deutsch and S. Cook: 1965, Pg-50)

“A research design is the plan structure and strategy of investigation conceived so as to obtain answers to the research questions and control variance.” (Wolf and Pant; 2000, Pg-50)

“Research design is the logical planning and directing of a piece of research.” (P. V. Young: 1960, Pg-131)

Research design occupies a key position in the research work. It facilitates the smooth sailing of the various research operations, theory making research as efficient as possible yielding maximal information with minimal expenditure of effort, time and money. In fact, research design has a great bearing on the reliability of the results.

### **3.3. Population and Sample**

A population is the complete enumeration or count of the population units for a characteristic. Here, the population refers universe and not the human population only. Census requires more money and manpower and time. There are many instances where it is not practicable to enumerate all the units due to their perishable nature. A census method provides for highest accuracy. All the members are covered by the inquiry; all the characteristics of the universe are maintained in original. This method is free from sampling errors.

A sample is a small specimen or a separated part of the whole population, representing its general qualities, as far as possible. The sampling technique is a procedure for the selection of a sample from the given population. A sample survey will usually be less expensive than a census survey and the desired

information will be obtained in less time. It is most important that a degree of accuracy of result is also maintained. Occasionally, the sample survey technique is applied to verify the census survey results. It has been a well established fact that in many situations a well-conducted sample survey can provide much more precise results than a population survey.

According to F.N. Kerlinger (1998, pg-118);

“Sampling is taking of any portion of a population or universe as representative of that population or universe.”

“A population as the group to which a researcher would like the results to be generalizable.” (W. J. Goode and P. K. Hatt; 1981, pg- 29)

This study is concerned with the liquidity and profitability ratio of listed companies. So here the companies listed in the stock market are the population of this study and the companies selected here for the study are taken as samples. For this study only four listed banks are taken as sample from all listed banks.

### **3.4 Nature and Sources of Data**

The collection of data is considered as an integral part of research activity. Basically, there are two sources of data:

(a) Primary data and

(b) Secondary data

#### **(a) Primary Data:-**

The data which are originally collected by an investigation or an agent for the first time for the purpose of statistical enquiry are known as ‘primary data’. Primary data are not published in any journals or books or newspapers.

Many investigations such as the literacy rate, birth rate, death rate, and other necessary information are collected and calculated by the help of primary data. Social survey, observation, case study, RRA, PRA, etc. are the major methods of primary data collection.

### **(b) Secondary Data:-**

Data which are not originally collected rather obtained from published or unpublished sources are called 'secondary data'. Before collecting primary data regarding any project or problem, it is desirable to go through the secondary data, if available, in order to get an idea about the possible pitfalls before hand. The data used for this study are secondary in nature. Information received through secondary sources are sufficient and useful. In order to gather complete information concerning some present social custom, it is generally necessary to know its historical background. This historical background can be known through secondary sources besides secondary sources supply information concerning difficulties, precautions, and methods of study.

This study on liquidity and profitability ratio of commercial banks of Nepal is based on secondary sources of data. The required data have been collected form Nepal Stock Exchange i.e. from the website [www.nepalstock.com](http://www.nepalstock.com). Other information is collected from different books annual reports, websites of concerned banks, library, and newspapers as required.

### **3.5 Data Collection Techniques**

In the course of preparation for the research work, the data regarded as appropriate for the study was obtained through direct computer printout from the NSE website [www.nepalstock.com](http://www.nepalstock.com). The research is based on the historical data of the banks available in annual reports of the banks. Books, periodicals, journals, and articles on the related subject were extensively reviewed in the library. In this study, the data extracted from annual financial reports published by NABIL, SBI, EBL and Kumari Bank has been processed and interpreted considering the requirements of the study.

### **3.6 Data Analysis Tools:**

Data are collected for analyzing. Collected data are meaningless unless it is analyzed for further meaning. The financial and statistical tools and techniques have been applied in data processing procedure. The data can be

analyzed by using various statistical and financial tools. For the analysis of data, appropriate tools are to be utilized in order to secure the precise finding of the study. All those tools which are utilized for the analysis and interpretation of the data is known as analytical tools. There are two types of analytical tools applied in the study. They are:

- a) Financial tools
- b) Statistical tools

### 3.6.1 Financial Tools:-

We described what the financial tools are in previous chapter.

### 3.6.2 Statistical Tools:-

Statistical tools are applied for the experiment concentrating on the system model and the interaction of independent and dependent variables. It summarizes a collection of observations to feature their commodity by suppressing details. Here in this study, the statistical tools will include:

- i) Arithmetic mean (A.M.)
- ii) Standard deviation (s.d.)
- iii) Coefficient of variation (C.V.)
- iv) Correlation coefficient
- v) Regression analysis

#### I) Arithmetic Mean (A.M.):-

A.M. is also known as the mean or average, a value that helps to summarize an entire set of numbers. The mean is the sum of all observations divided by the number of observations. In examining large collection of numbers, such a census data, it is helpful to be able to present a number that provides a summary of the data. The A.M. is probably the best known descriptive statistic. The A.M. denoted by  $\bar{X}$  is defined by

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{N}$$



Where,  $\bar{X}$  = Arithmetic mean

$\Sigma X$  = Sum of the observation

$N$  = No. of observation

$X_1 \Gamma X_2 \Gamma X_3$  = Values of variables

## II) Standard deviation (s.d.):-

Standard deviation (s.d.) is defined as the positive square root of the mean of the square of the deviations taken from the A.M. and denoted by 's'. The most useful and frequently used measure of dispersion is the s.d. or root-mean square deviation. The s.d. has proven to be extremely useful measure of spread in part because it is mathematically tractable. It is formulated by

$$s = \sqrt{\frac{\Sigma (X - \bar{X})^2}{N}}$$

Where,  $s$  = Standard deviation

$\Sigma (X - \bar{X})^2$  = Sum of the square of mean deviation

$N$  = No. of observation

## III) Coefficient of variation (C.V.):-

The coefficient of dispersion based on s.d. multiplied by 100 is known as the C.V. If  $\bar{X}$  be the arithmetic mean and  $s$  the standard deviation of the distribution then the C.V. is defined by

$$C.V. = \frac{s}{\bar{X}} \times 100$$

Where, C.V. = Coefficient of variables

$s$  = Standard deviation

$\bar{X}$  = Arithmetic mean

It is independent of unit. So two distributions can be compared with the help of C.V. for their variability. Less the C.V., more will be the uniformity, consistency, etc. and vice-versa.

#### IV) Correlation coefficient (r):-

Correlation is a statistical technique which can show whether and how strongly pairs of variables are related. For example, height and weight are related. An intelligent correlation analysis can lead to a greater understanding of our data. Correlation analysis only helps in determining the extent to which the two variables are correlated, but it does not tell us about cause and effect relationship.

Two variables are said to be 'correlation' when they are so related that the change in the value of one variable is accompanied by the change in the value of the other. The measure of correlation called the 'correlation coefficient' summarizes in one figure. The Karl Pearson's correlation coefficient is defined by

$$r = \frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$$

Where,  $r$  = Correlation coefficient

$$\sum x$$

$$\sum y$$

Correlation coefficient lies between -1 and +1 when  $r=1$ , there is positive perfect correlation between the two variables. When  $r=-1$ , there is a negative perfect correlation. When  $r=0$ , the variables are uncorrelated and nearer the value of  $r$  to +1, closer will be relationship between two variables and nearer the value of  $r$  to 0, lesser will be the relationship.

#### Coefficient of Determinants

It is the square of correlation which is denoted by  $r^2$ . It describes what percentage change in dependent variable by the change of independent variables.

## Probable Errors

Probable error of the correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of  $r$ . If  $r$  be the calculated value of  $r$  from a sample of  $n$  pairs of observation, then P.E. is defined by

$$\text{P.E.} = 0.6745 \left| \frac{1 - r^2}{\sqrt{n}} \right|$$

If  $r < \text{P.E.}$ , it is insignificant so perhaps there is no evidence of correlation. If  $r > 6 \text{ P.E.}$  it is significant. In other cases, nothing can be concluded.

## V) **Regression Analysis:-**

Literal meaning of regression is stepping or returning back to the original position. Regression analysis is used as a tool of determining the strength of relationship between two variables. Thus it is a statistical device with the help of which we can estimate or predict the value of one variable when the value of other variable is known. The unknown variable which we have to predict is called dependent variable and the variable whose value is known is called independent variable. Regression analysis clearly indicates the cause and effect relationship between two variables. If  $y$  is the independent and  $x$  is the dependent variable, the regression equation  $y$  on  $x$  is

$$y = a + bx$$

Where,  $y$  = dependent variable

$a$  = intercept

$b$  = slope or regression coefficient

$x$  = independent variable

And to find the value of  $a$  and  $b$ , the following normal equations

$$\sum y = na + b \sum x$$

$$\sum xy = a \sum x + b \sum x^2$$

And last, putting the value of a & b in regression equation.

### Alternative Method

In the above method, we find the regression equations directly from actual data. The regression equation can easily be obtained when the deviation of the items are taken from the assumed mean. In such case,

The equation of lines of regression of y on x is

$$y - \bar{y} = b_{yx}(x - \bar{x})$$

Where,  $\bar{x}$  = Arithmetic mean of x series

$\bar{y}$  = Arithmetic mean of y series

$b_{yx}$  = Regression coefficient of y on x

And the equation of lines of regression of x on y is

$$x - \bar{x} = b_{xy}(y - \bar{y})$$

# Chapter-IV

## 4. DATA PRESENTATION AND ANALYSIS

After collecting and organizing the data, the next step is to present them systematically so that they can be presented in various forms such as tabular form, diagrammatical form, graphical form, etc. After presentation, the next step is to analyze the data with the help of financial and statistical tools that is concerned about comparative analysis and interpretation of available data.

This chapter is concerned with presentation analysis and interpretation of data. After presenting the data in a tubular and graphical form, they are analyzed and interpreted.

According to K. H. Wolff and Raj Pant (1999, pg-27);

“The analysis of data consists of organizing, tabulating, and performing statistical analysis. The main purpose of analysis of the data is to change it from an unprocessed form to an understandable presentation.”

“Technically speaking, data presentation implies editing, coding, classification, and tabulation of collected data so that they use amenable to analysis.” (C. R. Kothari, 1990, Pg-151)

The main purpose of this study is to find out actual financial position of Kumari Bank Ltd., NABIL, EBL, and NSBI with the help of ratio above 6 years. Tools used for the analysis is ratio and under which liquidity and profitability position of KBL.

### 4.1. Liquidity Ratio

#### 4.1.1 Current Ratio

It measures the firm's ability to meet its short-term obligation as they fall due.

$$CR = \frac{CA}{CL}$$

The current ratio of samples banks are presented below.

**Table 4.1**  
**Current Ratio**

(in times)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	1.09	1.08	1.09	1.15
2005/06	1.08	1.09	1.12	1.13
2006/07	1.07	1.12	1.15	1.1
2007/08	1.07	1.1	1.18	1.12
2008/09	1.07	1.11	1.22	1.13
2009/10	1.08	1.07	1.08	1.13
<b>Mean (<math>\bar{x}</math>)</b>	<b>1.077</b>	<b>1.095</b>	<b>1.14</b>	<b>1.127</b>
<b>S.D. ( )</b>	<b>0.00746</b>	<b>0.01708</b>	<b>0.04933</b>	<b>0.0149</b>
<b>C.V.</b>	<b>0.69%</b>	<b>1.56%</b>	<b>4.33%</b>	<b>1.32%</b>

Sources: Appendix 1

In the above table, the mean current ratio of EBL, NABIL, NSBI, and KBL are 1.077, 1.095, 1.14, and 1.127 times respectively. By comparing the different banks with each other, the average current ratio of the NSBI is higher than other three banks' average CR. It shows that liquidity position of this bank is good and EBL's liquidity position is poor.

