

# **CHAPTER ONE**

## **INTROUDUCTION**

### **1.1 Background of the Study**

In this modern age, economic condition of a country represents the soundness of the country. Today there are numbers of country whose economic condition of the country are very high while there are other countries whose economic condition is very low.

To increase the economy of the country we should consider capital formation as the vital instrument in the development of a nation.

Financial institutions are responsible for capital formation and growth of the economy as capital formation leads in the size of national output, income and employment solves the problem of inflation, balance of payments, and making the economy free from the burden of debts.

Nepalese financial sector is composed of banking sector and non banking sector. Banking sector comprises of Nepal Rastra Bank and Commercial Banks. The non banking sector includes Development banks, micro-credit development bank, finance companies, co-operative financial institutions, NGO's performance are only limited to few banking activities.

Other financial institutions comprises of Insurance companies, employee's provident fund, citizen investment trust, postal saving offices and Nepal stock exchange.

In Nepal banking sector has played a vital role in the development of the country. The major function of the bank is to accept deposits from surplus units in the form of transactions (payment oriented) and non transactions

(savings oriented) accounts and to mobilize the idle resources into productive sectors.

Banking has crossed various phases to come to the modern form. Some sort of banking activities had been carried out since the time immemorial. Traditional forms of banking were traced during the civilization of Greek, Rome and Mesopotamia. Merchants, goldsmith and money lenders are said to be the ancestors of modern banking.

Capital formation is one of the important factors leads to increase in the size of national output income and employment, solving the problem of inflation and balance of payment and foreign debts. Domestic capital formation helps in making a country self sustainable. According to classical economist, one of the main factors which helped capital formation was the accumulation of capital. Profit made by the business community constituted the major part of savings the community and the saved has assumed to be invested. They thought capital formation indeed plays a deceive role in determining the level and growth of national income and economic development. In the view of many economists, capital occupies the central and strategies position in the process of economic development in an underdeveloped economy lies in a rapid expansion of the rate of its capital investment so that it attains rate of growth of output which exceeds the rate of growth of population by the significant margin. Only with such rate of capital investment will the living standard begin to improve in developing country. In developing countries, the rate of saving is quite low and existing institutions are half successful in mobilizing such savings as most people have incomes so low that vertically all current income must be spent in maintain a subsistence level of consumption.

Investment is an essence of the national economy. Banking system is the integral part of investment system in productive sector. It involves the

sacrifice of current rupees for future rupees. It is concerned with the allocation of present fund for later reward, which is uncertain. When people deposit money in a saving account in bank for example; the bank must invest the money in new factories and equipments to increase their production. In addition borrowing from the banks most issues stocks and bonds that they sell to investors to raise capital needed for business expansion. Government also issues bonds to obtain funds to invest in such project such as the construction of dams, roads and schools. All such investments by individuals business and government involves a present sacrifice of income to get an expected future benefits. As a result, investment raises a nation's standard of living.

For the development of any country, the financial sector of that country is responsible and must be strong. The financial sector is vast field, which comprises of banks cooperatives, insurance companies, financial companies, stock exchange, foreign exchange markets, mutual funds etc. These institutions collect idle and scattered money from the general public and finally invest in different enterprises of national economy that consequently help in reducing poverty, increase in life style of people, increase employment opportunities and thereby developing the society and country as a whole. Thus, today's concept, the financial institutions and commercial banks has become one of the bases for the measuring level of economic development of nation.

Commercial banks are the main source which motivates people to save their earnings. Bank deals in accepting the saving of people in the form of deposit collection and invest it in the productive area. They give the loan to the people against real and financial assets. They transfer monetary sources from savers to users. In other words, they are intermediate between lender and receiver of fund they mobilize the depositor fund.

The commercial bank has been a vital ingredient for economic development. They are intermediaries, which mobilize funds through the prudential combination of investment portfolios in advanced countries. Whereas in Nepal the role of joint venture banks are still to be realized as an essential machine of mobilizing internal saving through various banking schemes in the economy. Hence, to uplift the backward economic condition of the country, the process of capital accumulation, among other prerequisites should be expedited.

### **1.1.1 General Background of Banks in Nepal**

Commercial banks are the suppliers of finance for trade and industry, which plays a vital role in the economic and financial life of the country. They help in the formation of capital by investing the savings in productive areas. Rural people of under developed countries like Nepal need various banking facilities to enhance its economy. In most of the countries, the banks are generally concentrated in urban and semi-urban sectors. They neglect rural sector due to heavy risk and low return, which is in fact, the main key to economic development without it other sectors of economy cannot be flourished.

### **1.1.2 History of Banking Development**

The name "bank" derives from the Italian word banco "desk/bench", used during the Renaissance by Florentine bankers, who used to make their transactions above a desk covered by a green tablecloth. However, there are traces of banking activity even in ancient times. ([www.en.wikipedia.org/wiki/bank](http://www.en.wikipedia.org/wiki/bank))

In fact, the word traces its origins back to the Ancient Roman Empire, where moneylenders would set up their stalls in the middle of enclosed courtyards called macella on a long bench called a bancu, from which the words banco and bank are derived.

As a moneychanger, the merchant at the *bancu* did not so much invest money as merely convert the foreign currency into the only legal tender in Rome- that of the Imperial Mint.

The evolution of the word "Bank" is linked to Latin word "bancus" meaning a bench Italian word "banca" meaning a bench, French word "banque" meaning a bench. Money lenders in the streets of major cities of Europe used benches for acceptance and payment of valuables and coins. When they were unable to meet their liabilities the depositors used to break their benches. The term "bankruptcy" is derived thereof.

Modern banking sowed its seed in the medieval Italy. Bank of Venice, set up in 1157 in Venice, Italy is regarded as the first modern bank. Subsequently, Bank of Barcelona (1401) and Bank of Genoa (1407) were established.

The Lombards who migrated to England and other parts of Europe from Italy are regarded for their role in the development and expansion of the modern banking.

Bank of Amsterdam set up in 1609 was very popular bank at that time. The bank of Hindustan established in 1770 is regarded as the first bank in India. These modern banks gradually replaced goldsmiths and money lenders.

In spite of the establishment of the Bank of England in 1694, the development of modern banking institution had to wait for another century and four decades until the passage of the Banking Act of 1833. This provided the freedom for establishments of joint stock banks. It was only in the 19th century that the modern joint stock commercial banking system developed in the leading countries of the world.

History of the banking tells us that the merchants are the banker who first evolved in the banking system by trading in commodities than the money. Their trading activities required the remittance of the money from one place to another. For this, they issued different documents, which are traded as the money called draft and hundis in the modern days.

Goldsmiths are also the developer of the banking system. The Goldsmith accepted various wealth of the public to keep them safe from theft in return they used to take some charges from them.

The money lenders of the early age also contributed in the growth of banking to large extent.

Like other countries goldsmiths, merchants and money lenders were the ancient bankers of Nepal. Even though the specific date of the beginning of money and banking deal in Nepal is not obvious, it is speculated that during the reign of the King Mandev, the coin "Manank" and "Gunank" during the reign of the reign of the King Gunakamadev were in use.

In the beginning of the eighth century, King Gunakamadev renovated the Kathmandu City by taking loan from the public. At the end of the century a merchant named Shankhadar Sharma freed all the people of Kathmandu from the debt.

After the unification of Nepal, Prithivi Narayan Shaha had used coin Mohar in his name an institution called "Takssar" was established in 1989. In the year 1933, Tejarath Adda was established during the tenure of the then prime minister Ranoddip Singh this was the first step towards the institutional development of banking in Nepal.

Tejarath Adda did not collect deposit from the public but gave loans to employees and public against the bullion. As a result in the year 1936 the draft of the company act and banking act were prepared by forming industrial council "A Jute Mill" was established in Biratnagar. Both commercial and industrial development as well as institutional banking system was established. This phase is recognised as the first phase of banking development in Nepal.

Nepal's first commercial bank, the Nepal Bank Limited (NBL) was established in 1937. The government owned 51 percent of the shares in the bank and controlled its operations to a large extent. Nepal Bank Limited was headquartered in Kathmandu and had branches in other parts of the country.

NBL being a commercial bank, it paid more attention on generating profit and preferred opening branches at urban areas. The government wanted to stretch out the banking services to the nook and corner of country, therefore government established Nepal Rastra Bank as the Central Bank of the country.

Nepal Rastra Bank (NRB), the central bank of Nepal, was established in 1956 with the central banking responsibilities of guiding the development of the embryonic domestic financial sector.

The role and responsibilities of NRB have been recast by the new NRB Act of 2002, which entails monetary and foreign exchange policies, development of a secure, healthy and efficient system of payments; supervision of the banking and financial system; and enhancement of the public confidence in Nepal's entire banking and financial system.

Integrated and speedy development of the country is possible only when competitive banking services reaches nooks and corners of the country. Keeping this in mind, government established Rastriya Banijya Bank (National Commercial Bank), a state-owned commercial bank, was established in 1966.

The Land Reform Savings Corporation was established in 1966 to deal with finances related to land reforms.

There were two other specialized financial institutions. Nepal Industrial Development Corporation, a state-owned development finance organization headquartered in Kathmandu, was established in 1959 with United States assistance to offer financial and technical assistance to private industry.

The Co-operative Bank, which became the Agricultural Development Bank in 1967, was the main source of financing for small agribusinesses and cooperatives. Almost 75 percent of the bank was state-owned; 21 percent was owned by the Nepal Rastra Bank and 5 percent by cooperatives and private individuals.

The Agricultural Development Bank also served as the government's implementing agency for small farmers' group development projects assisted by the Asian Development Bank and financed by the United Nations Development Programme.

In the mid-1980s, three foreign commercial banks opened branches in Nepal. The Nepal Arab Bank was co-owned by the Emirates Bank International Limited (Dubai), the Nepalese government, and the Nepalese public, currently known as Nabil Bank.

Today many institution are involved in banking activities like NGO's and INGO's are also participating in banking activities. This study is concerned with two commercial banks of Nepal the brief introduction of these banks are done here.

## **1.2 Profiles of the Banks under Study**

Two commercial banks have been chosen with an aim to attain the basic purpose of the study. The two commercial banks selected for the study are Everest Bank limited (EBL) and Bank of Kathmandu Limited (BOK). The selection of sampled banks has been made with an attempt to achieve the maximum variety in respect to their investments and loan characteristics.

A brief introduction to these banks has been made in the following paragraphs.

### **Everest Bank Limited (EBL)**

Everest Bank Limited (EBL) started its operation in 1994 with a view and objectives of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer friendly services through a network of 22 branches.

EBL is a joint venture bank with the Punjab National Bank (PNB) which holds 20% of the equity in the bank. The banks performance under all parameters has been outstanding. During the year 2063/64 there was a disposal net profit of Rs 30.06 crore compared to 23.73 last year.

The bank was able to increase its operating profit by 31.9%, deposit by more than 38% and advances by 39% during the year compared to corresponding period last year. EBL has 22 branches that spread out the nation, it is the first private commercial bank having largest network.

All the branches of the bank are connected with Anywhere Branch Banking System (ABBS), which enables customers to do all their transactions from any branches other than where they have their account.

The bank has been conferred with “Bank of the Year 2006, Nepal” by the banker, a publication of financial times, London. The bank was bestowed with the “NICCI Excellence award” by Nepal India chamber of commerce for its spectacular performance under finance sector.

The **Vision** of the bank is, to evolve & position the bank as a progressive, cost effective & customer friendly institution by providing comprehensive financial and related services; integrating frontiers of technology & servicing various segments of society.

The **Mission** of the bank is, to provide excellent professional services & improve its position as a leader in the field of financial related services; Build & maintain a team motivated & committed workforce with high work ethos; Use latest technology aided at customer satisfaction & act as an effective catalyst for socio-economic developments.

**(www.everestbankltd.com)**

### **Bank of Kathmandu Limited (BOK)**

Bank of Kathmandu limited was incorporated in 1993 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally. To achieve these, BOK has been focusing on its set objectives right from the beginning. To highlight its few objectives:

To contribute to the sustainable development of the nation by mobilizing domestic savings and channeling them to productive areas

- ) To use the latest banking technology to provide better, reliable and efficient services at a reasonable cost.