The current ratio of EBL in different fiscal year seems almost equal. In the first five year, the CR is in decreasing way, but in the year 2009/10 it is increased. In the context of NABIL bank, the CR is increasing way from the year 2004/05 to 2006/07. In the year 2007/08, it is decreased and year 2009/10, CR of NABIL is very low. NSBI Bank's current ratio is increasing way but last year it is also decreased. KBL's current ratio is decreasing way in first three years after CR is increase and last two years it is equal.

The overall current ratio of four sample banks has fluctuated. By comparing the four banks' CR with standard of CR (i.e. 2:1), it is found that the

banks' current ratio is lower than the standard. It means that they cannot meet their current obligations and their liquidity position is poor.

The C.V. of EBL, NABIL, NSBI, and KBL are 0.69%, 1.56%, 4.33%, and 1.32% respectively where C.V. of NSBI > NABIL > KBL > EBL (i.e. 4.33 > 1.56 > 1.32 > 0.69). It means that the variability of ratio of NSBI will be less consistent and EBL will be more consistent, that is performance of EBL is better than other banks.

#### **4.1.2 Cash and Bank Balance to Total Deposit Ratio:-**

This ratio measures the availability of bank highly liquid funds to meet its unanticipated calls on different types of deposit.

$$\text{CBB to Deposit Ratio} = \frac{\text{CBB}}{\text{Deposit}}$$

The CBB to deposit ratio of sample banks are presented below:

**Table 4.2**

#### **Cash and Bank Balance to Total Deposit Ratio**

(in times)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	0.104	0.038	0.12	0.071
2005/06	0.113	0.033	0.084	0.05
2006/07	0.131	0.06	0.102	0.064
2007/08	0.111	0.084	0.098	0.073
2008/09	0.185	0.09	0.098	0.113
2009/10	0.212	0.03	0.068	0.156
<b>Mean (<math>\bar{x}</math>)</b>	<b>0.143</b>	<b>0.056</b>	<b>0.095</b>	<b>0.88</b>
<b>S.D. ( )</b>	<b>0.0416</b>	<b>0.0241</b>	<b>0.016</b>	<b>0.036</b>
<b>C.V.</b>	<b>28.71%</b>	<b>43.04%</b>	<b>16.87%</b>	<b>40.93%</b>

Sources: Appendix 1

The above table shows that the cash and bank balance to total deposit ratio of EBL fluctuated during the six-year period. The ratio was highest (0.212 times) in the F/Y 2009/10 and lowest (0.104 times) in the F/Y 2004/05. In average, EBL maintained 0.143 times. Similarly, the CBB to deposit ratio of NABIL was highest (0.09) and that ratio decreased to 0.03 times in the F/Y 2009/10.

Similarly, cash and bank balance NSBI was 0.12 times in F/Y 2004/05 and then decreased to 0.084 times in F/Y 2005/06 and the increased to 0.102 and then ratio of NSBI was table for two years and then decreased to 0.068 in F/Y 2009/10. Likewise, the CBB to deposit ratio of KBL was highest (0.156 times) in F/Y 2009/10 and lowest (0.05 times) in F/Y 2005/06. This ratio was decreased to 0.05 in F/Y 2005/06 and then ratio was increasing way.

Comparing four sampled banks, the average ratio of EBL, NABIL, NSBI, and KBL was 0.143, 0.056, 0.095, and 0.088 times respectively. It can be concluded that EBL had the practice of percentage of total deposit collected in form of cash and bank balance to meet the immediate cash requirement because it has highest ratio than other banks. Similarly, C.V. of EBL, NABIL, NSBI, and KBL was 28.71%, 43.04%, 16.87%, and 40.93% respectively. Here, C.V. of NABIL is highest and NSBI has lowest C.V. so NSBI is more consistent and NABIL is less consistent.

#### **4.1.3 Cash and Bank Balance to Current Assets Ratio:-**

This ratio indicates that how much most liquid assets out of CA.

$$\text{CBB to CA ratio} = \frac{\text{Cash and bank balance}}{\text{Total current assets}}$$



**Table 4.3****Cash and Bank Balance to Current Assets Ratio**

(in times)

F/Y	EBL	NABIL	NSBI	KBL
2004/05	0.091	0.033	0.103	0.06
2005/06	0.098	0.029	0.073	0.044
2006/07	0.112	0.052	0.086	0.057
2007/08	0.01	0.073	0.081	0.063
2008/09	0.169	0.078	0.079	0.097
2009/10	0.191	0.027	0.62	0.135
<b>Mean (<math>\bar{x}</math>)</b>	<b>0.113</b>	<b>0.487</b>	0.0807	0.076
<b>S.D. ( )</b>	<b>0.0585</b>	<b>0.0207</b>	0.0125	0.0309
<b>C.V.</b>	<b>52.32%</b>	<b>42.46%</b>	15.49%	40.67%

Sources: Appendix 1

The above table shows that the cash and bank balance to current assets ratio of EBL is increasing trend from 0.091 times to 0.112 times in F/Y 2004/05 to 2006/07. Then that ratio is decreased in F/Y 2007/08 then again it is increasing way. Similarly, NSBI bank's ratio is fluctuating. It has highest ratio of 0.103 times in F/Y 2004/05 and lowest ratio 0.062 in F/Y 2009/10. NABIL bank's ratio decreased from 0.033 times to 0.029 times in F/Y 2005/06 then that ratio is increasing way to F/Y 2008/09 and last year 2009/10. It is very low i.e. 0.027 times. KBL's ratio also decreased in 2005/06 then that ratio is increasing way from F/Y 2006/007 to 2009/10.

Average ratio of EBL, NABIL, NSBI, and KBL are 0.1128 times, 0.0487 times, 0.0807 times, and 0.076 times respectively. It shows that the average ratio of EBL is higher than other three banks so it indicates that EBL has more liquid assets out of current assets that means EBL is maintaining the highest cash and bank balance and NABIL is maintaining the lowest cash and bank balance. So EBL's liquidity position is better than other banks. Similarly, C.V. of EBL, NABIL, NSBI, and KBL is 52.32%, 42.46%, 15.49%, and 4067%

respectively. EBL has greater C.V. so EBL has greater variability or low consistency and C.V. of NSBI is lowest. So NSBI has more consistency.

## 4.2. Profitability Ratio

### 4.2.1 Profit Margin:-

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Operating income}} \times 100$$

**Table 4.4**

### **Profit Margin**

(in %)

F/Y	EBL	NABIL	NSBI	KBL
2004/05	19.65	36.16	9.95	15.58
2005/06	22.31	37.01	8.64	15.52
2006/07	21.82	33.10	14.63	19.62
2007/08	24.49	30.73	26.95	16.42
2008/09	24.97	30.56	22.67	17.06
2009/10	23.76	24.10	19.13	15.43
<b>Mean ( <math>\bar{x}</math> )</b>	<b>22.83</b>	<b>31.94</b>	17	16.61
<b>S.D. ( )</b>	<b>1.8075</b>	<b>4.2758</b>	6.5942	1.4686
<b>C.V.</b>	<b>7.92</b>	<b>13.39</b>	38.79	8.84

Sources: Appendix 2

The above table shows that the profit margin of EBL is in fluctuating trend and thus range from 19.65% in F/Y 2004/05 to 24.97% in F/Y 2008/09. Similarly, profit margin of NABIL increased from 36.16% in F/Y 2004/05 to 37.01% in F/Y 2005/06 and then margin is in decreasing trend i.e. 33.1% to 24.1% in F/Y 2006/07 to 2009/10. It is not good performance of NABIL. NSBI bank's profit margin is also in fluctuating trend and for the last three years it is in decreasing way. Profit margin of NSBI is highest 26.95% in F/Y 2007/08 and lowest 8.64% in F/Y 2005/06. Similarly, profit margin of KBL is also

fluctuating. It has decreased in one year and then it is fluctuating. It has increased in one year and then it has increased and then decreased. Profit margin of KBL is higher (19.62%) in F/Y 2006/07 and lowest (15.43%) in F/Y 2009/10.

Average profit margin of EBL, NABIL, NSBI, and KBL are 22.83%, 31.94%, 17% and 16.61% respectively. NABIL's profit margin is higher than other banks. It means NABIL was most successful to earn profit from the operating income and KBL was least successful to earn profit from operating income because it has lower percentage of profit margin. Similarly, C.V. of EBL, NABIL, NSBI, and KBL are 7.92%, 13.39%, 38.79%, and 8.84% respectively. C.V. of EBL is lowest than other banks so EBL's profit margin is more consistent and NSBI has low consistency (i.e. higher C.V.).

#### **4.2.2 Return on Assets (ROA):-**

$$\text{ROA} = \frac{\text{Net income}}{\text{Total Assets}} \times 100\%$$

**Table 4.5**

**Return on Assets (in %)**

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	<b>1.43</b>	<b>3.03</b>	<b>0.72</b>	<b>1.13</b>
2005/06	<b>1.49</b>	<b>2.84</b>	<b>0.58</b>	<b>1.15</b>
2006/07	<b>1.38</b>	<b>2.47</b>	<b>0.90</b>	<b>1.43</b>
2007/08	<b>1.66</b>	<b>2.01</b>	<b>1.83</b>	<b>1.16</b>
2008/09	<b>1.73</b>	<b>2.35</b>	<b>1.44</b>	<b>1.39</b>
2009/10	<b>2.01</b>	<b>2.19</b>	<b>1.02</b>	<b>1.54</b>
<b>Mean (<math>\bar{x}</math>)</b>	<b>1.62</b>	<b>2.48</b>	<b>1.08</b>	<b>1.3</b>
<b>S.D. ( )</b>	<b>0.2146</b>	<b>0.3545</b>	<b>0.4297</b>	<b>0.16</b>
<b>C.V.</b>	<b>13.25</b>	<b>14.3</b>	<b>39.78</b>	<b>12.31</b>

Sources: Appendix 2

The above table shows that the ROA of EBL is increasing from 1.43% to 1.49% in F/Y 2004/05 to 2005/06. In F/Y 2006/08 this % is decreased to 1.38% then after ROA is increasing way to in F/Y 2009/10. So EBL's position is getting better. Similarly, ROA of NABIL is decreasing way for first four year in F/Y 2008/09 it is increase to 2.35% and after that year it is decrease overall performance of NABIL is good. In the context of NSBI, ROA is decrease 0.72% to 0.58% in second year. In F/Y 2006/07 and 2007/08, ROA increase and reaches to 1.83% then after ROA is decreasing way. It shows NSBI performance getting low. Similarly ROA of KBL in increasing trend for first three year. In F/Y, ROA decreased to 1.16% then it is increasing way. Overall performance is better.

Average ROA of EBL, NABIL, NSBI, and KBL are 1.62%, 2.48%, 1.08%, and 1.3% respectively. ROA of NABIL is higher than other banks. It means NABIL is utilized its assets more effectively in profit generating purpose than other three banks. Similarly, C.V. of EBL, NABIL, NSBI, and KBL are 13.25%, 14.3%, 39.78%, and 12.31% respectively. Lower C.V. of KBL is more consistent to earn profit on its assets and higher C.V. of NSBI is low consistent to earn profit on its assets.