- J) To facilitate trade by making financial transactions easier, faster and more reliable through relationships with foreign banks and money transfer agencies.
- J) To contribute to the overall social development of Nepal.

Bank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

Bank of Kathmandu is committed to delivering quality service to customers, generating good return to shareholders, providing attractive incentives to employees and serving the community through stronger corporate social responsibility endeavor.

The **Vision** of the bank is, to become a significant contributor to the economic development of Nepal by distinguishing the bank as an efficient, competitive, safe and top quality financial institution.

The **Mission** of the bank is, to offer financial services and becoming the “Bank of Choice” by dedicating to the progress and growth of the institution for the community, customers, employees, supervisors and stockholders.

[www.bok.com.np](http://www.bok.com.np)

### **1.3 Focus of the Study**

Major focus of the study is about commercial banks and their deposit mobilization. This study concentrates about the meaning of commercial banks and their functions, mainly consists the study of deposits, the characteristics of bank loan reflects on the position of bank deposits and aggregate allocation of credit on different sectors of the economy.

Commercial banks are those institutions, which deals in accepting deposit of individual and giving loans. These banks provide working capital needs of trade, industry and even to agricultural sector. Moreover commercial banks also provide technical and administrative assistance to industries, trade and business enterprises. They transfer monetary sources from savers to users. Commercial bank is a corporation which accepts demand deposits subject to check and makes short terms loans to business enterprises, regardless of the scope of its other services.

The commercial banks play an important role in the modern economy. Commercial banks are the heart of financial system. They make fund available through their lending and investing activities to borrowers, individuals, business firms and services. A commercial bank must mobilize its deposits and other funds in profitable, secured and marketable sector.

So, this study deals with the efficiency of commercial banks and economic development of the country by making a survey of deposits and credit of commercial banks and how can we utilize it to fulfill the financial needs of the different sectors of the economy. It has generally been observed that the deposits of commercial banks have not been fully utilized.

#### **1.4 Statement of Problem**

Nepal is underdeveloped country and rapid economic development is the basic need of the country. Development by its means is not possible within a short period and it takes a long time for the proper development of a country, it has to build up infrastructure. In Nepal, the process of development started only after 1956 A. D. when the first five year plan came into practice.

Capital in fact, plays the leading role for the economic development of a country. But in Nepal, there is shortage of capital. There are various sources

of accumulating capital internal and external sources. Under external sources: aid, grants and loans are the main sources. In internal sources: accumulating capital, taxes, public enterprises, public debt are the popular in our country. But due to underdevelopment, poverty, lack of banking knowledge the desired capital for the development of the country cannot be accumulated from those internal sources. So, it can be said that in Nepal's present situation bank deposit is dependable and permanent sources of capital accumulation.

The need of deposit mobilization for economic development of a country is no more to question. But we are facing an acute problem of resources mobilization. We have 23 commercial banks in Nepal which are very much considered to be vital financial institution to mobilize domestic resources. Under the prevalence of these situations the study has try to deal with following problems.

- ) What is the relationship between deposit and loans and advances?
- ) What is the effectiveness of deposit mobilization of commercial banks?
- ) How far the interest rates of deposits have positive relationship with the deposit collection of commercial banks?
- ) What is the increasing or decreasing trend of deposit mobilization of commercial banks?

### **1.5 Objectives of the Study**

The objective of the study is to examine the relationship between the amount of total deposit and amount of total credit granted by the commercial banks.

The main objectives of the study are:

- ) To study and analyze the relationship between deposits, loans & advances.

- ) To evaluate the effectiveness of deposit mobilization by conducting SWOT analysis of the banks under study.
- ) To examine how far the interest rates of deposits have positive relationship with the deposit collection.
- ) To provide suggestions to the concerned banks for the further improvement on the basis of study findings.

### **1.6 Significance of the Study**

Banks and other financial institutions play important role to increase economic standard for the development of the country. Economic development becomes slow if there are incomplete and unfair banking facilities. Especially commercial banks provide different economic and technical facilities to the people who involve in business activities. Commercial banks plays major role in collection of scared small savings form depositors and transfer these funds into productive sectors for the economic development.

As the research done in any field there are several key factors that cannot be avoided, in which significance of study also occurs. Mainly this study covers the deposit and credit position of commercial banks, so it helps to reveal the financial position of banks and study occupies an important role in the series of the studies on commercial banks. The significances of the study are:

- ) Important to know how well the bank is utilizing its deposits.
- ) Important to policy formulator and also be useful for academic professionals, students particularly those involves in commerce, CA and financial institutions to formulate policies and plans on the basis of the performance of the bank.

- ) Important to the management party of selected banks for the evaluation of the performance of their bank and comparison with other banks.
- ) Important for the investors, customers (depositors, loan takers) and personnel of bank to take various decisions regarding deposits and loan advances.
- ) This study has been equally important to the others who are interested to know about the area. It may encourage to researcher to research further.

### **1.7 Limitation of Study**

This study is conducted for the partial fulfillment of Master Degree in M.B.S. and prepared within time constraints which will weaken adequacy of the study. Whereas, researcher try to keep the report more feasible, accurate and fulfill even there are some limitations. These limitations can be point out in the following points:

- ) The accuracy of the finding depends on the reliability of available information.
- ) This study covers only limited year's period i.e. only 5 fiscal years.
- ) The qualitative factors such as growth, expansion, policies, quality of services, effectiveness of management etc have been ignored.
- ) The availability of various resources also acts as constraints.
- ) This study concentrates on deposit collection and utilization by commercial banks.

### **1.8 Organization of Study**

The study has been classified into five chapters. The titles of each of these parts are follows:

**Chapter I; Introduction:** The first chapter includes various aspects of present study like Background of the Study, Focus of the Study, Statement of Problem, Objective of the Study, Significance of the Study and Limitation of Study.

**Chapter II; Review of Literature :** The second chapter deals with the study of related books, and research work which are already published and conducted by different experts and researcher in the field of financial mobilization.

**Chapter III; Research Methodology :** The third chapter deals research methodology process such as, research design, nature and source of data, population and sampling of the study, methods tools of analysis of data viz. quantitative and qualitative tools and at last definition of key terms.

**Chapter IV; Presentation and Analysis of Data:** The fourth chapter introduces the main aspect of the study. It deals with data collection procedure and presentation of data with different statistical and financial tools, and findings of the study.

**Chapter V; Summary, Conclusion and Recommendations:** The fifth chapter presents summary, conclusion and recommendations.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

This chapter is focused on brief discussion about the abstract regarding the theories of deposit mobilization. In order to accomplish the objective of the study, the chapter includes reviews literature on deposit mobilization, its theoretical framework and etc. including different views of expertise, assumptions, book and journals, as well as major findings of previous studies of the relevant field is included in precise manner.

The importance of review of literature can be stated as **(P.R Joshi 2002, p: 112)**

- ) Review of study helps to identify the research problems in which previous works have been conducted. It provides a basis for identifying the areas for future research and extent of past work.
- ) It helps to determine the methodology for research work.
- ) It helps to draw delineation and scope of studies.
- ) It helps to avoid unintentional replication of previous studies.
- ) It helps to interpret the significance of researcher's results in a precise manner.

In this chapter the emphasis will be given to the review of relevant literature on the deposit liabilities and their analyses. This chapter is basically concerned with the review of literature relevant to the topic "A Comparative Study of Deposit Mobilization in Everest Bank Pvt. Ltd. and Bank of Kathmandu Pvt. Ltd".

#### **2.1 Commercial Bank Concept**

Commercial banks are those financial institutions, which deals in accepting deposits from persons and institutions and giving loans against securities.

They provide working capital needs or trade, industry and even to agriculture sectors. Moreover commercial banks also provide technical and administrative assistance to industries trades and business enterprises.

Under the Commercial Bank Act 1947, the commercial banks are those banks which provide short term and long term debts whenever necessary for trade and commerce. They accept deposits from the public and grant loans in different form, purchase and discount the bill for exchange, promissory notes exchange foreign currency.

A commercial bank is one which exchange money, deposits money accepts deposit, grants loan and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industry or for such specific purpose **(Nepal Commercial Bank Act 1974)**.

The American institute of banking has laid down the four major functions of the commercial bank such as receiving and handling payments for its clients, making loan and investments and creating money by extension of credit **(American Institute of Banking, 1972, p 345)**.

Meanwhile, under the free enterprises system like USA, the interest of the nation as well as that of the individual stockholders are supposed to be best served by vigorously profit seeking. But profit is a sole objective of an enterprise and it should not be evaluated just on the basis of the profit earned. Neither the bank nor the community will be best served if the banker unreasonably sacrifices the safety his fund or liquidity of his bank in an effort to increase income **(American Institute of Banking, 1972, p 149)**.

## **2.2 Theoretical Framework**

Basically, theoretical framework describes the following terms which are closely related to the research work.

### **2.2.1 Meaning of Interest**

Interest rate is one of the most important variables in economics and financial system of the country. In common sense interest is a payment made by borrower to the lender for the money borrowed and is expressed as a rate percentage per year. The interest rate is the price of money; the price of renting the use of the resources that money commands for a specified by the free interplay of supply and demand in a market economy. The price of the money, the interest rate, plays a vital role in the allocation of resources and in the decision making of consumers and business. Various interest rate theories have been propounded by various economists, which describe how interest rate is determined in various situations. There are numerous interest rates in financial market. Such type of differences exists due to the risk premium associated with the issuer. Even securities issued by the same borrowers often carry a variety of interest rates. In this section, the focuses upon those basic forces that influence the level of different interest rates.

### **2.2.2 Concept of Deposit**

Deposit is the sum of money lodged with a bank, discount house or other financial institution (**Shrestha & Bhandari, 2059, p 28**). Deposit is nothing more than the assets of an individual which is given to the bank for safe-keeping with an obligation to get something (interest) from it. To a bank these deposits are liabilities. Commercial bank Act 2031 (1974) defines “Deposits” as the amount deposited in a current, savings or fixed accounts of a bank or financial institution (**Bhandari, 2003, p 73**). The deposits are subject to withdrawals by means of cheque on a short notice by customers. There are several restrictions on these deposits, regarding the amount of

deposit, number of withdrawal etc. These are considered more as investments and hence they earn some interest. The rate of interest varies depending on the nature of the deposits. The bank attracts deposits from customers by offering different rates of interest and different kinds of facilities. Though the bank plays an important role in influencing the customer to save and open deposit accounts with it, it is ultimately the customer who decides whether s/he should deposit his surplus funds in current deposit a/c, saving deposits or fixed/time deposit a/c. Bank deposits arise in two ways. When the banker receives cash, it credits the customer's account, it is known as a primary or a simple deposit. People deposit cash in the banking system and thereby convert one form of money, cash, into another form, bank money. They prefer to keep their money in deposit accounts and issue cheques against them to their creditors. Deposits also arise when customers are granted accommodation in the form of loans. When a bank grants a loan to a customer it doesn't usually pay cash but simply credits the customers account with the amount of loan. Of course, there is nothing that prevents the borrower from withdrawing the entire amount of borrowing in cash but quite often s/he retains the amount with the bank as deposit.

#### **2.2.2.1 Types of Deposit**

There are different types of deposits. But for this study, major three types of deposit are taken. They are:

##### **Current Deposit**

A current deposit is a running account with amounts being paid into and drawn out of the account continuously. These accounts are also called demand deposits or demand liabilities since the banker is under an obligation to pay money in such deposits on demand. The account never becomes time barred, because the limitation does not run until a demand is made by the customer on the bank for the payment of deposit. These

accounts are generally opened by business houses, public institutions, corporate bodies and other organization whose banking transactions are numerous and frequent. As these deposits are payable on demand, banker is obliged to keep larger cash reserves than are needed in the case of fixed and savings deposits. This type of account is just a facility offered by the bank to its customers. So such deposit doesn't yield any interest return.

The deposit in which an amount is immediately paid at the time of any account holder's demand is called demand deposit (**Bhandari, 2003, p 73**). Its transaction is continual & a very small portion of such deposit can be invested in the productive sector. Though the bank cannot gain significant profit by investing it in new sector, this is one of the facilities given to the customer. Therefore, the bank doesn't give interest on this account. For this study this types of deposit is not suitable.