#### **4.2.3 Return on Equity (ROE):-**

$$\text{ROE} = \frac{\text{Net income}}{\text{Shareholder's equity}} \times 100$$

**Table 4.6****Return on Equity**

(in %)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	20.2	31.38	9.71	13.12
2005/06	24.65	33.88	8.33	12.0
2006/07	24.67	32.76	11.91	16.6
2007/08	23.49	30.63	21.91	12.82
2008/09	28.99	32.94	17.51	15.9
2009/10	30.15	29.69	18.47	17.73
<b>Mean (<math>\bar{x}</math>)</b>	<b>25.36</b>	<b>31.88</b>	<b>14.64</b>	<b>14.7</b>
<b>S.D. ( )</b>	<b>3.347</b>	<b>1.444</b>	<b>4.955</b>	<b>2.143</b>
<b>C.V.</b>	<b>13.2</b>	<b>4.53</b>	<b>33.85</b>	<b>14.58</b>

Sources: Appendix 2

The above table shows that the ROE of EBL is decreased 20.2% (in 2004/05) to 24.67% (in 2006/07). In F/Y 2007/08, ROE is only 23.49%. After that year, ROE is increasing way. Overall performance is better. Similarly ROE of NABIL is fluctuating trend. ROE of NABIL is highest 33.88% in F/Y 2005/06 and lowest 29.69% in 2009/10. Performance is getting weak. In the context of NSBI, ROE is increasing trend for first four years. In F/Y 207/08, ROE of NSBI is very high by comparing the other five F/Y. Similarly, KBL's ROE is sometimes increasing and sometimes decreasing, but last two years ROE of KBL is increasing way.

Average ROE of EBL, NABIL, NSBI, and KBL are 25.36%, 31.88%, 14.64%, and 14.7% respectively. Mean ROE of NABIL is higher than other banks. It means NABIL has more utilized the resources of the owners or NABIL reveal the efficient use of owner's investment and NSBI is not efficient use of owner's investment because it has lower rate of ROE. Similarly, C.V. of EBL, NABIL, NSBI, and KBL are 13.2%, 4.53%, 33.85%, and 14.58

respectively. C.V. of NABIL is lower than other banks. So NABIL's ROE is more consistent and NSBI's ROE is low consistent by way of highest C.V.

#### 4.2.4 Net Interest Margin:-

$$\text{NIM} = \frac{\text{Net interest income}}{\text{Interest earning assets}} \times 100$$

**Table 4.7**

#### **Net Interest Margin**

(in %)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	4.31	5.56	3.37	3.83
2005/06	3.59	4.99	3.63	3.24
2006/07	3.36	4.21	3.28	3.72
2007/08	3.91	3.9	3.46	3.4
2008/09	3.94	4.28	3.39	3.47
2009/10	4.7	4.55	2.24	4
<b>Mean (<math>\bar{x}</math>)</b>	<b>3.97</b>	<b>4.58</b>	<b>3.23</b>	<b>3.61</b>
<b>S.D. ( )</b>	<b>0.4415</b>	<b>0.5506</b>	<b>0.4547</b>	<b>0.2624</b>
<b>C.V.</b>	<b>11.12</b>	<b>12.02</b>	<b>14.08</b>	<b>7.27</b>

Sources: Appendix 2

The above table shows that the net interest margin of EBL is decreasing trend from 2004/05 to 2006/07. After then NIM is increasing trend. It shows that the profitability position of EBL is better. Similarly, NABIL's NIM is decreasing trend 5.56% to 3.9% from the F/Y 2004/05 to 2007/08. After then it is increasing way for last year. So NABIL is good. NSBI's NIM is fluctuating trend with the highest NIM of 3.63% in F/Y 2005/06 and lowest NIM of 2.24% in F/Y 2009/10. It shows the lower performance. Similarly, KBL's NIM is fluctuated first three years after then in F/Y 2007/08 NIM is increasing way and highest NIM of 4% in F/Y 2009/10. So its position is getting better.

Average NIM of EBL, NABIL, NSBI, and KBL are 3.97%, 4.58%, 3.23% and 3.61% respectively. Mean NIM of NABIL is higher than others, which means NABIL gives best performance to collect the net interest income from earning assets. NSBI collects low degree of net interest income from earning assets (i.e. lowest mean). C.V. of EBL, NABIL, NSBI, and KBL are 11.12%, 12.02%, 14.08%, and 7.27% respectively. C.V. of KBL is lower than other banks. It means KBL's profitability is more consistent.

#### 4.2.5 Interest Spread:-

$$\text{Spread} = \frac{\text{Interest income}}{\text{Interest earning assets}} \div \frac{\text{Interest expenses}}{\text{Interest paying liabilities}} \times 100$$

**Table 4.8**

#### **Interest Spread**

(in %)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	4.41	5.53	3.5	3.78
2005/06	3.54	5.03	3.72	3.1
2006/07	3.29	4.19	3.34	3.77
2007/08	3.98	4.04	3.5	3.23
2008/09	4.32	4.33	3.42	3.44
2009/10	5.31	4.6	2.26	4.31
<b>Mean (<math>\bar{x}</math>)</b>	<b>4.14</b>	<b>4.62</b>	3.29	3.61
<b>S.D. ( )</b>	<b>0.656</b>	<b>0.517</b>	0.475	0.4037
<b>C.V.</b>	<b>15.85</b>	<b>11.18</b>	14.44	11.18

Sources: Appendix 2

The above table shows that the interest spread of EBL is decreasing way for first three years of the range 4.41% to 3.29%. After F/Y 2007/08, spread is in increasing trend. It means EBL's performance getting better. Similarly, interest spread of NABIL is decreasing trend in F/Y 2004/05 to 2007/08 of the rate 5.53% to 4.04%. then in last year, spread is increasing way, but not reach to 5.53%. So NABIL's performance is not good. NSBI's interest spread is fluctuated in first three year. After then it is decreasing trend. The highest spread 3.72% in F/Y 2005/06 and lowest spread 2.2%. In F/Y 209/10 it is not good position and last KBL, spread is decrease 3.78% to 3.1% in F/Y 2005/06. In F/Y 2006/07, spread reaches to 3.77%. In F/Y 2007/08, spread is 3.23% after then spread is increasing way. KBL is average performance.

Average of interest spread of EBL, NABIL, NSBI, and KBL are 4.14%, 4.62%, 3.29%, and 3.61% respectively. NABIL has higher spread rate than other banks. So NABIL is ore earning average return on earning assets than average rate paid on interest paying liabilities. C.V. of EBL, NABIL, NSBI, and KBL are 1.85%, 11.18%, 14.4%, and 11.18% respectively. Lower C.V. of NABIL and KBL (i.e. 11.8%) is more consistent of profitability position.

#### **4.2.6 Interest Efficiency Ratio:-**

$$\text{IER} = \frac{\text{Interest expenses}}{\text{Interest income}} \times 100$$



**Table 4.9****Interest Efficiency ratio**

(in %)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	41.65	22.79	51.85	48.03
2005/06	44.43	27.26	44.68	55.66
2006/07	45.19	35	47.24	50.18
2007/08	40.85	38.33	49.6	52.1
2008/09	46.32	41.21	46.87	59.37
2009/10	50.7	48.42	56.47	63.54
<b>Mean (<math>\bar{x}</math>)</b>	<b>44.86</b>	<b>35.5</b>	<b>49.45</b>	<b>54.81</b>
<b>S.D. ( )</b>	<b>3.2382</b>	<b>8.5365</b>	<b>3.8597</b>	<b>5.3616</b>
<b>C.V.</b>	<b>7.22</b>	<b>24.05</b>	<b>7.8</b>	<b>9.78</b>

Sources: Appendix 2

The above table shows that the interest paid to interest income ratio of EBL is increasing trend for the range 41.65% to 45.19% in F/Y 2004/05 to 2006/07. In F/Y 2007/08, this ratio is 40.85% after then it is increasing way. It is not good performance. NABIL's interest efficiency ratio is increasing trend from 22.79% to 48.42% in F/Y 2004/05 to 2009/10. It is not good for the bank. Similarly, NSBI's interest efficiency ratio is decreased from 51.85% to 44.68% in F/Y 2005/06. In F/Y 2006/07 and 2007/08, this ratio is increase and in F/Y 2008/09, it is 46.87%. Last year, this ratio is very high i.e. 56.47%, it is not good for bank. Similarly, interest efficiency ratio of KBL is increasing way in every year, but in F/Y 2006/07 is decrease. It is not good for the bank.

Average of interest efficiency ratio of EBL, NABIL, NSBI, and KBL are 44.86%, 35.5%, 49.45%, and 54.81%. KBL has higher ratio, it means KBL is

paid higher amount of interest on liabilities in relation to interest income and NABIL has lower ratio, it means NABIL remained more efficient in controlling the interest cost compared to other banks. Similarly, C.V. of EBL, NABIL, NSBI, and KBL are 7.22%, 24.05%, 7.8%, and 9.78% respectively. EBL has lower C.V., it means IER of EBL is more consistent and NABIL is low consistent.

#### **4.2.7 Return on Total Deposit Ratio:-**

$$\text{Return on total deposit} = \frac{\text{Net income}}{\text{Total deposit}} \times 100$$

**Table 4.10**

#### **Return on Total Deposit**

(in %)

F/Y	EBL	NABIL	NSBI	KBL
2004/05	1.67	3.57	0.85	1.34
2005/06	1.72	3.28	0.66	1.33
2006/07	1.63	2.89	1.06	1.61
2007/08	1.88	2.34	2.23	1.37
2008/09	1.92	2.76	1.81	1.64
2009/10	2.25	2.46	1.13	1.82
Mean ( $\bar{x}$ )	1.85	2.88	1.29	1.52
S.D. ( )	0.2096	0.4318	0.5512	0.1842
C.V.	11.33	14.99	42.73	12.2

Sources: Appendix 2

In the above tables, EBL's return on total deposit is increase 1.667% to 1.72% in F/Y 2005/06. In F/Y 2006/07, this ratio reaches 1.63% and then it is increasing trend for last three year. It shows the better performance. Similarly, NABIL's return on total deposit ratio is decreasing trend for the F/Y 2004/05 to 2007/08. In F/Y 2008/09, this ratio increase to 2.76% from 2.34% and in F/Y

2009/10, this ratio decreased to 2.46%. It shows the lower position of deposit of bank. NSBI's return on deposit ratio is decrease 0.85% to 0.66% in 2<sup>nd</sup> year. For next two years, this ratio is increase to 1.06% and 2.23% respectively. After F/Y 2008/09 that ratio is decreasing trend. Similarly return on deposit of KBL is decrease 1.34% to 1.33% then in 3<sup>rd</sup> year it is 1.61%. In F/Y 2007/08, this ratio is decrease to 1.37 and then it is increasing way for last two years.

Average return on total deposit of EBL, NABIL, NSBI, and KBL is 1.85%, 2.88%, 1.29%, and 1.52% respectively. Here, NABIL has highest i.e. 2.88% ratio than other banks. So NABIL is more efficient to utilize its total deposit for profit generating purpose. C.V. of EBL, NABIL, NSBI, and KBL are 11.33%, 14.99%, 42.73%, and 12.12% respectively. EBL has lower C.V., it means its return on deposit is more consistent and NSBI's is low consistent.