### **Saving Deposit**

According to Commercial Bank Act 2031 (1974) saving account means "An account of amounts deposited in a bank for savings purposes." The saving deposit bears the features of both of the current and fixed period's deposits. Saving accounts are mainly meant for non-trading customers who have some potential for saving and who don't have numerous transactions entering their account. While opening the account the minimum compensating balance differ according to the banks rule. Similarly there is also divergence as to how much amount of money can be withdrawn. But if the customers want to withdraw more money from the bank which is not allowed by it but if s/he gives pre-information to the banks, s/he can withdraw more money. The bank fixes the minimum and maximum amount of withdraw able through a cheque from this deposit. If the bank goes into liquidation, priority is given to the saving deposit than current and fixed deposits while repaying the liabilities.

## **Fixed Deposit**

Fixed deposits constitute a very important resource for banks as bank need not keep greater reserve in respect of such deposits. Under the commercial Bank Act 2031 (1974), “Fixed account means as account of amounts deposited in a bank for certain period of time.” The customers opening such account deposit their money in the account for a fixed period. Usually, only the person or institution who wants to gain more interest opens such type of account. High interest rate is paid to this deposit as compare to saving deposits. The bank and the customer can take benefit from this deposit. The bank invests this money on the productive sector and gains profit and the customer too can be made his financial transaction stronger by getting more interest from this deposit. The principal amount with interest must be returned to the customer after expiry of fixed time.

In England these deposits are repayable subject to a period of notice and hence known as time deposit or time liabilities means that these are withdraw able subject to a period of notice and not on demand (**Radhaswamy & VasuDevan, 1979, p 72**). Fixed deposit receipt is not transferable by endorsement and certainly not negotiable. However the debt covered by the fixed deposit receipts can be assigned. Bank generally gives loans up to 90% of the deposit against the security of the deposit. For this bank charge some interest higher than the interest allowed on the deposit.

### **2.2.2.2 Importance of Deposit**

Deposit arises from saving. An individual’s income equals consumption plus saving. S/he deposits the saved part of income in the bank and gets interest from it. Banks in turn lend this money and earn profit by charging high interest rates. The borrowers from banks, invests this fund in productive sectors yielding more return than the interest on borrowed fund. This investment leads to create new employment opportunity in the economy. Ultimately due to new employment the purchasing power of the economy

increases and finally GDP and growth of the economy occurs. It means that the deposit has very important role in the economy. There is a direct relationship between deposit of banks and the investment in the economy. If the volume of deposit is low, the investment in the economy also lags behind due to lack of resources. The deposit of banks is the accumulated capital which can directly be invested. There is a great need of such deposit in the developing countries. Deposit includes the idle money of the public, bank being the inter-mediator to accept this sort of money and help to canalize this in productive sector. So the importance of banks and financial intermediaries is larger in present context.

### **2.2.3 Features of Sound Lending and Fund Mobilization Policy**

Income and profit of the financial institutions like commercial banks and financial institutions depend upon its lending procedure, lending policy and mobilizing collected fund through investing in different securities. The greater the credit created by the bank the higher will be the profitability. Some required features of sound lending policy and fund mobilization is explained as under:

#### **a) Safety and Security**

Financial institutions should inlets their deposit in profitable and secured sectors. They should not invest their fund in securities of those companies whose securities are too much depreciated and fluctuated because of risk of loss factors. They should accept those securities, which are marketable, durable, profitable and high market price as well as stable. In this case MAST should be applied for the investment.

Where,

M = Marketability

A = Ascertain ability

S = Stability

T = Transferability

**b) Legality**

Each and every financial institution follow the rules and regulation of the company, government and various directions supplied by Nepal Rastra Bank, Ministry of Finance and on while issuing securities and mobilizing their fund. Illegal securities will bring out any problems to the investors. Lastly, the reputation and goodwill of the firm may be lost.

**c) Liquidity**

Liquidity is the position of the firm to meet current or short-term obligations. General public or customers deposit their savings at the banks in different accounts having full confidence of repayment by the banks whenever they require. To show a good current position and maintain the confidence, every firm must keep proper cash balance with them while investing in different securities and granting loan for excess fund.

**d) Profitability**

To maximize the return on investment and lending position, financial institutions must invest their collected fund in proper sectors. Finally they can maximize their volume of wealth. Their return depends upon the interest rate, volume of loan its time period and nature of investment on different securities and sectors.

**e) Tangibility**

A commercial bank should prefer tangible security to an intangible one. Though it may be considered that tangible properly doesn't yield an income a part from intangible securities, which have lost their value due to price level inflation.

**f) Purpose of loan**

Banks and other financial institutions must examine why loan is required to the customer. If customers do not use their borrowings, they can never

repay and the financial institutions will have heavy bad debts. So, they should collect detailed information about the plan and scheme of the borrowing.

#### **g) Diversification**

A firm can invest its deposit collection in various securities to minimize the risk. So, all the firms must diversify their fund or make portfolio investment. Diversification helps to earn a good return and minimize the risks and uncertainty. So, the firms are making portfolio investment with different securities of different companies.

### **2.2.4 Meaning of Some Important Terminologies**

The study in this section comprises of some important banking terminology for which efforts have been made to clarify the meaning, which are frequently used in this research work. Their brief summary is presented below:

#### **a) Loan and Advances**

Loan, advances and overdrafts have occupied a huge portion for the mobilization of funds of the commercial banks. Bank deposits can be crossed beyond a desired level but the level of loans and advances and overdrafts will never cross it. Commercial Banks and other financial institution may take more preferential collateral while granting loan and advances. Some portion of loan and advances and overdrafts includes that amount which is given to staffs of the banks as home loan, vehicle loan, personal loan and others.

#### **b) Investment on Government Securities, Shares and Debentures**

Commercial bank can earn some interest and dividend from the investment on government securities, shares and debentures. It is not the major portion of income but it is treated as a second source of banking business. A

commercial bank may extend credit by purchasing government securities, bond and shares for several reasons. Some of them are given as:

- It may want to space it's maturing so that the inflow of cash coincides with expected withdrawals by depositors of large loan demands of its customers.
- It may wish to have high-grade marketable securities to liquidate if its primary reserve becomes inadequate.
- It may also be forced to invest because the demand for loans has decreased or it is not sufficient to absorb its excess reserves.

However, investment portfolio of commercial bank is established and maintained primarily with a view of nature of banks liabilities since depositors may demand funds in great volume without previous notice to banks. The investment must be of a type that can be marketed quickly with little or no shrinkage in value.

#### **c) Investment on other Company's Shares and Debentures**

Due to excess funds and least opportunity to invest these funds in much more profitable sector and to meet the requirement of NRB directives many commercial banks have to utilize their funds to purchase shares and debentures of many other financial and non-financial companies. These days most of the commercial banks have purchased regional development banks, NIDC and other development bank's shares.

#### **d) Off- Balance Sheet Activities**

Off-balance sheet activities involve contracts for future purchase and sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet. Some good example of these items are letter of credit(L/C), letter of guarantee, bills of collections etc. nowadays, such activities are stressfully highlighted by some economist and finance specialists to expand the modern transaction of a bank.

### **e) Other use of Fund**

A commercial bank must maintain the minimum bank balance with NRB i.e.6% for fixed deposits and 8% for each of current and saving deposit account in local currency. Likewise, 3% cash balance of local cash balance, in local currency, accounts must be maintained in the vault of the bank. Again a part of the fund should be used for bank balance in foreign bank and to purchase fixed assets like land, building, furniture, computers, stationery etc.

### **f) Deposits**

Deposit is the most important source of the liquidity for each and every commercial bank. For financial strength of banks, it is treated as a barometer. In the word of Eugene, “a bank’s deposits are the amount that it owes to its customers.” A deposit is the lifeblood of the commercial banks. Even though, they constitute the great bulk of bank liabilities, the success of a bank greatly depends upon the extent to which it may attract more and more deposits, for accounting and analyzing purpose, deposits are categorized in three headings. They are:

- Current Deposits
- Saving Deposits
- Fixed Deposits

### **2.2.5 Review of Legislative Provisions**

Legislative environment has significant impact on the commercial bank’s establishment, their mobilization and utilization of resources. All the commercial banks have to conform to the legislative provisions specified in the Commercial Bank Act 2031 and the rules and regulation formulated to facilitate the smooth running of commercial banks.

### **Compulsory Cash Reserve Ratio (CRR) and Refinancing**

In order to improve the sluggish economy, continuity has been given to flexible monetary policy. NRB has revised the compulsory CRR effective from 22<sup>nd</sup> July 2002 with a view to reduce the cost of fund of banks which will facilitate the banks to reduce their lending rates without changing in deposit rates. As per this revision, in respect to balance with NRB requirements of commercial banks, the present level of 7 % of the domestic current and saving deposit liabilities and 4.5% of time deposit liability remain unchanged. The requirement of cash reserve in their own vault, however, has been brought down to 2% from 3%. In respect of refinancing rates, the present rate of 2% for export credit in foreign currency; 3% rehabilitation of sick industries, 4.5% for Grameen Bikas Banks (Rural Development Banks) and export credits in Nepalese currency; and 5.5% for all other types of refinancing remains unchanged. An additional amount of Rs. 1500 million has been set aside to provide refinancing facilities for such industries.

### **Policy Guidelines on the Establishment of the Commercial Banks**

Receiving applications for the establishment of commercial banks has been stopped since 1995. Visualizing that such an administrative restriction is not in conformity with the liberal financial policy, the following policy guidelines have been made public on 16<sup>th</sup> May 2003:

#### **1) Paid up Capital**

To establish a commercial bank of national level having its office in Kathmandu, joint investment with foreign bank and financial institution or a management contract at least for 3 years with such institutions is required. The paid up capital of such bank must be at Rs. 1000 million. To establish the commercial banks in all the places in the Kingdom other than in the Kathmandu Valley, the paid up capital must be Rs. 250 million.

## **2) Share Capital**

In general, the share of commercial banks will be available for the promoters (70 percent) and general public (30 percent). The foreign banks and financial institutions could have a maximum of 67 % share in investment on the commercial banks of national level. In order to provide adequate opportunity for investment to the Nepali promoters in national level banks, only 20 % of total share capital will be made available to general public on the condition that the foreign bank and financial institutions are going to acquire 50% of the total share. In case of commercial banks to be established outside Kathmandu Valley, share investment of promoters and general public should stand at 70% and 30% respectively.

## **3) Legal Procedure**

Banks to be established with foreign promoters, participation have also to be registered fulfilling all the legal processes prescribed by the prevalent Nepal laws.

## **4) Banks Already in Operation**

Banks that is already in operation and those who have already acquired letter of intent before the enforcement of these provisions have to bring their capital level within seven years, i.e. by 16 July 2009, as per the recently declared provision. Such increase in the capital should be at a rate of 10 percent should be at the minimum.

## **5) Concerning up Gradation**

Banks to be established outside Kathmandu Valley could be allowed to operate throughout the Kingdom including Kathmandu Valley only on the condition that they have brought their paid up capital level to Rs. 1000 million and also fulfilled other prescribed conditions. Until and unless such banks do not get license to operate throughout the kingdom, they will not be allowed to open any office in Kathmandu Valley.

## **6) Promoters Share Payment Procedure**

Of the total committed share capital, the promoters has to deposit in NRB an amount equal to 20% along with the application and another 30% at the time of receiving the letter of intent on a interest free basis. The bank should put into operation within one year of receiving the letter of intent. The promoters have to pay fully the remaining balance of committed total share capital before the bank comes into operation. Normally, within 4 months from the date of filling the application, NRB should give its decision for the establishment of the bank whether it is in favor or against it. If it declines to issue license, it has to inform in writing with reasons to the concerned body.

## **7) Promoters Qualification and Experience**

Action on the application from promoters will not be initiated if it is proved that their collateral has been put on auction by the bank and financial institutions as a result of non-payment of loans in the past, who have not cleared such loans or those in the black list of the Credit Information Bureau and 5 years have not elapsed from the date of the removal of their name from such list. The application will be deemed automatically cancelled irrespective of it being on any stage of process for license issuance if the above events are proved. Of the total promoters, one-third should be its chartered accountant or at least a graduate of Tribhuvan University or recognized institutions with major in economics or accountancy, finance, law, banking or statistics. Likewise, one-fourth promoters should have the work experience of bank or financial institution or similar nature.