#### **4.2.8 Return on Total Investment:-**

$$\text{Return on total investment} = \frac{\text{Net income}}{\text{Total investment}} \times 100$$

**Table 4.11**

#### **Return on total Investment**

(in %)

<b>F/Y</b>	<b>EBL</b>	<b>NABIL</b>	<b>NSBI</b>	<b>KBL</b>
2004/05	7.9	12.19	3.19	7.07
2005/06	5.65	10.28	2.2	7.43
2006/07	5.95	7.53	3.11	10.14
2007/08	8.92	7.51	9.59	8.18
2008/09	10.74	9.52	8.02	17.1
2009/10	16.61	8.37	2.38	13.78
<b>Mean (<math>\bar{x}</math>)</b>	<b>9.3</b>	<b>9.23</b>	<b>4.75</b>	<b>10.62</b>
<b>S.D. ( )</b>	<b>3.7</b>	<b>1.6601</b>	<b>3.065</b>	<b>3.6728</b>
<b>C.V.</b>	<b>39.79</b>	<b>17.99</b>	<b>64.52</b>	<b>34.58</b>

Sources: Appendix 2

In the above tables, return on investment of EBL is 7.9% in F/Y 2004/05. In F/Y 2005/06, this ratio is decrease to 5.65%. After then return on investment is increasing trend in F/Y 2006/07 to F/Y 2009/10. It is better performance. NABIL's return on investment is decreasing trend for the range 12.9% to 7.51% in first four F/Y. In F/Y 2008/09, this ratio is increasing to 9.52% and then it is decrease. Similarly, return on investment of NSBI is decreased 3.19% to 2.2% in second year. Then this ratio is increase for next two years. The highest ratio is 9.59% in F/Y 2007/08. After then that ratio is getting low and in F/Y 2009/10, this ratio is very low i.e. 2.38%, it is very bad conditions of NSBI. Similarly, KBL's ratio is fluctuating trend. It has highest ratio 17.1% in F/Y 2008/09 and lowest 7.07% in F/Y 2004/05.

Average of return on investment on EBL, NABIL, NSBI, and KBL are 9.3%, 9.23%, 4.75%, and 10.62% respectively. KBL has the highest return on investment than other banks. It means KBL is more efficient to invest its fund for profit generating purpose. C.V. of EBL, NABIL, NSBI, and KBL are 39.79%, 17.99%, 64.52%, and 34.58% respectively. NABIL has lower C.V., it means its return on investment is more consistent and NSBI is low consistent.

### **4.3 Correlation Coefficient Analysis**

Correlation coefficient analysis measures the relationship between two or more variables. Correlation analysis only helps in determining the extent to which the two variables are correlated. Probable error of the correlation (P.E.) is the measures of testing the reliability of the calculated value of r. Karl Pearson's method of finding correlation coefficient is based on all the observation that this method summarizes is one figure the degree of relationship as well as direction. In this study to find the relationship between the following variables.

1. Total deposit and total investment
2. Net profit and total investment

#### **4.3.1 Correlation between Total Deposit and Total Investment**

a) Calculation of correlation coefficient between deposit and total investment of EBL.

**Table 4.12**

(Rs. in million)

F/Y	Deposit (X)	Investmen t (Y)	$x = f_x - \bar{x}A$	$y = f_y - \bar{y}A$	$x^2$	$Y^2$	xy
2004/0 5	10097.69	2128.93	-12621.97	-2426.09	159314126. 7	5885912.6 9	30622035.2
2005/0 6	13802.45	4200.52	-8917.21	-354.5	79516634.1 8	125670.25	3161150.95
2006/0 7	18186.25	4984.31	-4533.41	429.29	20551806.2 3	184289.9	-1946147.58
2007/0 8	23976.3	5059.56	1256.64	504.54	1579144.09	254560.61	634025.15
2008/0 9	33322.95	5948.48	10603.29	1393.46	112429758. 8	1941730.7 7	14775260.4 8
2009/1 0	36932.31	5008.31	14212.65	453.29	201999420	205471.82	6442452.12
Total	136317.9 5	27330.11			575390890	8597636.0 4	53688776.3 2

Sources: Appendix

Here,

$$x = 136317.95 \quad y = 27330.11 \quad N = 6 \text{ (no. of observation)}$$

$$\text{Mean } \bar{x}A = \frac{x}{N} = \frac{136317.95}{6} = 22719.66$$

$$\text{Mean } \bar{y}A = \frac{y}{N} = \frac{27330.11}{6} = 4555.02$$

Again,

$$x^2 = 575390890 \quad y^2 = 8597636.04 \quad xy = 53688776.32$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2}\sqrt{y^2}} \\ &= \frac{53688776.32}{\sqrt{575390890}\sqrt{8597636.04}} \\ &= 0.7633 \end{aligned}$$

... There is a high degree positive correlation between deposit and investment.

Again,

$$\begin{aligned} \text{Coefficient of determination (r}^2\text{)} &= (0.7633)^2 \\ &= 58.26\% \end{aligned}$$

It means dependent variable changes by 58.26% by changes in independent variable and remaining change by other factors

Again,

$$\begin{aligned} \text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.7633^2}{\sqrt{6}} \\ &= 0.1149 \end{aligned}$$

$$6 \times \text{P.E.} = 6 \times 0.1149 = 0.6896$$

Since,  $t = 6$  P.E. So the value of  $t$  is significant

The above calculation shows that since there is high degree positive correlation (i.e. 0.7633) between total deposit and total investment of EBL and this value is also significant and their direction of movement is same. EBL's investment depends on its deposit by 58.26%.

b) Calculation of correlation coefficient between deposit and total investment of NABIL

**Table 4.13**

(Rs. in million)

F/Y	Deposit (X)	Investment (Y)	$x = f_x - \bar{x}$	$y = f_y - \bar{y}$	$x^2$	$y^2$	xy
2004/05	14586.61	4267.23	-14226.775	-4692.46	202401126.9	22019180.85	66758502.23
2005/06	19347.4	6178.53	-9465.985	-2781.16	89604872.02	7734850.946	26326377.13
2006/07	23342.29	8945.31	-5471.095	-14.38	29932880.5	206.7844	78674.13
2007/08	31915.05	9939.77	3101.665	980.08	9620325.772	960556.8064	3039894.53
2008/09	37348.26	10826.38	8534.875	1866.69	72844091.27	3484531.556	15931993.81
2009/10	46340.7	13600.92	17527.315	4641.23	307206771.1	21541015.91	81348369.82
Total	172880.31	53758.14			711610067.6	55740342.86	193483811.65

Sources: Appendix

Here,

$$x = 172880.21 \quad y = 53758.14 \quad N = 6$$

$$\text{Mean } \bar{x} = \frac{x}{N} = \frac{172880.21}{6} = 28813.37$$

$$\text{Mean } \bar{y} = \frac{y}{N} = \frac{53758.14}{6} = 8959.69$$

Again,

$$x^2 = 711610067.54 \quad y^2 = 55740342.86 \quad xy = 193483811.65$$

Now,

$$\text{Correlation of coefficient (r)} = \frac{xy}{\sqrt{x^2} \sqrt{y^2}}$$

$$= \frac{193483811.65}{\sqrt{711610067.54} \sqrt{55740342.86}}$$

$$= 0.9715$$

There is a closer relationship between deposit and investment.

Again,

$$\text{Coefficient of determination } (r^2) = (0.9715)^2$$

$$= 94.38\%$$

It means dependent variable changes by 94.38% by changes in independent variable and remaining change by other factors

Again,

$$\text{P.E.} = 0.6745 \times \frac{1-r^2}{\sqrt{n}}$$

$$= 0.6745 \times \frac{1-(0.9715)^2}{\sqrt{6}}$$

$$= 0.01547$$

$$6 \times \text{P.E.} = 6 \times 0.01547 = 0.09282$$

Since,  $t > 6 \text{ P.E.}$  So the value of  $t$  is significant

The above calculation shows that there is a very closer relationship between total deposit and total investment of NABIL (i.e.0.9715) and this value is also significant. NABIL's total investment depends on its deposit by 94.38%. It means deposit is the main source of investment for NABIL.



c) Calculation of correlation coefficient between deposit and investment of NSBI

**Table 4.14**

(Rs. in million)

F/Y	Deposit (X)	Investment (Y)	$x = f_x - \bar{x}$	$y = f_y - \bar{y}$	$x^2$	$Y^2$	$xy$
2004/05	7198.33	1907.52	-6130.51	-2643.93	37583152.86	6990365.845	16208639.3
2005/06	8654.77	2607.68	-4674.07	-1943.77	21846930.36	3778241.813	9085317.04
2006/07	11002.04	3758.98	-2326.8	-792.47	5413998.24	628008.7009	1843919.2
2007/08	11445.29	2659.45	-1883.55	-1892	3547760.603	3579664	3563676.6
2008/09	13715.39	3088.89	386.55	-1462.56	149420.9025	2139081.754	-565352.57
2009/10	27957.22	13286.18	14628.38	8734.73	213989501.4	76295508.17	127774949.6
Total	79973.04	27308.7			282530764.4	93410870.29	157911149.3

Sources: Appendix

Here,

$$x = 79973.04 \quad y = 27308.7 \quad N = 6$$

$$\text{Mean } \bar{x} = \frac{x}{N} = \frac{79973.04}{6} = 13328.84$$

$$\text{Mean } \bar{y} = \frac{y}{N} = \frac{27308.7}{6} = 4551.45$$

Again,

$$x^2 = 282530764.46 \quad y^2 = 93411140.28 \quad xy = 157911149.25$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2} \sqrt{y^2}} \\ &= \frac{157911149.2}{\sqrt{282530764.46} \sqrt{93411140.28}} \\ &= 0.972 \end{aligned}$$

There is a closer relationship between deposit and investment.

Again,

$$\begin{aligned} \text{Coefficient of determination } (r^2) &= (0.972)^2 \\ &= 94.48\% \end{aligned}$$

It means dependent variable changes by 94.48% by changes in independent variable and remaining change by other factors

Again,

$$\begin{aligned} \text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.972^2}{\sqrt{6}} \\ &= 0.001295 \end{aligned}$$

Since,  $r > 6 \text{ P.E.}$  So the value of  $r$  is significant

The above calculation shows that there is a very closer relationship between total deposit and total investment of NSBI (i.e.0.972) and this value is also significant. NSBI's total investment depends on its deposit by 94.48%. It means deposit is the main source of investment for NSBI.

d) Calculation of correlation coefficient between deposit and investment of KBL

**Table 4.15**

(Rs. in million)

F/Y	Deposit (X)	Investment (Y)	$x = \sum x - \bar{x}A$	$y = \sum y - \bar{y}A$	$x^2$	$Y^2$	$xy$
2004/05	6268.95	1190.27	-5483.093	-511.42	30064308.85	261550.4164	2804163.422
2005/06	7768.96	1394.95	-3983.083	-306.74	15864950.18	94089.4276	1221770.879
2006/07	10557.42	1678.42	-1194.623	-23.27	1427124.112	541.4929	27798.87721
2007/08	12774.28	2138.8	1022.237	437.11	1044968.484	191065.1521	446830.0151
2008/09	15710.4	1510.83	3958.357	-190.86	15668590.14	36427.5396	-755492.017
2009/10	17432.25	2296.87	5680.207	595.18	32264751.56	354239.2324	3380745.602
Total	70512.26	10210.14			96334693.33	937913.261	7125816.779

Sources: Annual report of KBL

Here,

$$x = 70512.26 \quad y = 10210.14 \quad N = 6$$

$$\text{Mean } \bar{x} = \frac{x}{N} = \frac{70512.26}{6} = 11752.04$$

$$\text{Mean } \bar{y} = \frac{y}{N} = \frac{10210.14}{6} = 1701.69$$

Again,

$$x^2 = 96334693.33 \quad y^2 = 937913.26 \quad xy = 7125816.79$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2} \sqrt{y^2}} \\ &= \frac{7125816.79}{\sqrt{96334693.33} \sqrt{937913.26}} \\ &= 0.7497 \end{aligned}$$

There is a high degree positive relationship between deposit and investment.