## **8) Promoters Share**

Promoter Group's share can be disposed or transferred only on the condition that the bank has been brought in operation; the share allotted to the general public has been floated in the market and after completion of 3 years from the date it has been registered in the Stock Exchange. But before the disposal of such shares it is mandatory to get approval from NRB. The

share allotted to general public has to be issued and sold within 3 years from the date the bank cannot issue bonus shares or declare and distribute dividends, shareholders of the promoters group and their family members cannot have access to loans or facilities from the same institution.

#### **9) Branch Expansion**

The commercial banks established in national level will initially be authorized to open a main branch office in Kathmandu Valley. They will be authorized to open one more branch in Kathmandu Valley only after they have opened two branches outside the Kathmandu Valley.

#### **10) Disqualify from Becoming Director**

An individual who is already serving as a director in one of the bank or financial institutions licensed by NRB cannot be considered eligible to become the director in other banks or financial institutions. Also, stock brokers, market makers and also an individual and institution involved as an auditor of the bank and institutions carrying on financial transactions cannot be a director.

### **2.2.6 Deposit Mobilizing Procedure of Commercial Banks**

All the banks of entire world were applied their own deposit mobilizing procedure. In practice, straightforward and effective deposit mobilization procedure has adopted by the bank. Effective deposit mobilization is the indicator of banks prosperity and its growth. Banks have some deposit mobilizing procedure they are summarized below:

#### **2.2.6.1 Sources of Fund**

In the economic activities there are so many sources of fund. In these sources, issuing share and borrowing loan from different sector. The sources of funds can be categorized in two ways.

## **A. Owned Funds/ Equity Capital of Bank**

Following are the sources of owned funds:

### **a) Ordinary Share**

Ordinary shares are the bank's strong and reliable sources of funds. Banks promoters issue ordinary shares to the public in fixed number. Banks collect the fund by selling fixed ordinary shares to the public by adopting fixed rules and regulation. These public make shareholders after purchasing the issued share.

### **b) Preference Share**

It is that kind of share which receive dividend and after liquidation money before ordinary share. But in Nepal, bank can not issue preference share. But some situation it can issue preference share by taking permission from Nepal Rastra Bank.

### **c) Bonus Share**

Company issue the extra share to the shareholder from the saving from profit and reserve fund by capitalizing these funds is known as bonus share. Bank issue shares to shareholders instead of banks amount. From this share, bank collects some share of funds.

### **d) Retained Earning**

Banks earn profit by investing the funds in different sector through the principle of profit earning. Banks invest its fund in productive or profitable industries and business. Bank earns some amount from these investments.

### **e) Reserve Fund**

Bank separates some share of capital in reserve funds in the time of banking activities. The reserve funds size based on banks earning and

rules and regulation. Banks must separate some share of amount from profit in reserve fund. Banks have been earning by investing the reserve funds in liquid sector.

#### **f) Undistributed Dividend**

Bank does not distribute all profit to the shareholders. Banks invest some amount from profit by not distributing to shareholders. By this, the invested profit makes sources of funds to the banks.

### **B. Borrowed Fund of Bank**

Bank collects the funds from another source except owned funds. Another source is borrowing from different sector. These types of funds collect borrow and debt capital. Following are the sources of the borrowed fund:

#### **a) Selling of Debenture**

Debenture means a “Rinpatra” which is issued by company by keeping or not keeping assets securities for collection of funds. If bank need a fund, it can collect capital by issuing debenture. The money also collects bank capital, which is collected by issuing debenture.

#### **b) Deposits**

The bank performs two-fold functions, i.e. the receipt of the deposits and granting the loans. The bank borrows money by accepting different types of deposits. The bank attracts the deposits from the public. The bank not only undertakes to take care of the deposits but also agrees to honors the demands of the depositor for withdraw of money from the deposits. Deposits accepted by the bank are of different types. They are:

- **Current Deposit**

It is also known as demand deposit. A customer can open a current account with a bank by making an initial of Rs. 100. Any amount may be deposited in this account. The bank makes a small charge on the customer having current deposit account.

- **Saving Deposit**

In this deposit, there are restriction on the maximum amount that can be deposited and also withdrawals from the account. The bank may not permit more than one or two withdrawals during a week.

- **Fixed Deposit**

A fixed deposit is one where a customer is required to keep a fixed amount with the bank for specific periods. He is not allowed to withdraw amount before expiry of the period. The rate of interest is higher than on other deposit account during this period the bank is free to make use this money for granting loans and advances.

**c) Loan from the Central Bank**

NRB is the central bank of Nepal. All banks should operate their banking activities by maintaining the rules and regulations directed by the NRB. In the time of necessity, NRB provides the loans for the banks. The loan granted by the central bank is a bank capital.

**d) Loan from the Financial Institutions**

Financial institutions also provide loan for the banks. Bank can receive loans from financial institutions in the form of borrowing. The loan granted by the financial institutions is also a bank capital.

**e) Loan from Commercial Banks**

If banks need money, it receives money from other commercial bank also in the form of borrowing. Banks fulfill the need of cash by taking loan from other banks. It is also the types of bank capital.

### **2.2.6.2 Mobilization of Deposit**

Banks utilize its funds in suitable area and right sector. Banks can not achieve its goals until and unless it mobilizes its deposits in right sectors and by performing different activities. Much kind of activities and other thing can origin for the purpose of receiving invest from the bank. But bank should separate the useful and profitable sector for mobilization its deposits. Banker being only a financial intermediary, we will not be able to make any profit unless he has to pay interest on deposits, meet establishment expenses, meet liquidity of cash balance, and yet allow him some balance from out of which he can build reserve and pay dividend to the shareholder.

As commercial bank they are expected to make profit. If there is no profit, there will be adverse criticism against public sector banking, both in and outside the parliament when these banks are asked to open new branches in areas which do not allow profits for years, or asked to grant loan to the priority sectors such as small industries and agriculture with a high incidence of bad debts, there is need for counter balancing profit from elsewhere. Therefore, these banks will have to show an ascending order of profits in order to ensure growth with stability. For this purpose the bank will have to allocate land able resources to different segments in such a manner these banks can ensure adequate profitability while at the same time responding to policies laid down in accordance with national objectives.

Therefore, banks should mobilize its deposits in suitable and profitable banking activities and right sector. Generally bank has mobilized its deposits in the following activities.

#### **a. Liquid Funds**

A bank has kept a volume of amount in liquid funds. The funds have so many responsibilities in banking activities liquid funds has covered following transactions.

- ) Cash in hand
- ) Balance with NRB
- ) Balance with domestic bank
- ) Call money

#### **b. Investment**

Bank invests its fund in different banking activities and different fields. Many types of fields are shown in market for investment. But banks invest its funds in profitable and safety activities. Bank invests its fund in the following titles:

- ) Share and debenture
- ) Government securities
- ) Joint-venture

#### **c. Loan and Advances**

Banks mobilize its funds or deposits by providing different types of loan and advances to customers, by charging fixed interest. Different types of loan and advances are

- ) To government enterprises
- ) To provide enterprises

Bank manages the different types of loans i.e. providing loan, business loan, and traditional loan to priority area.

#### **d. Fixed Assets**

Land and buildings are essential for the establishment of bank. Bank's funds are used in buying of furniture, vehicle, computer, and other concerned instrument, which are related to banking activities. Bank cannot take direct gain from these assets, but bank should buy it. A bank has a need of fund to purchase fixed assets for the new branches of the bank.

### **e. Administrative and Miscellaneous Expenses**

Bank should manage funds for administrative and other miscellaneous expenses. The administrative expenses are:

- ) Salary of Employee
- ) Allowances
- ) Pension
- ) Advertisement
- ) Stationery
- ) Provident Fund
- ) Rent
- ) Income tax
- ) Donation
- ) Insurance
- ) Tour expenses
- ) Commission

The miscellaneous expenses are

- ) To distribute the dividend to shareholders
- ) To bear the loss on sale and purchase of banking assets
- ) Maintenance expenses
- ) To pay the interest on borrowed amount
- ) Reserve fund

In this way, bank mobilizes its deposits by performing different activities to achieve its desired goals i.e. earning profit. Banks are able to earn sufficient profit by mobilizing its deposits in proper way into the different profitable sector. It can utilize its collected deposits as well as own funds in all banking activities by performing effective deposit mobilization procedure.

## **2.2.7 Review of Related Studies**

### **2.2.7.1 Review of Journals/Articles, Research Papers**

In this subject, effort has been made to examine and review some of the related articles published in different economic journals, Bulletin of World Bank, dissertation papers, newspapers, researchers view and findings towards fund mobilization and other related books.

Banks are that kind of institutions, which deals with money and substitutions for money. They deal with credit and credit instrument. Effective circulation of credit is more significant for the banks. Unsteady and unevenly flow of credit harms the economic situation of the nation. Because of this, collected funds or deposits should be invested and mobilized into the right sector. An investment of fund decides the life and death of the banks.

“An investment is a commitment of money that is expected to generate additional money. Every investment entails sacrifice for a future uncertain benefit.”(**Clark, 1991**)

**Cheney and Moses (1995, p 12)** are concerned with the objective of investment and indicate that the risk is in proportion with the degree of returns. They write, “The investment objective is to increase systematically the individual’s wealth, defined as assets minus liabilities. The higher the level of the desired wealth, the higher must be received. An investor seeking higher return must be willing to face higher level of risk.”

**Charles P. Jones (1999, p 2)**, emphasizing on the proper management of an investor’s wealth says, “Investment is the commitment of funds to one or more assets that will be held over some future time period. Investment is

concerned with the management of an investor's wealth, which is the sum of current income and present value of all future income."

**Gittman and Jochnk (1990 p 18)**, "Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generate positive returns."

**Baidya Sakespeare (1997, p 47)** has an elaborated definition on "Investment" which beseeches of sound investment policy and covers wider aspects. He writes, a sound investment policy of bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and banks on the other hand. Moreover, risk in banking sector tends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble its problem usually springs from significant amount of loans that have become uncollectible due to mismanagement, illegal economic downturn. Therefore, the banks investment policy must be such that it ensures sound and prudent in order to protect public funds.

"Further in details he deals with what type of loan do banks make? And, how much of loan is to be invested? The banks make a variety of loans to a wide variety of customers from many different purposes from purchasing automobile to construct of homes and making trade with foreign countries. There, no uniform rules can be laid down to determine the portfolio of bank. The environment in which the bank operates influences its investment policy. The nature and availability of funds and assets also differ widely from region to region within a country or country to country. For example, the scope of operating a bank in Jumla will be different from the scope of a bank operating in Kathmandu. The investment policy to be applied in Kathmandu may not be applicable to the customer of Jumla because the demand for loans is less in rural areas whereas it is higher in urban areas."

**Bhalla V.K. (1997)** has derived a three- pointed basic concept of investment. His view on investment cover:

- ) Economic investment that is an economics definition of investment.
- ) Investment in a more general or extended sense which is used by the man of street or ordinary people
- ) The sense in which we are going to be very much interested namely financial investment.

He says, “Banks are those institutions which accepts deposits from the public and in return provide credit to trade, business and industry that directly makes a remarkable impact on the economic development of a country. To collect fund and collect as a good investment is a very risky job. Ad-hoc investment decision leads the bank out of the business thereby drawn the economic growth of a country. Hence sound investment policy is another secret of a successful bank.”

**Shrestha Sunity (1997, p 23-27)** has analyzed in her article, “Financial Performance of Commercial Banks Using Both Descriptive and Diagnostic Approach.” In her studies she has concluded the following points:

- a. The structural ratio of commercial banks show that banks invest on the average 75% of their total deposit on the government securities and the shares.
- b. The analysis of resources position of commercial banks should quit high percentage of deposit as cash reserve.
- c. Return ratio of all the banks show that most of the time foreign banks have higher return as well as higher risk than Nepalese banks.
- d. The debt-equity ratios of commercial banks are more than 100% in most of the time period under study period. It led to conclude that the commercial banks are highly leveraged and highly risk. Joint

venture banks had higher capital adequacy ratio but has been dealing every day.