Again, coefficient of determinant  $r^2 = 0.7497^2 = 56.21\%$ .

It means dependent variable 56.1% changed by independent variable and remaining change by other factors

Again,

$$\begin{aligned} \text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.7497^2}{\sqrt{6}} \\ &= 0.1206 \end{aligned}$$

$$\dots 6 \text{ P. E.} = 6 \times 0.1206 = 0.7236$$

Since,  $r > 6 \text{ P.E.}$  So the value of  $r$  is significant

The above calculation shows that since there is high degree positive correlation (i.e. 0.7497) between total deposit and total investment of KBL and this value is also significant and their direction of movement is same. KBL's investment depends on its deposit by 56.21%.

### 4.3.2. Correlation between Net Profit and Total Investment

a) Calculation of correlation coefficient between net income and total investment of EBL.

**Table 4.16**

(Rs. in million)

F/Y	Net income (X)	Investment (Y)	$x = f\bar{x} - \bar{x}A$	$y = f\bar{y} - \bar{y}A$	$x^2$	$Y^2$	xy
2004/05	168.21	2128.93	-269.04	-2426.09	72382.5216	5885912.688	652715.25
2005/06	237.29	4200.52	-199.96	-354.5	39984.0016	125670.25	70885.82
2006/07	296.29	4984.31	-140.96	429.29	19869.7216	184289.9041	-60512.72
2007/08	451.22	5059.56	13.97	504.54	195.1609	254560.6116	7048.42
2008/09	638.73	5948.48	201.48	1393.46	40594.1904	1941730.772	280754.32
2009/10	831.77	5008.31	394.52	453.29	155646.0304	205471.8241	178831.97
Total	2623.51	27330.11			328671.6265	8597636.05	1129723.06

Sources: Appendix

Here,

$$x = 2623.51 \quad y = 27330.11 \quad N = 6$$

$$\text{Mean } f\bar{x}A = \frac{x}{N} = \frac{2623.51}{6} = 437.25$$

$$\text{Mean } f\bar{y}A = \frac{y}{N} = \frac{27330.11}{6} = 4555.02$$

Again,

$$x^2 = 328671.68 \quad y^2 = 8597636.04 \quad xy = 1129723.06$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2} \sqrt{y^2}} \\ &= \frac{1129723.06}{\sqrt{328671.68} \sqrt{8597636.04}} \\ &= 0.672 \end{aligned}$$

There is a high degree positive relationship between net income and investment.

Again,

$$\begin{aligned} \text{Coefficient of determination (r}^2\text{)} &= (0.672)^2 \\ &= 45.16\% \end{aligned}$$

If there is change in investment then net income change by 45.16% and remaining change by other factors.

Again,

$$\begin{aligned} \text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.4513}{\sqrt{6}} \\ &= 0.151 \end{aligned}$$

$$\dots 6 \text{ P.E.} = 6 \times 0.151 = 0.9061$$

Since, r is not significant or insignificant so nothing can be concluded.

The above calculation shows that since there is high degree positive relationship (i.e. 0.672) between net income and total investment of EBL and EBL's net income depends on its total investment by 45.16%.

b) Calculation of correlation coefficient between net income and total investment of NABIL.

**Table 4.17**

(Rs. in million)

F/Y	Net income (X)	Investment (Y)	$x = f_x - \bar{x}$	$y = f_y - \bar{y}$	$x^2$	$Y^2$	xy
2004/05	520.11	4267.23	-270.79	-4692.46	73327.224	22019180.85	1270671.24
2005/06	635.26	6178.53	-155.64	-2781.16	24223.81	7734850.946	432859.74
2006/07	673.96	8945.31	-116.94	-14.38	13674.964	206.7844	1681.597
2007/08	746.47	9939.77	-44.43	980.08	1974.0249	960556.8064	-43544.95
2008/09	1031.05	10826.38	240.15	1866.69	57672.023	3484531.556	448285.6
2009/10	1138.57	13600.92	347.67	4641.23	120874.43	21541015.91	1613616.43
Total	<b>4745.42</b>	<b>53758.14</b>			291746.47	55740342.86	3723569.66

Source: Appendix

Here,

$$x = 4745.42 \quad y = 53758.14 \quad N = 6$$

$$\text{Mean } \bar{x} = \frac{x}{N} = \frac{4745.42}{6} = 790.9$$

$$\text{Mean } \bar{y} = \frac{y}{N} = \frac{53758.14}{6} = 8959.69$$

Again,

$$x^2 = 291746.46 \quad y^2 = 55740342.86 \quad xy = 3723569.66$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2} \sqrt{y^2}} \\ &= \frac{3723569.66}{\sqrt{291746.46} \sqrt{55740342.86}} \\ &= 0.9234 \end{aligned}$$

The relationship will be closer between net income and total investment.

Again,

$$\begin{aligned} \text{Coefficient of determination } (r^2) &= (0.9234)^2 \\ &= 0.8527 \text{ or } 85.27\% \end{aligned}$$

If there is change in investment then change in net income by 85.27% and remaining change by other factors.

Again,

$$\begin{aligned} \text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.9234^2}{\sqrt{6}} \\ &= 0.04057 \end{aligned}$$

$$\dots 6 \text{ P.E.} = 6 \times 0.04057 = 0.2434$$

Since,  $r > \text{P.E.}$  so the value of  $r$  is significant.

The above calculation shows that since there is high degree positive relationship (i.e. 0.9234) between net income and total investment of NABIL and NABIL's net income depends on its total investment by 85.27%.

c) Calculation of correlation coefficient between net income and total investment of NSBI

**Table 4.18**

(Rs in million)

F/Y	Net income (X)	Investment (Y)	$x = f_x - \bar{x}$	$y = f_y - \bar{y}$	$x^2$	$Y^2$	xy
2004/05	60.85	1907.52	-114.87	-2643.93	13195.117	6990365.845	303708.24
2005/06	57.39	2607.68	-118.33	-1943.77	14001.989	3778241.813	230006.3
2006/07	117	3758.98	-58.72	-792.47	3448.0384	628008.7009	46533.84
2007/08	254.91	2659.45	79.19	-1892	6271.0561	3579664	-149827.48
2008/09	247.77	3088.89	72.05	-1462.56	5191.2025	2139081.754	-105377.45
2009/10	316.37	13286.18	140.65	8734.73	19782.423	76295508.17	1228539.78
Total	1054.29	27308.7			61889.825	93410870.29	1553583.23

Here,

$$x = 1054.29 \quad y = 27308.7 \quad N = 6$$

$$\text{Mean } \bar{x}_A = \frac{x}{N} = \frac{1054.29}{6} = 175.72$$

$$\text{Mean } \bar{y}_A = \frac{y}{N} = \frac{27308.7}{6} = 4551.45$$

Again,

$$x^2 = 61889.83 \quad y^2 = 934111140.28 \quad xy = 1553583.23$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2} \sqrt{y^2}} \\ &= \frac{1553583.23}{\sqrt{61889.83} \sqrt{934111140.28}} \\ &= 0.6461 \end{aligned}$$

There is high degree positive relationship between net income and total investment.

Again,

$$\begin{aligned} \text{Coefficient of determination (r}^2) &= (0.6461)^2 \\ &= 0.4175 \text{ or } 41.75\% \end{aligned}$$

If there is change in investment then net income changes by 41.75% and remaining change by other factors.

Again,

$$\begin{aligned} \text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.4175}{\sqrt{6}} \end{aligned}$$

$$= 0.1604$$

$$6 \text{ P.E.} = 6 \times 0.1604 = 0.9625$$

Since, r is not significant or insignificant nothing can be concluded.

The above calculation shows that since there is high degree positive relationship (i.e. 0.6461) between net income and total investment of NSBI and NSBI's net income depends on its total investment by 41.75%.



d) Calculation of correlation coefficient between net income and total investment of KBL

**Table 4.19**

(Rs in million)

F/Y	Net income (X)	Investment (Y)	$x = f\bar{x}A$	$y = f\bar{y}A$	$x^2$	$Y^2$	$xy$
2004/05	84.2	1190.27	-100.46	-511.42	10092.212	261550.42	51377.25
2005/06	103.67	1394.95	-80.99	-306.74	6559.3801	94089.428	24842.87
2006/07	170.26	1678.42	-14.4	-23.27	207.36	541.4929	335.09
2007/08	174.93	2138.8	-9.73	437.11	94.6729	191065.15	-4253.08
2008/09	258.38	1510.83	73.72	-190.86	5434.6384	36427.54	-14070.2
2009/10	316.54	2296.87	131.88	595.18	17392.334	354239.23	78492.34
Total	1107.98	10210.14			39780.597	937913.26	136724.27

Source: Appendix

Here,

$$x = 1107.98 \quad y = 10210.14 \quad N = 6$$

$$\text{Mean } \bar{x}A = \frac{x}{N} = \frac{1107.98}{6} = 184.66$$

$$\text{Mean } \bar{y}A = \frac{y}{N} = \frac{10210.14}{6} = 1701.69$$

Again,

$$x^2 = 39780.59 \quad y^2 = 937913.26 \quad xy = 136724.27$$

Now,

$$\begin{aligned} \text{Correlation of coefficient (r)} &= \frac{xy}{\sqrt{x^2} \sqrt{y^2}} \\ &= \frac{136724.27}{\sqrt{39780.59} \sqrt{937913.26}} \\ &= 0.7078 \end{aligned}$$

There is high degree positive relationship between net income and total investment.

Again,

$$\begin{aligned}\text{Coefficient of determination } (r^2) &= (0.7078)^2 \\ &= 0.5010 \text{ or } 50.10\%\end{aligned}$$

If there is change in investment then net income changes by 50.10% and remaining change by other factors.

Again,

$$\begin{aligned}\text{P.E.} &= 0.6745 \times \frac{1-r^2}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.5010}{\sqrt{6}}\end{aligned}$$

$$= 0.1374$$

$$\dots 6 \text{ P.E.} = 6 \times 0.1374 = 0.8244$$

Since, r is not significant or insignificant nothing can be concluded.

The above calculation shows that since there is high degree positive relationship (i.e. 0.708) between net income and total investment of KBL and KBL's net income depends on its total investment by 50.10%.