- e. In case of the analysis of the management achievement foreign banks have comparatively higher total management achievement index.

**Asian Weekly News Paper Report**, published from Hong Kong, competition between joint venture banks made them to collect large amount as deposit. In same way, Nepal's two Joint Venture Nepal Arab Bank Ltd. and Himalayan Bank Ltd. are positioned among 500 biggest banks of Asia region. This evaluation is based on the total assets, deposit, loan investment, net income and profit and investment on shares (**Kantipur Daily, 2001**)

**Shrestha Ramesh Lal (1988)** in his article, "A Study on Deposit and Credit of Commercial Banks in Nepal" concluded that the credit deposit ratio would be 51.30%, other things remaining the same in Nepal, which was the lowest under the period of review. Therefore, he had strongly recommended that the joint venture banks should try to give more credit entering new field as far as possible, otherwise, they might not be able to absorb even the total expenses.

**Bajracharya Bodi B. (2047, p 93-97)**, in his article, "Monetary Policy and Deposit Mobilization in Nepal" that the mobilization of domestic saving is one of the prime objectives of monetary policy in Nepal. For this purpose, commercial banks stood as the active and vital financial intermediary for generating resources in form of deposit of the investors in different aspects of the economy.

He has explained that commercial banks only can play an important role to mobilize the national savings. Now a day other financial institutions like finance companies, cooperative societies have been established actively to

mobilize deposits in the proper sectors so that return can be ensured from the investment.

**Sharma Bhaskar (2000, p 13)** has found same results that all the commercial banks are establishing and operating in urban areas, in this study, “Banking the Future on Competition.” His achievements are:

Commercial banks are establishing and providing their services in urban areas only. They do not have interest to establish in rural areas. Only the branch of Nepal Bank Ltd. and Rastriya Banijya Bank Ltd. are running in those sectors.

- Commercial banks are charging higher interest rate on lending
- They have maximum tax concession
- They do not properly analyze the system

According to him, “Due to the lack of investment avenues, banks are tempted to invest without proper credit appraisal and on personal guarantee, whose negative side effects would show colors only after four or five years.” He has further included that private commercial banks have mushroomed only in urban areas where large volume of banking transaction and activities are possible.

**Pradhan Shekhar Bahadur (2053, p 9)** in his articles, “Deposit Mobilization, Its Problem and Prospects” He has presented the following problems in the context of Nepal:

- People do not have knowledge and proper education for saving in institutional manner. They so now know financial organizational process, withdrawal system, depositing system etc.
- Financial institutions do not want to operate and provide their services in rural areas.

- He has also recommended about how to mobilize the deposit collection by the financial institutions by rendering their services in rural areas, by adding various services.
- By operating rural banking programmers and unit
- Nepal Rastra Bank must organize training programmers to develop the skilled human resources
- By spreading a numbers of co-operative societies to develop mini banking services and improves the habits of public on deposit collection to the rural areas.

#### **2.2.7.2 Review of Previous Theses**

Before this study, various studies regarding the various aspects of commercial banks such as deposit mobilizing policy, financial performance, investment policy, lending policy, interest rate structure, resource mobilization and capital structure have conducted several thesis works. Some of them, which are relevant for this study, are presented below:

**Bhandari Deepak Raj (1998)**, in his study entitled “The Impact of Interest Rate Structure on Investment Portfolio of Commercial Banks of Nepal” has concluded followings:

- i) Rates of commercial banks have been fluctuating. Deposits and lending rates were increased immediately after liberalization of the interest rate on August 31, 1989 but however, started to decline which have helped in increasing the credit flow.
- ii) Interest rate structure has direct influence on profitability of commercial banks. Decreasing lending rate helps to increase the profitability through increasing the credit.
- iii) Deposits are more interest rate conscious and positively co-related.

- iv) Loans and advances of commercial banks have been found to be continuously increasing with the decline in interest rates.
- v) Effective interest rate structure helps in proper utilization of resources as measured by loan to deposit ratio.
- vi) Most of the banks are having similar interest rate structure which lessens the importance of liberalization of interest rate.

**Thapa Samiksha (2001)**, in her thesis paper “A Comparative Study on Investment Policy of Nepal Bangladesh Bank Ltd. and other Joint Venture Bank of Nepal” she has compared the investment activities of NBBL with only two Joint Venture Bank i.e. Nepal Arab Bank Ltd. and Nepal Grindlays Bank Ltd. by taking five years data. She has recommended in two ways:

**a. Statement Recommendation:** She has suggested about investment in government securities, OBS operation loan recover act, sound credit collection policy, and project oriented approach, effective portfolio management, and innovative approach to bank marketing and banking facilities.

**b. Theoretical Recommendation:** She has suggested about liberal policy and coat management strategy.

**Sapkota Udday Prasad (2002)**, in his thesis paper “A Study on Fund Mobilizing Policy of Standard Chartered Bank Ltd in Comparison to Nepal Bangladesh Bank Ltd and Himalayan Bank Ltd” having main objectives to examine the fund mobilizing policy adopted by three joint venture banks viz. SCBNL, NBBL and HBL and the way these banks mobilized their funds during five year study period i.e. from 1996/97 to 1999/2000.

He found the overall condition of SCBNL seems in satisfactory position in comparison to NBBL and HBL. In other words, he recommends that banks are strongly recommended to provide information about its services, facilities and extension of their services towards rural areas. These three banks are recommended to increase cash and bank balance to meet the need of investment and demand of loan and advances. And banks are to be investing its funds in the purchase of shares and debentures of other financial, non-financial companies, hotels and government companies.

Mr. Sapkota has not explained about the risk ratios which have to be faced by these joint venture banks. His study can not show the fund mobilizing policy of the selected banks for the succeeding years because of time limitation i.e. up to 1999/2000.

While reviewing the books and articles and previous studies, it is found that banks are not just the storehouse of the country's wealth but are the reservoirs of resources necessary for economic development and employment generation. There are still different obstacles in the effective operation of the commercial banks in Nepal. Therefore these obstacles should be eradicated for the economic development of Nepal.

**Dangol Neeta (2003)**, Studied on the "Impact of Interest Rate on Financial Performance of Commercial Banks" concludes:

- i) Most of the commercial banks contradict the general financial theories.
- ii) The relation between amount of deposits and interest rate on deposit, in general concept, must be positive. But deposits are increasing despite the decrease in the general level of interest. The result of such phenomenon is that there are fewer investment opportunities for the banking sectors as well as general investors.

- iii) The relation between total amount of loan and the lending rate is negative and significant. However, the change in the total amount of loan flow is not proportionate with the change in the lending rate.
- iv) Correlation between interest rate and inflation is not significant.
- v) Not only interest rate is responsible to shape the profitability of banks but also the operating efficiency also has major influence on it.

**Bhatta Sashi (2004)**, in the topic “Interest Rate and its effect on Deposit and Lending”, in this study, the disseminator tries to portrait the relation of interest rate with deposit and lending amount. Her findings and the findings made by Mr Chettri are seems to be different. According to Mr Chettri’s finding, all the relation matches with the theory but Mrs Bhatta’s finding on deposit was not as per theory. But other matters are same as Mr Chettri’s. The conclusions drawn by Mrs Bhatta are:

- o Deposit rates of all sample banks under study are in decreasing trend; meaning that every year deposit rates of sample banks under study have decreased.
- o Lending rates of all sample banks under study are also in decreasing trend; means that every year lending rates of sample banks under study have decreased.
- o Analysis shows that interest rates on lending are far higher than deposit rates of sample banks. The correlation coefficient between these two variables, (deposit rate and lending rate) of sample banks comes highly positive.

- The simple correlation coefficient between deposit rate and deposit amount of sample banks were highly negative. But out of them, correlation coefficient analysis of one sample bank is found to be negative. It means that in that case the theory doesn't match the analysis. So writer conclude that the result appears in that study was different than the theory.
- The correlation analysis between lending rate and lending amount of all sample banks under study comes highly negative. This relation between two variables (lending rate and lending amount) of sample banks matches with the theory which says with the increase in lending rate, lending amount decreases and vice-versa. So she concluded that lending rate is the most important determinant of loan and advances of all commercial banks. This makes clear that borrower's seem more interest conscious.

Finally her conclusion about her study, in her own words, as follow:

“There is significant relationship between deposit rate and deposit amount and lending rate and lending amount of almost all commercial banks except one. Test of significance for correlation coefficient between inflation rate and deposit and lending rate shows that these variables are not correlated.”

**Karmacharya M.N. (2005)**, in his thesis paper “A Study on the Deposit Mobilization by the Joint Venture Banks” has mentioned that the bank has successfully maintained its liquid asset position but could not mobilize its resources efficiently. He has concluded that Nepal Bank's utilization side is weak as compare to the collection of resources. He suggested for extending its branches, so NBL's deposit collection and also long-term as well as short-term credit may increase. He has recommended not to consider security factor only but to provide loan to genuine projects without securing.

**Pokharel Jhabindra (2006)**, a study made on the topics “Determinants of Interest Rates in Nepalese Financial Markets” also give some ideas about the interest rates in Nepalese markets. Though, this thesis tried to identify the factors that shape the interest rates in Nepalese markets, it also tried to explore the relationship between the interest rate, deposits, credit rates and inflation. Among different objectives, some objectives that match to this study are:

- To show the relationship between the liquidity position and interest rate on deposit and lending.
- To identify the effect of inflation on interest rate charged and offered by various Nepalese financial institutions.
- To identify the different methods used by Nepalese financial institutions to calculate interest on lending.

**Mandala Mahendra (2007)**, in his thesis paper “A Comparative Financial Performance Appraisal of Joint Venture Banks.”, has studied primarily three Joint Venture Banks i.e. NABIL, NGBL and Nepal Indosuez Bank Ltd. His main objectives is to find out the both banks, NGBL and NABIL have mobilized the debt funds in proper way for generating more return but Nepal Indosuez Bank (NIBL) could not mobilize as NABIL and NGBL. He has recommended that all the banks should provide their facilities in rural areas and encourage the small entrepreneur’s development programmes, play merchant role, mobilize the deposit funds in productive sectors and grant priority to the local manpower.

He has not attempted to show the investment policy and concentrated only on financial performance of JVBs, therefore it can not represent the performance appraisal of JVBs. His study is comparative study of only three JVBs.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

“Research methodology refers to the various sequential steps to be adopted by a research in studying a problem with certain objectives in view”. **(Kothari, 1989, p 30)** Research methodology is the research method used to test the hypothesis. It sequentially refers to the various steps to be adopted by a researcher in studying a problem with certain objectives in view. In other words, research methodology describes the methods and process applied in the entire subject of the study.

Generally, it refers to the numerous processes adopted by the researchers during the research period. It is the technique to solve the research problem in systematic manner. It includes many techniques and is crucial for every research work. The main objective of this research work is to evaluate the deposit mobilizing procedure adopted by the two Commercial Banks i.e. Everest Bank Pvt. Ltd. and Bank of Kathmandu Pvt. Ltd.

It helps to solve the research problem in a systematic way. This chapter has been designed and developed as a guideline or a plan for the achievement of objectives set and hypothesis developed as a guideline or a plan for the achievement of objectives and hypothesis developed for the purpose of the study. Reliability and validity of research work is facilitated by research methodology and the basic objective of this chapter is to guide next chapter for data presentation, descriptive and empirical analysis of interest rate in its effect on deposits, lending and inflation. So, suitable research methodology as demanded by the study has been followed. It is intended to use simple and lucid research methodology.

### **3.1 Research Design**

Research design indicates a plan of action to be carried out in connection with proposed research work. The research design is descriptive and core prescriptive in this study because the historical secondary data have been mainly deployed for analysis. “A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.”(Kothari, 1992, p 25)

The research examines the facts and postulates in certain frameworks on details and supplies the important information on subject matter, summary of the study, major findings of the study, recommendations, conclusion etc. are the most significant information among them, they are derived with the help of some financial and statistical tools were adapted to evaluate the deposit mobilization of Commercial Banks viz. EBL and BOK in consideration not only to research about them but also to facilitate among them.

### **3.2 Nature and Sources of Data**

The study is mainly based on secondary data. The secondary sources of data collections are those that have been used from published on used by someone previously. The secondary sources of data are Balance Sheet, Profit & Loss account and literature publication of the concerned banks. The NEPSE report of the concerned bank has furnished some important data to this research work. Some supplementary data and information have been collected from the authoritative sources like Nepal Rastra Bank, Nepal Stock Exchange Limited, Security Exchange Board, Economic Survey, National Planning Commission, different journals, magazines and other published and unpublished reports documented by the authorities.

In order to fulfill the objectives of this research work, all the secondary data are compiled, processed and tabulated in time series. And to judge the reliability of data provided by the banks and other sources, they were compiled with the annual reports of auditors. Formal and informal talks to the concerned head of the department of the bank were also helpful to obtain the additional information of the related problem.

### **3.3 Population and Sample**

There are altogether 23 commercial banks functioning all over the kingdom. Among them six are JVBs and seventeen are domestic commercial banks. The list of commercial banks which represents the population of this study is presented below:

1. Nepal Bank Ltd.
2. Rastriya Banijya Bank Ltd.
3. Nabil Bank Ltd.
4. Nepal Investment Bank Ltd.
5. Standard Chartered Bank Ltd.
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank Ltd.
9. Everest Bank Ltd.
10. Bank of Kathmandu Ltd.
11. Nepal Credit and Commercial Bank Ltd.
12. Lumbini Bank Ltd.
13. Nepal Industrial and Commercial Bank Ltd.
14. Machhapuchhre Bank Ltd.
15. Kumari Bank Ltd.
16. Laxmi Bank Ltd.
17. Siddhartha Bank Ltd.
18. Global Bank Ltd.
19. Agriculture Development Bank Ltd.

20. Citizens Bank International Ltd.
21. Sunrise Bank Ltd.
22. Bank of Asia Ltd.
23. Prime Bank Ltd.

Among all the banks which are presented above, only two banks, 1 from joint venture bank and one from local investment bank are taken as a sample for comparative study. They are:

1. Everest Bank Pvt. Ltd. (EBL)
2. Bank of Kathmandu Pvt. Ltd (BOK)

These banks are compared as per deposit mobilization procedure, that they are adopting to mobilize their collected funds as well as own funds.

### **3.4 Data Analysis Tools**

Presentation and analysis of the data is the core of each and every research work. This study requires some financial and statistical tools to accomplish the objective of the study. The financial and statistical tools are most reliable. In this study various financial, statistical and accounting tools have been used. These tools make the analysis more effective, convenience, reliable and authentic.

The various results obtained with the help of financial, accounting and statistical tools are tabulated under different headings. Then they are compared with each other to interpret the results. Two kinds of tools have been used to achieve the certain goals.

1. Financial Tools
2. Statistical Tools

### **3.4.1. Financial Tools**

Financial tools basically help to identify the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account.

#### **Ratio Analysis**

Ratio analysis is the powerful tool of financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions the relationship between two or more things. **(Merriam, 1975, p 958)** In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of a firm. The relationship between two accounting figure expressed mathematically, is known as a financial ratio or simply a ratio. An accounting figure conveys meaning when it is related to some relevant information. **(Pandey, 1975, p 104)**

“A ratio is a mathematical relationship between two variables. It is significant for financial analysis. It also helps us to predict the future performance of a company based on study of ratios of earlier years.” **(Benerjee, p 95)**

Thus, ratio analysis is the part of whole process of analysis of financial statements of any business or industrial concerned especially to take output and credit decision. Ratio indicates a quantitative relationship, which can be, in turn, used to make a qualitative judgment. Even though there are various types of ratios to analyze and interpret the financial statement, only six types of ratios have been taken in this study, which are related to fund mobilization of the banks. They are presented below:

#### **A. Liquidity Ratios**

Liquidity ratios are applied to measure the ability of the firms to meet short term obligations. It measures the speed of firms to convert the firms asset

into cash to meet deposit withdraws and other current obligations. This is quick measure of the liquidity and financial strength of the firm.

“Liquidity ratios examine the adequacy of funds, the solvency of the firms ability to pay its obligation when due.” **(Hampton, 1995, p 139)** Various types of liquidity ratios are applied in these studies, which are explained below:

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

Cash and bank balance are the most liquid current assets of a firm, cash and bank balance to total deposit ratio measures the percentage of most liquid assets to pay depositors immediately. This ratio is computed dividing the amount of cash and bank balance by the total deposits. It can be presented as,

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

Where, cash and bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance held abroad. Total deposits consist of deposits on current account, saving account, fixed account, money at call and short notice and other deposits.

**ii) Cash and Bank Balance to Current Assets Ratio**

This ratio measures the percentage of liquid assets i.e. cash and bank balance among the current assets of a firm. Higher ratio shows the higher capacity of firms to meet the cash demand. This ratio is calculated dividing cash and bank balance by total current assets and can be calculated as,

$$\text{Cash and Bank Balance to Current Assets Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

Hence, cash and bank balance includes cash in hand, foreign cash and foreign banks.

### **iii) Investment on Government Securities to Current Assets Ratio**

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds. It can be mentioned as:

$$\text{Investment on Government Securities to Current Assets X} \frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

Where, Investment on government securities involves treasury bills and development bonds etc.

## **B. Assets Management Ratios**

These ratios are designed to answer this question: does the total amount of each type of asset as reported on the balance sheet seem reasonable or not. If a firm has excessive investments in assets then its capital costs will be unduly high and its stock price will suffer. **(Brigham, 1992 p 74)**

In this study this ratio is used to indicate how efficiently the selected banks have arranged and invested their limited resources. The following financial ratios related to fund mobilization are calculated under asset management ratio and interpretation is made by these calculations.

### **i) Loan and Advances to Total Deposit Ratio**

This ratio is calculated to find out how successfully the selected banks are utilizing their total collections or deposits on loan and advances for the purpose of earning profit. Greater ratio shows the better utilization of total deposits. This ratio can be obtained dividing loan and advances by total deposits, which can be shown as,

$$\text{Loan and Advances to Total Deposit X} \frac{\text{Total Loan and Advance}}{\text{Total Deposit}}$$

### **ii) Total Investment to Total Deposit Ratio**

Investment is one of the major sources of earning of profit. This ratio indicates how properly firm's deposits have been invested on government securities and shares and debentures of other companies. This ratio is computed by using following formula:

$$\text{Total Investment to Total Deposit} \times \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Where, total investment includes investment on government securities, investment on debentures and bonds, share in subsidiary companies, shares in other companies and other investments.

### **iii) Loan and Advances to Total Working Fund Ratio**

The main element of total working fund is loan and advances. This ratio indicates the ability of selected banks in terms of earning high profit from loan and advances. Loan and advances to working fund ratio can be obtained dividing loan and advances amount by total working fund. That is formulized as,

$$\text{Loan and Advances to Total Working Fund} \times \frac{\text{Total Loan and Advances}}{\text{Total Working Fund}}$$

Where, total working fund includes total amount of assets given in balance sheet which refers to current assets, net fixed assets, total loans for development banks and other sundry assets except off balance sheet items i.e. letter of credit, letter of guarantee etc.

### **iv) Investment on Government Securities to Total Working Fund Ratio**

Investment on government securities to working fund ratio shows how much part of total investment is there on government securities in percentage. It can be obtained by:

$$\text{Investment on Government Securities to Total Working Fund X} \frac{\text{Investment on Government Securities}}{\text{Total Working Fund}}$$

Where, investment on government securities includes investment on debentures, bonds and shares of other companies.

#### **v) Investment on Shares and Debentures to Total Working Fund Ratio**

Investment on shares and debentures to total working fund ratio shows the investment of banks on the shares and debentures of other companies in terms of total working fund. This ratio can be obtained dividing on shares and debentures by total working fund. It is calculated as:

$$\text{Investment on Shares and Debentures to Total Working Fund X} \frac{\text{Investment on Shares and Debentures}}{\text{Total Working Fund}}$$

Where, total investment includes investment on government securities, investment on debenture and bonds, shares of other companies.

### **C. Profitability Ratios**

Profit is only appeared when there is positive difference between total revenues and total cost over a certain period of time. Profitability ratios show the combined effects of liquidity, assets management, and debt on operating results. Profitability ratios are very helpful to measure the overall efficiency of operations of a firm. It is a true indication of the financial performance of each and every business organization. Here profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets. Profitability of the firms can be presented through the following different ways:

### **i) Return on Loan and Advances Ratio**

Return on loan and advances ratio shows how efficiently the banks have utilized their resources to earn good return from provided loan and advances. This ratio is computed dividing net profit (loss) by the total amount of loan and advances and can be mentioned as,

$$\text{Return on Loan and Advances} \times \frac{\text{Net Profit / Loss}}{\text{Loan and Advances}}$$

### **ii) Return on Total Working Fund Ratio**

Return on total working fund ratio measures the profit earning capacity of the banks by utilizing available resources i.e. total assets. If the bank's well managed and efficiently utilized its working fund, it will get higher return. Maximizing taxes, this in the legal options available will also improve the return. It is computed as:

$$\text{Return on Total Working Fund} \times \frac{\text{Net Profit}}{\text{Total Working Fund}}$$

### **iii) Total Interest Earned to Total Working Fund Ratio**

This ratio reflects the extent to which the banks are successful in mobilizing these total assets to acquire income as interest. This ratio actually reveals the earning capacity of commercial banks by mobilizing its working fund. Higher the ratio higher will be the income as interest. We have,

$$\text{Total Interest Earned to Total Working Fund} \times \frac{\text{Total Interest Earned}}{\text{Total Working Fund}}$$

### **iii) Total Interest paid to Total Working Fund Ratio**

This ratio measures the percentage of total interest expenses against total working fund. A high ratio indicates higher interest expenses on total working fund and vice-versa. This ratio is calculated as:

$$\text{Total Interest Paid to Total Working Fund X} \frac{\text{Total Interest Paid}}{\text{Total Working Fund}}$$

#### **D. Risk Ratios**

Generally, risk means uncertainty which lies in the business transaction of investment management. When a firm wants to bear risk and uncertainty, profitability and effectiveness of the firm is increased. This ratio checks the degree of risk involved in the various financial operations. For this study, following risk ratios are used to analyze and interprets the financial data and investment policy.

##### **i) Liquidity Risk Ratio**

The liquidity risk of the bank defines its liquidity need for deposit. The cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposit, as the liquidity needs. The ratio of cash and bank balance to total deposit is an indicator of bank's liquidity of need. This ratio is low if funds are kept idle as cash and bank balance but this reduces profitability. When the bank makes loans its profitability increases and also the risk. Thus, higher liquidity ratio indicates less profitable return and vice-versa. This ratio is calculated by dividing cash and bank balance to total deposit.

$$\text{Liquidity Risk Ratio X} \frac{\text{Cash and Bank Balance}}{\text{Total Deposit}}$$

##### **ii) Credit Risk Ratio**

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk involved in the project. Generally credit risk ratio shows the proportion of non performing assets in the total investment plus loan and advances of a bank. It is computed as:

$$\text{Credit Risk Ratio} = \frac{\text{Total Investment} \Gamma \text{Total Loan and Advances}}{\text{Total Assets}}$$

### **E. Growth Ratios**

The growth ratios represent how well the commercial banks are maintaining their economic and financial position. The higher ratios represent the better performance of the selected firms to calculate, check and analyze the expansion and growths of the selected banks the following growth ratios are calculated. Growth ratios are directly related to the fund mobilization and investment of those firms.