## 4.4 Regression Analysis

Regression analysis is used as a tool for determining the strength of relationship between two variables. Thus, it is a statistical device with the help of which we can estimate or predict the value of one variable when the value of other variable is known. In this study, an attempt is made find the degree of relationship of following variables:

- 1) Total deposit and total investment
- 2) Net income and total investment

### 4.4.1 Regression Equation between Total Deposit and Total Investment

- a) Calculation of regression equation of total investment (y) on total deposit (x) of EBL

Sol<sup>n</sup> :

The equation of lines of regression of y on x is

$$y - \bar{y} = b_{yx} (x - \bar{x})$$

Here,

$$\bar{x} = 22719.66 \quad \sum xy = 53688776.32$$

$$\bar{y} = 4555.02 \quad \sum x^2 = 575390890$$

(from table 4.12)

Now,

$$\begin{aligned} \text{Regression coefficient of y on x (} b_{yx} \text{)} &= \frac{\sum xy}{\sum x^2} \\ &= \frac{53688776.32}{575390890} \\ &= 0.0933 \end{aligned}$$

Again,

putting the values in regression equation, then

$$y - 4555.02 = 0.0933 (x - 22719.66)$$

$$\text{or, } y - 4555.02 = 0.0933x - 2119.93$$

$$\text{or, } y = 2435.09 + 0.0933x$$

...  $y = 2435.09 + 0.0933x$  is the regression equation

The above calculation shows that the regression equation of total investment (y) on total deposit (x) of EBL is  $y = 2435.09 + 0.0933x$ . It means if the value of total deposit is known EBL's investment value is directly 2435.09 million above the origin and 0.0933 times the change in investment per unit change in deposit.

b) Calculation of regression equation of total investment (y) on total deposit (x) of NABIL

Sol<sup>n</sup> :

The equation of lines of regression of y on x is

$$y - \bar{y} = by_x (x - \bar{x})$$

Here,

$$\bar{x} = 28813.37 \quad \sum xy = 193483811.65$$

$$\bar{y} = 8959.69 \quad \sum x^2 = 711610067.54$$

(from table 4.13)

Now,

$$\begin{aligned} \text{Coefficient of regression y on x (by}_x) &= \frac{\sum xy}{\sum x^2} \\ &= \frac{193483811.65}{711610067.54} \\ &= 0.272 \end{aligned}$$

Again,

putting the values in regression equation, then

$$y - 8959.69 = 0.272 (x - 28813.37)$$

$$\text{or, } y - 8959.69 = 0.272x - 7837.24$$

$$\text{or, } y = 1122.45 + 0.272x$$

...  $y = 1122.45 + 0.272x$  is the regression equation

The above calculation shows that the regression equation of total investment (y) on total deposit (x) of NABIL is  $y = 1122.45 + 0.272x$ . It means if the value of total deposit is known NABIL's investment value is directly 1122.45 million above the origin and 0.272 times the change in investment per unit change in deposit.

c) Calculation of regression equation of total investment (y) on total deposit (x) of NSBI

Sol<sup>n</sup> :

The equation of lines of regression of y on x is

$$y - \bar{y} = b_{yx} (x - \bar{x})$$

Here,

$$\begin{aligned} \bar{x} &= 13328.84 & \sum xy &= 157911149.25 \\ \bar{y} &= 4551.45 & \sum x^2 &= 282830764.46 \\ & & & \text{(from table 4.14)} \end{aligned}$$

Now,

$$\begin{aligned} \text{Coefficient of regression y on x (} b_{yx} \text{)} &= \frac{\sum xy}{\sum x^2} \\ &= \frac{157911149.25}{282830764.46} \\ &= 0.559 \end{aligned}$$

Again,

putting the values in regression equation, then

$$y - 4551.45 = 0.559 (x - 13328.84)$$

$$\text{or, } y - 4551.45 = 0.559x - 7450.82$$

$$\text{or, } y = 0.559x - 2899.37$$

...  $y = 0.559x + 2899.37$  is the regression equation

The above calculation shows that the regression equation of total investment (y) on total deposit (x) of NSBI is  $y = 0.559x + 2899.37$ . It means if the value of total deposit is known NSBI's investment value is directly 2899.37 million above the origin and 0.559 times the change in investment per unit change in deposit.

d) Calculation of regression equation of total investment (y) on total deposit (x) of KBL

Sol<sup>n</sup> :

The equation of lines of regression of y on x is

$$y - \bar{y} = b_{yx} (x - \bar{x})$$

Here,

$$\begin{aligned} \bar{x} &= 11752.04 & \sum xy &= 7125813.79 \\ \bar{y} &= 1701.69 & \sum x^2 &= 96334693.33 \\ & & & \text{(from table 4.15)} \end{aligned}$$

Now,

$$\begin{aligned} \text{Coefficient of regression y on x (} b_{yx} \text{)} &= \frac{\sum xy}{\sum x^2} \\ &= \frac{7125813.79}{96334693.33} \\ &= 0.07397 \end{aligned}$$

Again,

putting the values in regression equation, then

$$y - 1701.69 = 0.07397 (x - 11752.04)$$

$$\text{or, } y - 1701.6 = 0.07397x - 869.29$$

$$\text{or, } y = 832.4 + 0.07397x$$

...  $y = 832.4 + 0.07397x$  is the regression equation

The above calculation shows that the regression equation of total investment (y) on total deposit (x) of KBL is  $y = 832.4 + 0.07397x$ . It means if the value of total deposit is known KBL's investment value is directly 832.4 million above the origin and 0.07397 times the change in investment per unit change in deposit.

#### 4.4.2 Regression equation between net income and total investment

a) Calculation of regression equation of net income (x) on total investment (y) of EBL

Sol<sup>n</sup> :

The equation of lines of regression of x on y is

$$x - \bar{x} = b_{xy} \frac{y - \bar{y}}{s_y}$$

Here,

$$\bar{x} = 437.25 \quad \sum xy = 1129723.06$$

$$\bar{y} = 4555.02 \quad \sum y^2 = 8597636.04$$

(from table 4.16)

Now,

$$\begin{aligned} \text{Regression coefficient of x on y (b}_{xy}\text{)} &= \frac{\sum xy}{\sum y^2} \\ &= \frac{1129723.06}{8597636.04} \\ &= 0.1314 \end{aligned}$$

Again,

putting the values in regression equation, then

$$x - 437.25 = 0.1314 (y - 4555.02)$$

$$\text{or, } x - 437.25 = 0.1314y - 598.536$$

$$\text{or, } x = 0.1314y - 161.28$$

...  $x = 0.1314y - 161.28$  is the regression equation

The above calculation shows that the regression equation of net income (x) and total investment (y) of EBL is  $x = 0.1314y - 161.28$ . If the value of total investment is known, EBL's investment value is directly below the origin and 0.1314 times the change in net income per unit change in investment.

**b) Calculation of regression equation of net income (x) on total investment (y) of NABIL**

Sol<sup>n</sup> :

The equation of lines of regression of y on x is

$$y - \bar{y} = b_{yx} \frac{x - \bar{x}}{s_x}$$

Here,

$$\begin{aligned}\bar{x} &= 790.9 & xy &= 3723569.66 \\ \bar{y} &= 8959.69 & y^2 &= 55740342.86 \\ & & & \text{(from table 4.17)}\end{aligned}$$

Now,

$$\begin{aligned}\text{Regression coefficient of x on y (b}_{xy}\text{)} &= \frac{xy}{y^2} \\ &= \frac{3723569.66}{55740342.86} \\ &= 0.0668\end{aligned}$$

Again,

putting the values in regression equation, then

$$x - 790.9 = 0.0668 (y - 8959.69)$$

$$\text{or, } x - 790.9 = 0.0668y - 598.51$$

$$\text{or, } x = 0.0668y + 192.39$$

...  $x = 0.0668y + 192.39$  is the regression equation

The above calculation shows that the regression equation of net income (x) and total investment (y) of NABIL is  $x = 0.0668y + 192.39$ . If the value of total investment is known, NABIL's investment value is directly above the origin and 0.0668 times the change in net income per unit change in investment.

**c) Calculation of regression equation of net income (x) on total investment (y) of NSBI**

Sol<sup>n</sup> :

The equation of lines of regression of x on y is

$$x - \bar{x} = b_{xy} (y - \bar{y})$$

Here,

$$\begin{aligned}\bar{x} &= 175.72 & xy &= 1553583.23 \\ \bar{y} &= 45551.45 & x^2 &= 93411140.28 \\ & & & \text{(from table 4.18)}\end{aligned}$$



Now,

$$\begin{aligned}\text{Regression coefficient of x on y (b}_{xy}\text{)} &= \frac{\sum xy}{\sum y^2} \\ &= \frac{1553583.23}{93411140.28} \\ &= 0.0166\end{aligned}$$

Again,

putting the values in regression equation, then

$$x - 175.72 = 0.0166 \sum y - 45551.45A$$

$$\text{or, } x - 175.72 = 0.0166y - 757.597$$

$$\text{or, } x = 0.0166y - 581.88$$

...  $x = 0.0166y - 581.88$  is the regression equation

The above calculation shows that the regression equation of net income (x) and total investment (y) of NSBI is  $x = 0.0166y - 581.88$ . If the value of total investment is known, NSBI's investment value is directly below the origin and 0.0166 times the change in net income per unit change in investment.

**d) Calculation of regression equation of net income (x) on total investment (y) of KBL**

Sol<sup>n</sup> :

The equation of lines of regression of y on x is

$$x - \bar{x} = b_{xy} \sum y - \bar{y}A$$

Here,

$$\bar{x} = 184.66$$

$$\sum xy = 136724.27$$

$$\bar{y} = 1701.69$$

$$\sum y^2 = 937913.26$$

(from table 4.19)

Now,

$$\begin{aligned}\text{Regression coefficient of x on y (b}_{xy}\text{)} &= \frac{\sum xy}{\sum y^2} \\ &= \frac{136724.27}{937913.26} \\ &= 0.1458\end{aligned}$$

Again,

putting the values in regression equation, then

$$x - 184.66 = 0.1458 (y - 1701.69)$$

$$\text{or, } x - 184.66 = 0.1458y - 248.12$$

$$\text{or, } x = 0.1458y - 63.45$$

...  $x = 0.1458y - 63.45$  is the regression equation

The above calculation shows that the regression equation of net income (x) and total investment (y) of KBL is  $x = 0.1458y - 63.45$ . If the value of total investment is known, KBL's investment value is directly below the origin and 0.1458 times the change in net income per unit change in investment.

## **Chapter-V**

### **5. SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary**

Financial institutions and markets are the most important factors to develop the nation. Financial market in functional perspective is a rational system of collecting savings and allocating them efficiently to the ultimate users for the investment in productive assets or current consumption. It is considered to be the hallmark of the financial system. It is also because that financial market and institutions play a predominant role in the transmission of the macro-financial policy actions to the various sectors of the economy.

Banks are the most important and essential financial institution in any nation. Bank is necessary to make all round economic development. Commercial bank occupies a very important position in the banking structure of every country. Commercial banks operate currency, accept deposits, provide loans, perform dealing relating to commerce except the bank which have been specified for the cooperative agriculture, industry of similar other specific objectives.

Financial statement analysis provides the framework for financial planning and control. It is important not only for the firm's manager, but also for other stakeholders. The financial statements are organized summaries of detailed information about the financial position and performance. Liquidity ratio attempts to reflect the picture of the capacity of organization meet short-term obligation out of its short-term resources. Liquidity is a prerequisite for the very survival of firm. Profitability ratio indicates the degree of success in achieving desired profit. It is also determined whether the firm will be concluded over a long period of time or is going out of business. Profitability measures the operating efficiency of a business enterprise.

This study includes brief study of liquidity and profitability position with the help of financial and statistical tools to show the strength and weakness of EBL, NABIL, NSBI, and KBL lending the financial statement from the F/Y 2004/05 to 2009/10.

The 1<sup>st</sup> chapter, “Introduction,” is all about introducing the subject matters under the study. This chapter includes a background of the study, profile of the banks, focus of the study, statement of the problems, objectives of the study, significance of the study, research hypothesis questions, limitation of the study, and organization of the study.

The 2<sup>nd</sup> chapter, “Review of Literature,” includes the financial statement analysis, liquidity and profitability ratios concept, its importance and their types and review of related studies.

The 3<sup>rd</sup> chapter, “Research Methodology,” includes an introduction of research methodology, research design, population and sample, nature and sources of data, data collection techniques, and data analysis tools.

The 4<sup>th</sup> chapter cover the data presentation, analysis, and interpretation by the help of various financial and statistical tools. This chapter is main part of the study. In the presentation of data the banks are presented and in the analysis of data, the data is analyzed in the form of table and chart to explain.

And in the last chapter, the whole of the thesis work defined under the summary and some of the conclusion had made from the study and have tried to give some of the recommendation have been mentioned forwarded for the improvement of the future performance of EBL, NABIL, NSBI, and KBL.

Lastly, in sublimated bibliography and appendix. Bibliography is present which informs the researchers the sources of researcher’s information and gives clean and complete description of the sources.

## **5.2. Conclusion**

After the proper study on the performance and financial and statistical activities of EBL, NABIL, NSBI, and KBL, the researches have drawn the following conclusion:

### **Ratio Analysis**

- a) Liquidity Ratios
  - Current ratio shows that the NSBI’s ability to meet its short-term obligation as they fall due than other three banks. NSBI has strong liquidity position because it has highest mean current ratio and

EBL has lowest current ratio. So EBL has poor liquidity position. On the basis of C.V. the ratio during the study period, EBL is more consistent than other three banks, but all four banks' current ratio is below the standard ratio (i.e. 2:1). It is the weakness of the bank.

- Cash and bank balance to total deposit shows EBL is better than NABIL, NSBI, and KBL because EBL has highest mean ratio. High ratio measures the most liquid fund with the bank to immediate payment to depositors. So EBL has strong liquidity position and NABIL (i.e. lower ratio) has weak liquidity position. On the basis of C.V., C.V. of NSBI is less than that of NABIL, EBL and KBL so NSBI's liquidity position is more consistent.
- Cash and bank balance to current assets ratio shows that EBL is better maintaining the highest cash and bank balance. EBL has strong liquidity position because it has highest mean ratio than NABIL, NSBI, and KBL. On the basis of C.V., the ratio during the study period, NSBI's liquidity position is more consistent and EBL's liquidity position is less consistent. C.V> is the most important tool. So NSBI is better.

b) Profitability Ratio

- Mean profit margin of NABIL is higher than other three banks. It means NABIL is successful to earn profit from the operating income. On the basis of C.V., C.V. of EBL is less than other banks. So EBL's profitability is more consistent and NSBI's is less consistent.
- C.V> on ROA of KBL is less than other three banks. So KBL is more consistent to earn profit by utilizing its total assets and NSBI is less consistent. On the basis of mean ROA, ROA of NABIL is higher so NABIL has better utilized its assets to profit generating purpose.
- On the basis of ROE of EBL, NABIL, NSBI, and KBL, it has been found that NABIL reveal the efficient use of owner's investment because NABIL has higher rate of ROE and NSBI is not efficient use of owner's equity. C.V. of ratio during the study period

includes that NABIL's ROE is more consistent on the way of less C.V. and NSBI's ROE is less consistent. Therefore, profitability position of NABIL is strong and NSBI is weak.

- Mean NIM of NABIL is higher than other three banks. It means that NABIL gives the best performance to collect the net interest income from earning assets and NSBI to collect the low degree of net interest income from earning assets. C.V. of KBL is lower than other three banks and NSBI's C.V. is higher. Therefore, KBL's profitability is more consistent and NSBI's profitability is less consistent.
- Mean interest spread of NABIL is higher than EBL, NSBI, and KBL. So NABIL is more earn of average return on earning assets than average rate paid on interest paying liabilities. It means NABIL's profitability position is better than other banks. On the basis of C.V., C.V. of NABIL and KBL are less than NSBI and EBL. So KBL and NABIL have more consistent interest spread.
- Interest efficiency ratio of NABIL is lower than EBL, NSBI, and KBL. It means NABIL remained more efficient in controlling the interest cost compared to interest income. It is good for the bank and KBL is not controlling the interest cost compared to interest income. C.V. of NABIL is higher than other banks. So NABIL bank's interest cost to interest income is less consistent or NABIL's performance is better than other banks.
- Return on total deposit of NABIL is higher than EBL, NSBI, and KBL. So NABIL is more efficient to utilize its total deposit for profit generating purpose. EBL has lower C.V. It means its return on total deposit is more consistent and NSBI's return on total deposit is less consistent.
- Return on total investment of KBL is higher than EBL, NABIL, and NSBI. It means KBL is more efficient to invest its fund for profit generating purpose. C.V. of NABIL is lower than EBL, NSBI, and KBL. It means NABIL's return on total investment is more consistent and NSBI bank's return on total investment is less consistent.

C.V. is the most important tools. So C.V. gives the actual results.

### **Correlation of Coefficient Analysis**

- After the study of correlation coefficient between total deposit and total investment, NSBI has higher  $r$ , that means closer will be the relationship between two variables and dependent variable changes by 94.48%. in change of other factors. Similarly, KBL has lower  $r$ , that means there is low degrees of relationship between deposit and investment and KBL's investment changes by only 56.21% in change of total deposit and remaining change other factors. Therefore, NSBI is more utilized to investment of its deposit.
- Correlation coefficient between net profit and total investment, NABIL has higher  $r$  than EBL, NSBI, and KBL. It means closer will be the relationship between net profit and total investment and its net profit changes by 85.27% in change of investment and only 14.73% by other factors. Therefore, we can say KBL is more efficient to invest its fund for profit generating purpose.

### **Regression Analysis**

- On the basis of regression line equation of total investment ( $y$ ) and total deposit ( $x$ ), we can predict the investment value if deposit is given. If deposit is know, EBL's investment line is directly 2435.09 million above the origin and 0.0933 times the change in investment per unit change in deposit. NABIL's investment line is directly above the origin and 0.272times the change in  $y$  per unit change in  $x$ . NSBI's investment is below the origin and KBL is above the origin, but only 0.07397 times the change in  $y$  per unit change in  $x$ .

Therefore, NABIL's performance is getting strong because its investment is directly above the origin and its slope is also high.

- On the basis of regression line equation of net income ( $x$ ) on total investment ( $y$ ), we will predict the value of net income is investment is known. If investment is given, EBL's net income line is directly Rs. 161.28 million below the origin and 0.1314 times the

changes in x per unit change in y. NSBI and KBL's net income line is also directly below the origin, but NABIL's net income line is directly Rs. 192.39 million above the origin and 0.0668 times the change in x per unit change in y. So, NABIL's position will be better.

### **5.3 Recommendations**

In this study, various financial and statistical tools are used to analyze and interpret data. So, on the basis of analysis and interpretation of data the following recommendations can be advanced for improvement of future performance of four selected bank i.e. EBL, NABIL, NSBI, and KBL.

- Current ratio of the EBL, NABIL, NSBI, and KBL is found below the standard (i.e. 2:1) so it is recommended that the banks should maintain adequate current assets to cover its current liabilities. NSBI's current ratio is less consistent so it should try to make more consistent.
- NABIL is recommended it should increase its cash and bank balance to fulfil the demand of its depositors. It is recommended that all four sample banks to have moderate level of cash and bank balance to meet unanticipated deposit. EBL is maintaining excess amount of cash and bank balance which is not good for their depositors. So, it is suggest its idle fund to mobilize short-term loan with matures short-term.
- NSBI and KBL's profit margin is very lower than EBL and NABIL. So, NSBI and KBL are strongly recommended to gain highest profit margin. Also it should reduce its expense. The banks should be very careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors, and its all customers. Profitability position of EBL and NABIL is satisfactory and should try to maximize it.
- NSBI and KBL should increase the NIM and interest spread by utilizing their deposits and borrowing liabilities properly and providing loan and advances in various sectors and invest in productive sectors. Thereafter, they increase their interest income. EBL and NABIL also should follow these activities to develop their position.



- NSBI and KBL should utilize the assets and owner's equity in productive sectors to yielding high return on shareholder's equity and on total assets and EBL and NABIL should continue their idea.
- KBL is earning interest at lower growth rate in comparison to its interest paid rate. So it is suggested to change their investment policy and to adopt such policy in which it can earn maximum interest.
- Banks should increase their cash and investment in Nepal government treasury bills to meet their current liabilities.
- EBL, NABIL, NSBI, and KBL are facing competition from recently established commercial banks, financial companies, development bank, NGO, and other financial institutions. So giving emphasis on technology development, EBL, NABIL, NSBI, and KBL should be more market oriented/service oriented, step forward on new business activities, develop efficiency of manpower, and offer a complete range of financial services.
- EBL, NABIL, NSBI, and KBL will study on micro analysis and find out the probability to invest on small and medium enterprises.

Although these four selected banks are profit oriented bank they should not forget their responsibility to stakeholders. So, banks should render its services in rural areas to promote and mobilize and launching of new advance services.

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**Appendix-1**

**Balance Sheet**

**(Everest Bank Limited)**

<b>Capital &amp; Liabilities</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Share capital	518,000,00	518,000,00	518,000,00	831400000	1,030,467,30
2. Reserve & surplus	314,617,365	444,808,301	683,515,266	1,089,837,580	1,173,157,75
3. Debenture & bonds	300,000,000	300,000,000	300,000,000	300,000,000	300,000,00
4. Loan & borrowing	-	-	-	-	312,000,00
5. Deposit liabilities	10,097,690,989	13,802,444,988	18,186,253,541	23,976,298,535	33,322,946,24
6. Bills payable	17,777,860	15,805,995	26,776,480	49,429,700	148,655,59
7. Proposed and unpaid dividend	23,527,388	114,666,758	68,146,323	140,790,370	218,080,34
8. Income tax liabilities	3,312,244	-	15,278,110	41,143,107	20,522,28
9. Other liabilities	457,590,572	763,558,645	1,634,604,580	720,443,592	391,019,13
<b>Total capital liabilities</b>	<b>11,732,516,418</b>	<b>15,959,248,687</b>	<b>21,432,574,300</b>	<b>27,149,342,884</b>	<b>36,916,848,65</b>

<b>Assets</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Cash balance	192,590,297	259,347,645	534,996,791	822,989,425	944,695,793
2. Balance with Nepal Rastra Bank	779,669,004	1,139,514,873	1,178,198,197	1,080,914,554	4,787,163,541
3. Balance with other banks	77,729,907	154,104,976	678,225,606	764,067,851	432,511,829
4. Money at call and short notice	570,000,000	66,960,000	-	346,000,000	-
5. Investments	2,128,931,852	4,200,515,220	4,984,314,586	5,059,557,544	5,948,480,273
6. Loans, advances, and bills purchase	7,618,671,476	9,801,307,676	13,664,081,664	18,339,085,562	23,884,673,616
7. Fixed assets	134,068,090	152,089,805	170,097,452	360,521,480	427,157,451
8. Non-banking assets	24,570,614	74,36642-	-	-	-

9. Other assets	206,285,178	178,007,850	222,660,004	376,215,468	492,166,151
<b>Total assets</b>	<b>11,732,516,418</b>	<b>15,959,248,687</b>	<b>21,432,574,300</b>	<b>27,149,342,884</b>	<b>36,916,848,654</b>

*Sources: Annual report of Everest Bank Limited*

**Appendix-2**

**Profit and Loss Account**

**(Everest Bank Limited)**

<b>Particulars</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
1. Interest income	719,297,855	903,411,137	1,144,408,308	1,548,657,1
2. Interest Expenses	299,565,269	401,397,351	517,166,241	632,609,2
<b>Net interest income</b>	<b>419,732,586</b>	<b>502,013,786</b>	<b>627,242,067</b>	<b>916,047,8</b>
3. Commission and discount	78,130,046	96,839,264	117,718,162	150,264,0
4. Other operating income	31,479,208	48,902,381	67,967,525	79,133,7
5. Exchange Income	27,077,784	14,397,970	28,404,544	64,452,3
<b>Total operating income</b>	<b>556,419,624</b>	<b>662,153,401</b>	<b>841,332,298</b>	<b>1,209,898,0</b>
6. Staff expenses	60,597,367	70,924,675	86,118,226	157,957,0
7. Other operating expenses	129,067,225	143,562,167	177,545,649	233,766,6
8. Exchange loss	-	-	-	-
<b>Operating profit before provision for possible losses</b>	<b>366,755,032</b>	<b>447,666,559</b>	<b>577,668,423</b>	<b>818,174,3</b>
9. Provision for possible losses	88,926,593	70,465,665	89,695,764	99,340,5
<b>Operating profit</b>	<b>277,828,439</b>	<b>377,200,894</b>	<b>487,972,659</b>	<b>718,833,8</b>
10. Non-operating income/loss	2,974,088	2,959,467	1,315,211	4,519,2
11. Write-back from loan loss provision	5,252,936	-	11,686,657	20,201,0
<b>Profit from regular activities</b>	<b>286,055,463</b>	<b>380,160,361</b>	<b>500,974,527</b>	<b>743,554,2</b>
12. Profit/loss from extra-ordinary activities	(5252936)	-	(795224)	(1899872)
<b>Profit from all activities</b>	<b>280,802,527</b>	<b>380,160,361</b>	<b>500,179,303</b>	<b>724,555,4</b>
13. Provision for staff bonus	28,080,253	34,560,033	45,470,846	65,868,6
14. Provision for income tax				