- i) Growth ratio of total deposits
- ii) Growth ratio of total investment
- iii) Growth ratio of loan and advances
- iv) Growth ratio of net profit

### **3.4.2 Statistical Tools**

In this study, some important statistical tools have been used to present and analyze the data for achieving the objectives. Such as coefficient of correlation between different variables has been used, which are presented below:

- i) Mean
- ii) Karl Pearson's of Coefficient of Correlation Analysis(r)
- iii) Coefficient of Variation (C.V)
- iv) Standard Deviation (S.D)
- v) Probable Error (P.E)

#### **i. Mean**

Mean is a single value related from a group of values to represent them in some way, a value, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group. **(Gupta, 1992, p 238)**

There are various types of mean. Arithmetic mean (AM, Simple & Weighted), median, mode, geometric mean, harmonic mean are the major types of averages. The most popular and widely used measure representing the entire data by one value is the AM. The value of the AM is obtained by adding together all the items and by dividing this total by the number of items.

Mathematically:

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n}$$

Where,

$\bar{X}$  = Arithmetic mean

$\sum X$  = Sum of all the values of the variable X

n = Number of observation

## ii. Karl Pearson's Coefficient of Correlation Analysis

This statistical tool has been used to analyze, identify and interpret the relationship between two or more variables. It interprets whether two or more variables are correlated positively or negatively. Statistical tool analyses the relationship between those variables and helps the selected banks to make appropriate investment policy regarding to profit maximization and deposit collection; fund mobilization through providing loan and advances.

For the purpose of decision-making, interpretation is based on following term:

Assumptions

If  $r = 1$ , there is positively perfect correlation between the two variables.

If  $r = -1$ , there is negatively perfect correlation between the two variables.

If  $r = 0$ , the variables are uncorrelated.

The nearer the value of r to +1, the closer will be the relationship between two variables and the value of r, the lesser will be the relation.

**(Bajracharya, 2057, p 256-257)**

Karl Pearson's correlation coefficient has been used to find out the relationship between the following variables:

**a) Coefficient of Correlation between Deposit and Loan and Advances**

Correlation coefficient between deposits and loan and advances measures the degree of relationship between two variables i.e. X and Y. In this analysis, deposit is independent variables (X) and loan and advances is dependent variables (Y). The main purpose of calculating correlation coefficient is to justify whether the deposits are significantly used in proper way or not and whether there is any relationship between these two variables.

**b) Coefficient of Correlation between Deposit and Total Investment**

Correlation coefficient between deposit and investment is to measure the degree of relationship between deposit and total investment. In this analysis, deposit is independent variables (X) and total investment is dependent variables (Y).

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$r = \frac{\sum \frac{dx \cdot dy}{n}}{\sqrt{\sum \frac{dx^2}{n}} \sqrt{\sum \frac{dy^2}{n}}}$$

**iii. Coefficient of Variation (C.V)**

The coefficient of variation is the most commonly used measure of relative variation. It is used in such problems where the researcher wants to

compare the variability of more than two years. Greater the C.V, the variable or conversely less consistent, less uniform, more consistent, more uniform, more stable and homogeneous.

$$C.V X \frac{Standard\ Deviation(\dagger)}{Expected\ Return(\bar{X})} | 100$$

#### iv. **Standard Deviation (S.D)**

The standard deviation is an important and widely used measure of dispersion. The measurement of the scatter ness of the mass of figure in a series about an average is known as dispersion. The greater the amount of dispersion is the greater the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposites it is denoted by the letter †.

$$S.D (\dagger) = \sqrt{\frac{1}{N} \sum (X - \bar{X})^2}$$

Where,

N = Number of observations

X = Expected return of the historical data

#### v. **Probable Error (P.E)**

Probable error is measured for testing the reliability of an observed value of correlation coefficient. It is computed to find the extent to which it is dependable. If correlation coefficient is greater than 6 times P.E the observed value of r is said to be significant, otherwise nothing can be concluded with certainty. But if the calculated (r) is less than the P.E

correlation is not at all significant. It is calculated by using following formula:

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

Where,

- P.E. (r) = Probable error of correlation coefficient
- r = Correlation coefficient
- n = Number of observations

## **CHAPTER FOUR**

### **DATA PRESENTATION AND ANALYSIS**

Presentation and analysis of the data is the core of each and every research work. This study requires some financial and statistical tools to accomplish the objective of the study. The various results obtained with the help of financial, accounting and statistical tools are tabulated under different headings. As the main objective of the study is to analyze the deposit mobilization of selected banks; the necessary financial facts and figures as well as descriptive information are gathered through the financial statement. The major variables for the study are cash and bank balance, total investment, investment on government securities and share and debenture and fixed deposit in commercial banks.

Financial Ratio Analysis is a tool, through which economic and financial position of organization can be fully X-rayed. It is the indicated quotient of two mathematical expressions, and as the relationship between two or more things. Therefore, to find out the position of investment in government securities of sample commercial banks, the following ratios are examined.

#### **4.1 Liquidity Ratios**

Liquidity ratios are applied to measure the ability of the firms to meet short term obligations. It measures the speed of firms to convert the firms asset into cash to meet deposit withdraws and other current obligations. This is quick measure of the liquidity and financial strength of the firm.

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

This ratio is computed dividing the amount of cash and bank balance by the total deposits.

**Table: 4.1**  
**Cash and Bank Balance to Total Deposit**

**(Ratio in %)**

| <b>Years</b>   | <b>EBL</b>   | <b>BOK</b>  |
|----------------|--------------|-------------|
| 2059/060       | 17.02        | 11.23       |
| 2060/061       | 7.83         | 10.11       |
| 2061/062       | 10.39        | 8.28        |
| 2062/063       | 11.17        | 6.95        |
| 2063/064       | 13.15        | 10.62       |
| <b>Average</b> | <b>11.91</b> | <b>9.44</b> |
| S.D            | 3.43         | 1.77        |
| C.V            | 28.80        | 18.75       |

Source: Annex III & IV

From the table 4.1 it is depicted that cash and bank balance to total deposit ratio of EBL is 11.91 percent in an average in the period under study whereas that of BOK is 9.44 percent in an average. The average ratio of EBL is higher than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 17.02 percent in FY 2059/060 for EBL, 11.23 percent in FY 2059/060 for BOK. The S.D is 3.43 and 1.77 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 28.80 and 18.75 respectively. These facts are shown in the figure 4.1 to make easier to understand.

**Figure: 4.1**  
**Cash and Bank Balance to Total Deposit**



#### 4.1.2 Cash and Bank Balance to Current Assets

This ratio is calculated dividing cash and bank balance by total current assets.

**Table: 4.2**  
**Cash and Bank Balance to Current Assets**

(Ratio in %)

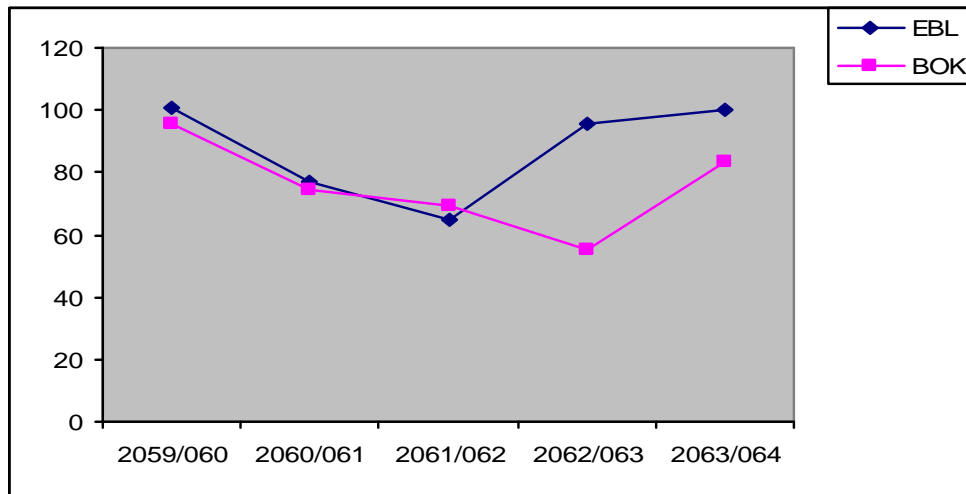
| <b>Years</b>   | <b>EBL</b>   | <b>BOK</b>   |
|----------------|--------------|--------------|
| 2059/060       | 100.71       | 95.80        |
| 2060/061       | 77.12        | 74.19        |
| 2061/062       | 64.80        | 69.25        |
| 2062/063       | 95.87        | 55.09        |
| 2063/064       | 100.00       | 83.54        |
| <b>Average</b> | <b>87.70</b> | <b>75.57</b> |
| S.D            | 16           | 15.28        |
| C.V            | 18.24        | 20.22        |

Source: Annex III & IV

From the table 4.2 it is depicted that cash and bank balance to total current assets ratio of EBL is 87.70 percent in an average in the period under study whereas that of BOK is 75.57 percent in an average. The average ratio of EBL is higher than BOK.

The ratios of banks are found to be in fluctuating. The higher ratio is 100.71 percent in FY 2059/060 for EBL, 95.80 percent in FY 2059/060 for BOK. The S.D is 16 and 15.28 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 18.24 and 20.22 respectively. These facts are shown in the figure 4.2 to make easier to understand.

**Figure: 4.2**  
**Cash and Bank Balance to Current Assets**



#### 4.1.3 Investment on Government Securities to Current Assets

This ratio is used to find the percentage of current assets invested on government securities, treasury bills and development bonds.

**Table: 4.3**  
**Investment on Government Securities to Current Assets**  
**(Ratio in %)**

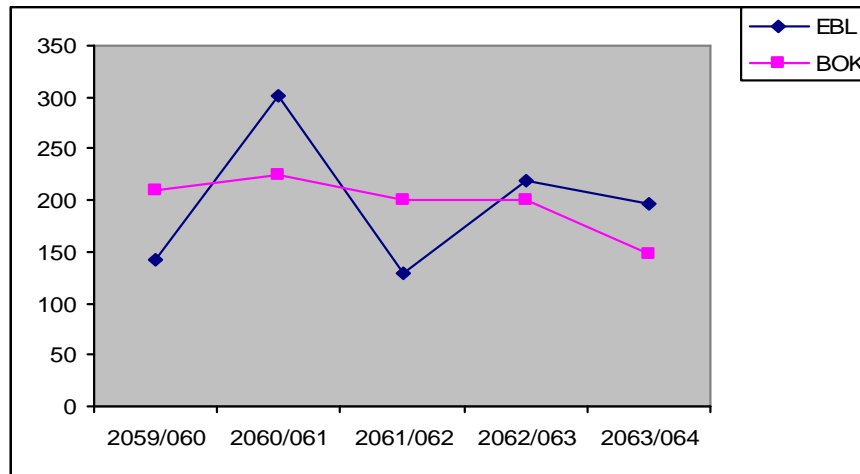
| Years          | EBL           | BOK           |
|----------------|---------------|---------------|
| 2059/060       | 141.34        | 208.93        |
| 2060/061       | 301.06        | 224.77        |
| 2061/062       | 129.71        | 200.73        |
| 2062/063       | 219.06        | 200.97        |
| 2063/064       | 196.73        | 148.05        |
| <b>Average</b> | <b>197.58</b> | <b>196.69</b> |
| S.D            | 68.81         | 28.89         |
| C.V            | 34.83         | 14.69         |

Source: Annex III & IV

From the table 4.3 it is depicted that investment on government securities to current assets ratio of EBL is 197.58 percent in an average in the period under study whereas that of BOK is 196.69 percent in an average. The average ratio of EBL is higher than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 301.06 percent in FY 2060/061 for EBL,

224.77 percent in FY 2060/061 for BOK. The S.D is 68.81 and 28.89 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 34.83 and 14.69 respectively. These facts are shown in the figure 4.3 to make easier to understand.

**Figure: 4.3**  
**Investment on Government Securities to Current Assets**



## 4.2 Assets Management Ratios

The asset management ratios, measures how effectively the firm is managing its assets. In this study this ratio is used to indicate how efficiently the selected insurance companies have arranged and invested their limited resources. The following financial ratios related to deposit mobilization are calculated under asset management ratio and interpretation is made by these calculations.

### 4.2.1 Loan and Advances to Total Deposit

This ratio is calculated to find out how successfully the selected banks are utilizing their total collections or deposits on loan and advances for the purpose of earning profit. This ratio can be obtained dividing loan and advances by total deposits.