*this year (including deferred tax)	81,914,477	106,753,311	158,299,176	207,468,1
*up to last year	2,539,186	1,556,081	-	
<b>Net profit/(loss)</b>	<b>168,214,611</b>	<b>237,290,936</b>	<b>296,409,281</b>	<b>451,218,6</b>

Sources: Annual report of Everest Bank Limited



**Appendix-3**

**Balance Sheet**

**(Nabil Bank Limited)**

<b>Capital &amp; Liabilities</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Share capital	491,654,400	491,654,400	491,654,400	689,216,000	965,747,000
2. Reserve & surplus	1,165,983,908	1,383,340,017	1,565,395,315	1,747,982,989	2,164,493,600
3. Debenture & bonds	-	-	-	240,000,000	300,000,000
4. Loan & borrowing	17062680	173,201,701	882,572,500	1,360,000,000	1,681,305,000
5. Deposit liabilities	14,586,608,707	19,347,399,440	23,342,285,327	31,915,047,467	37,348,255,800
6. Bills payable	119,753,038	112,606,736	83,514,820	238,421,890	463,138,600
7. Proposed and unpaid dividend	-	435,084,062	509,417,925	437,373,004	361,325,000
8. Income tax liabilities	-	34,604,855	-	38,776,869	80,232,400
9. Other liabilities	805,268,083	352,079,858	378,552,721	465,940,930	502,899,500
<b>Total capital liabilities</b>	<b>17,186,330,816</b>	<b>21,838,316,669</b>	<b>26,761,738,608</b>	<b>37,132,759,149</b>	<b>43,867,397,500</b>

<b>Assets</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Cash balance	146,352,555	237,818,512	270,406,987	511,426,584	674,395,000
2. Balance with Nepal Rastra Bank	-	318,358,771	1,113,415,436	1,829,470,769	2,648,596,000
3. Balance with other banks	413,028,059	74,061,305	16,003,428	330,243,702	49,520,000
4. Money at call and short notice	868,428,307	1,734,901,943	563,532,632	1,952,360,700	552,880,000
5. Investments	4,267,233,178	6,178,533,108	8,945,310,567	9,939,771,428	10,826,379,000
6. Loans, advances, and bills purchase	10,586,170,002	12,922,543,153	15,545,778,730	21,365,053,318	27,589,933,000
7. Fixed assets	361,235,392	319,086,147	286,895,224	598,038,998	660,988,000

8. Non-banking assets	-	-	-	-	
9. Other assets	543,883,323	544,668,139	512,050,004	606,393,650	864,695
<b>Total assets</b>	<b>17,186,330,816</b>	<b>22,329,971,078</b>	<b>27,253,393,008</b>	<b>37,132,759,149</b>	<b>43,867,397</b>

Sources: Annual report of Nabil Bank Limited

**Appendix-4**  
**Profit and Loss Account**  
**(Nabil Bank Limited)**

<b>Particulars</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Interest income	1,068,746,769	1,309,998,500	1,587,758,714	1,978,696,727	2,798,486,196
2. Interest Expenses	243,544,611	357,161,304	555,710,109	758,436,212	1,153,280,052
<b>Net interest income</b>	<b>825,202,158</b>	<b>952,837,196</b>	<b>1,032,048,605</b>	<b>1,220,260,515</b>	<b>1,645,206,144</b>
3. Commission and discount	128,376,500	138,293,913	150,608,550	156,234,754	179,693,027
4. Other operating income	56,440,760	82,897,862	87,574,553	97,444,578	144,164,143
5. Exchange Income	184,878,868	185,483,662	209,926,167	196,487,415	251,919,712
<b>Total operating income</b>	<b>1,194,898,286</b>	<b>1,359,512,633</b>	<b>1,480,157,875</b>	<b>1,670,427,262</b>	<b>2,220,983,026</b>
6. Staff expenses	199,516,217	219,780,853	240,161,275	262,907,576	339,897,913
7. Other operating expenses	190,299,470	182,696,413	188,183,330	220,750,570	265,158,033
8. Exchange loss	-	-	-	-	-
<b>Operating profit before provision for possible losses</b>	<b>805,082,599</b>	<b>957,035,367</b>	<b>1,051,813,270</b>	<b>1,186,769,116</b>	<b>1,615,927,080</b>
9. Provision for possible losses	8,662,150	3,769,541	14,206,365	64,055,186	45,722,434
<b>Operating profit</b>	<b>796,420,449</b>	<b>953,265,826</b>	<b>1,037,606,905</b>	<b>1,122,713,930</b>	<b>1,570,204,646</b>
10. Non-operating income/loss	(48,089)	735,324	5,280,641	24,083,737	2,190,102
11. Write-back from loan loss provision	4,454,762	7729444	10,926,317	11,100,529	10,617,867
<b>Profit from regular activities</b>	<b>800,827,122</b>	<b>961,730,594</b>	<b>1,053,813,863</b>	<b>1,157,898,196</b>	<b>1,583,012,615</b>
12. Profit/loss from extra-ordinary activities	41156398	26073578	40736694	39990808	4352186
<b>Profit from all activities</b>	<b>841,983,520</b>	<b>987,804,172</b>	<b>1,094,550,557</b>	<b>1,197,889,004</b>	<b>1,587,364,801</b>
13. Provision for staff bonus	84,198,357	89,800,379	99,504,596	108,899,000	147,866,771

14. Provision for income tax	237671128	262741444	321086263	342521610	447614612
*this year (including deferred tax)	239,149,464	262,562,561	314526570	342,468,738	446,695,867
*up to last year	(1,478,336)	178,883	6,559,693	52,872	918,745
<b>Net profit/(loss)</b>	<b>520,114,085</b>	<b>635,262,349</b>	<b>673,959,698</b>	<b>746,468,394</b>	<b>1,031,053,098</b>

Sources: Annual report of Nabil Bank Limited

**Appendix-5**

**Balance Sheet**

**(Nepal SBI Bank Limited)**

<b>Capital &amp; Liabilities</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Share capital	426,875,900	431,865,600	640,236,100	647,798,400	874,527,840
2. Reserve & surplus	199,760,826	257,147,460	342,137,628	515,492,451	540,116,972
3. Debenture & bonds	-	-	200,000,000	200,000,000	200,000,000
4. Loan & borrowing	117,177,914	469,628,863	612,428,650	815,365,219	1,627,480,190
5. Deposit liabilities	7,198,327,428	8,654,774,214	11,002,040,633	11,445,286,030	13,715,394,960
6. Bills payable	-	31,123,670	46,238,743	48,855,749	75,115,471
7. Proposed and unpaid dividend	-	3,878,232	35,469,706	91,024,235	12,228,852
8. Income tax liabilities	-	-	-	-	-
9. Other liabilities	498,263,740	114,603,212	157,287,664	137,378,475	142,581,889
<b>Total capital liabilities</b>	<b>8,440,405,808</b>	<b>9,963,021,251</b>	<b>13,035,839,124</b>	<b>13,901,200,559</b>	<b>17,187,446,174</b>

<b>Assets</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>
1. Cash balance	161,222,496	143,749,918	244,187,671	287,530,644	308,101,599
2. Balance with Nepal Rastra Bank	703,204,306	390,025,828	626,123,385	556,678,464	403,810,203
3. Balance with other banks	-	189,969,554	247,847,352	278,481,119	631,048,524
4. Money at call and short notice	-	123,112,500	215,000,000	350,000,000	304,012,877
5. Investments	1,907,520,790	2,607,680,003	3,758,975,484	2,659,452,919	3,088,886,918
6. Loans, advances, and bills purchase	5,143,662,078	6,213,878,776	7,626,736,137	9,460,450,701	12,113,698,428
7. Fixed assets	62,350,191	66,451,924	66,711,798	97,218,804	120,222,259
8. Non-banking assets	-	725,4994	24,555,992	3,847,024	-

9. Other assets	462,445,947	220,897,754	225,701,305	207,540,884	217,665,366
<b>Total assets</b>	<b>8,440,405,808</b>	<b>9,963,021,251</b>	<b>13,035,839,124</b>	<b>13,901,200,559</b>	<b>17,187,446,174</b>

Sources: Annual report of Nepal SBI Bank Limited

**Appendix-6**

**Profit and Loss Account**

**(Nepal SBI Bank Limited)**

<b>Particulars</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>
1. Interest income	493,598,313	578,372,070	708,718,614	831,116,781
2. Interest Expenses	255,919,216	258,430,003	334,770,096	412,261,744
<b>Net interest income</b>	<b>237,679,097</b>	<b>319,942,067</b>	<b>373,948,518</b>	<b>418,855,037</b>
3. Commission and discount	30,666,943	42,568,260	40,753,985	52,591,560
4. Other operating income	56,725,305	11,275,211	7,136,575	12,601,352
5. Exchange Income	30,615,953	32,357,149	43,060,315	49,463,539
<b>Total operating income</b>	<b>355,687,298</b>	<b>406,142,687</b>	<b>464,899,393</b>	<b>533,511,488</b>
6. Staff expenses	32,510,008	37,582,219	50,539,528	53,232,464
7. Other operating expenses	82,180,035	90,628,615	99,214,082	120,111,581
8. Exchange loss	-	-	-	-
<b>Operating profit before provision for possible losses</b>	<b>240,997,255</b>	<b>277,931,853</b>	<b>315,145,783</b>	<b>360,167,443</b>
9. Provision for possible losses	118,724,771	193,243,637	146,656,796	59,376,948
<b>Operating profit</b>	<b>122,272,484</b>	<b>84,688,216</b>	<b>168,488,987</b>	<b>300,790,495</b>
10. Non-operating income/loss	(570,628)	1,442,831	(2,926,272)	(256,759)
11. Write-back from loan loss provision	-	52972631	54,177,763	78,515,105
<b>Profit from regular activities</b>	<b>121,701,856</b>	<b>139,103,678</b>	<b>219,740,478</b>	<b>379,048,841</b>
12. Profit/loss from extra-ordinary activities	-	-	-	-
<b>Profit from all activities</b>	<b>121,701,856</b>	<b>139,103,678</b>	<b>219,740,478</b>	<b>379,048,841</b>
13. Provision for staff bonus	12,170,186	13,910,368	19,976,407	34,458,986
14. Provision for income tax				

*this year (including deferred tax)	48,679,997	67806676	66120456	86704011
*up to last year	-	-	16641642	2,977,000
Deferred tax	-	-	-	-
<b>Net profit/(loss)</b>	<b>60,851,673</b>	<b>57,386,634</b>	<b>117,001,973</b>	<b>254,908,844</b>

Sources: Annual report of Nepal SBI Bank Limited