**Table: 4.4**  
**Loan and Advances to Total Deposit**

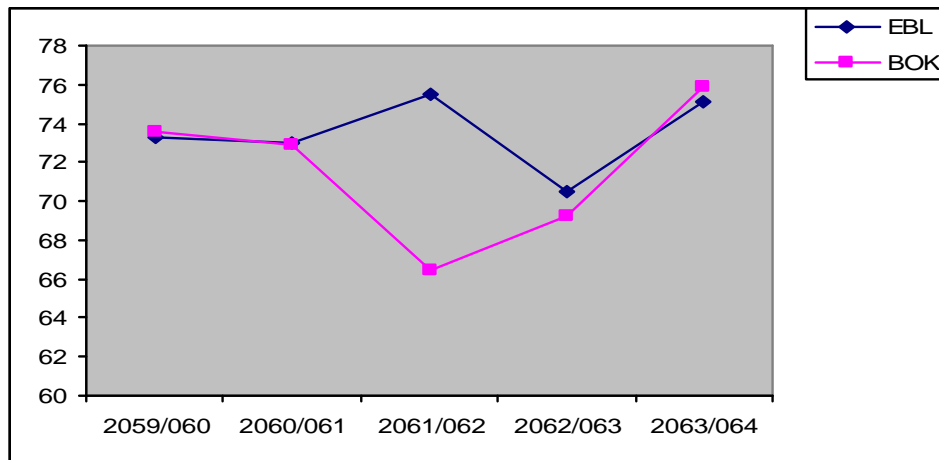
**(Ratio in %)**

| <b>Years</b>   | <b>EBL</b>   | <b>BOK</b>   |
|----------------|--------------|--------------|
| 2059/060       | 73.32        | 73.62        |
| 2060/061       | 72.97        | 72.94        |
| 2061/062       | 75.45        | 66.45        |
| 2062/063       | 70.50        | 69.23        |
| 2063/064       | 75.13        | 75.87        |
| <b>Average</b> | <b>73.47</b> | <b>71.62</b> |
| S.D            | 1.99         | 3.75         |
| C.V            | 2.71         | 5.24         |

Source: Annex III & IV

From the table 4.4 it is depicted that loan and advance ratio of EBL is 73.47 percent in an average in the period under study whereas that of BOK is 71.62 percent in an average. The average ratio of EBL is higher than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 75.45 percent in FY 2061/062 for EBL, 75.87 percent in FY 2063/064 for BOK. The S.D is 1.99 and 3.75 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 2.71 and 5.24 respectively. These facts are shown in the figure 4.4 to make easier to understand.

**Figure: 4.4**  
**Loan and Advances to Total Deposit**



#### 4.2.2 Total Investment to Total Deposit

Investment is one of the major sources of earning of profit. This ratio indicates how properly firm's deposits have been invested on government securities and shares and debentures of other companies.

**Table: 4.5**  
**Total Investment to Total Deposit**

**(Ratio in %)**

| <b>Years</b>   | <b>EBL</b>   | <b>BOK</b>   |
|----------------|--------------|--------------|
| 2059/060       | 24.70        | 29.43        |
| 2060/061       | 31.44        | 32.00        |
| 2061/062       | 21.08        | 29.05        |
| 2062/063       | 30.21        | 32.18        |
| 2063/064       | 27.41        | 24.15        |
| <b>Average</b> | <b>26.97</b> | <b>29.37</b> |
| S.D            | 4.20         | 3.25         |
| C.V            | 15.57        | 11.07        |

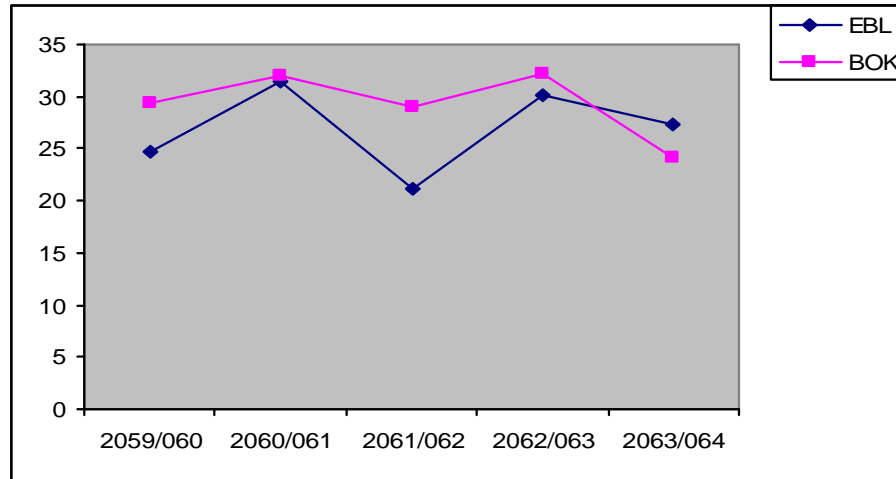
Source: Annex III & IV

From the table 4.5 it is depicted that total investment to total deposit ratio of EBL is 26.97 percent in an average in the period under study whereas that of BOK is 29.37 percent in an average. The average ratio of EBL is lower than BOK. The ratios of banks are found to be in fluctuating.

The higher ratio is 30.21 percent in FY 2062/063 for EBL, 32.18 percent in FY 2062/063 for BOK. The S.D is 4.20 and 3.25 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 15.57 and 11.07 respectively. These facts are shown in the figure 4.5 to make easier to understand.

**Figure: 4.5**

**Total Investment to Total Deposit**



**4.2.3 Loan and Advances to Total Working Fund**

This ratio indicates the ability of selected banks in terms of earning high profit from loan and advances. Loan and advances to working fund ratio can be obtained dividing loan and advances amount by total working fund.

**Table: 4.6**  
**Loan and Advances to Total Working Fund**

(Ratio in %)

| Years          | EBL          | BOK          |
|----------------|--------------|--------------|
| 2059/060       | 60.96        | 61.02        |
| 2060/061       | 61.24        | 59.46        |
| 2061/062       | 64.94        | 60.29        |
| 2062/063       | 61.41        | 59.12        |
| 2063/064       | 63.75        | 64.51        |
| <b>Average</b> | <b>62.46</b> | <b>60.88</b> |
| S.D            | 1.78         | 2.20         |
| C.V            | 2.86         | 3.61         |

Source: Annex III & IV

From the table 4.6 it is depicted that loan and advances to total working fund ratio of EBL is 62.46 percent in an average in the period under study whereas that of BOK is 60.88 percent in an average. The average ratio of EBL is higher than BOK. The ratios of banks are found to be in fluctuating.

The higher ratio is 64.94 percent in FY 2061/062 for EBL, 64.51 percent in FY 2063/064 for BOK. The S.D is 1.78 and 2.20 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 2.86 and 3.61 respectively. These facts are shown in the figure 4.6 to make easier to understand.

**Figure: 4.6**  
**Loan and Advances to Total Working Fund**



#### 4.2.4 Investment on Government Securities to Total Working Fund

Investment on government securities to working fund ratio shows how much part of total investment is there on government securities in percentage.

**Table: 4.7**  
**Investment on Government Securities to Total Working Fund**  
**(Ratio in %)**

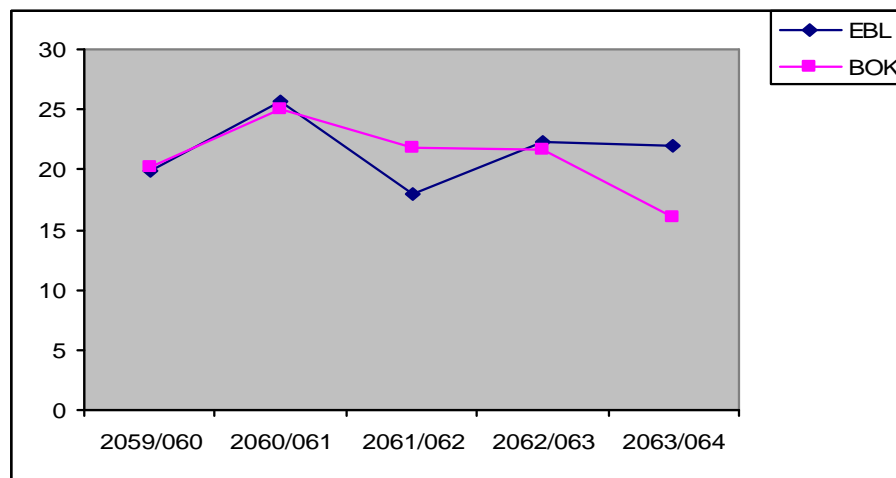
| Years          | EBL          | BOK          |
|----------------|--------------|--------------|
| 2059/060       | 19.86        | 20.29        |
| 2060/061       | 25.67        | 24.98        |
| 2061/062       | 17.90        | 21.77        |
| 2062/063       | 22.24        | 21.65        |
| 2063/064       | 21.95        | 16.00        |
| <b>Average</b> | <b>21.52</b> | <b>24.94</b> |
| S.D            | 2.91         | 3.25         |
| C.V            | 13.52        | 13.03        |

Source: Annex III & IV

From the table 4.7 it is depicted that investment on government securities to total working fund ratio of EBL is 21.52 percent in an average in the period under study whereas that of BOK is 24.94 percent in an average.

The average ratio of EBL is lower than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 25.67 percent in FY 2060/061 for EBL, 24.98 percent in FY 2060/061 for BOK. The S.D is 2.91 and 3.25 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 13.52 and 13.03 respectively. These facts are shown in the figure 4.7 to make easier to understand.

**Figure: 4.7**  
**Investment on Government Securities to Total Working Fund**



#### **4.2.5 Investment on Shares and Debentures to Total Working Fund**

Investment on shares and debentures to total working fund ratio shows the investment of banks on the shares and debentures of other companies in terms of total working fund.

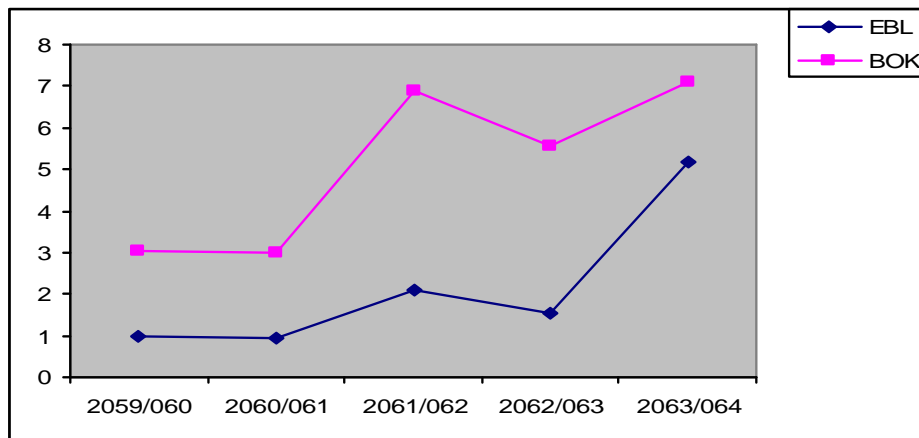
**Table: 4.8**  
**Investment on Shares and Debentures to Total Working Fund**  
**(Ratio in %)**

| <b>Years</b>   | <b>EBL</b>  | <b>BOK</b>   |
|----------------|-------------|--------------|
| 2059/060       | 0.98        | 3.02         |
| 2060/061       | 0.95        | 3.00         |
| 2061/062       | 2.10        | 6.90         |
| 2062/063       | 1.54        | 5.56         |
| 2063/064       | 5.18        | 7.10         |
| <b>Average</b> | <b>2.15</b> | <b>17.54</b> |
| S.D            | 1.76        | 2.01         |
| C.V            | 81.86       | 11.46        |

Source: Annex III & IV

From the table 4.8 it is depicted investment on shares and debentures to working fund ratio of EBL is 2.15 percent in an average in the period under study whereas that of BOK is 17.54 percent in an average. The average ratio of EBL is lower than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 5.18 percent in FY 2063/064 for EBL, 7.10 percent in FY 2063/064 for BOK. The S.D is 1.76 and 20.1 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 81.86 and 11.46 respectively. These facts are shown in the figure 4.8 to make easier to understand.

**Figure: 4.8**  
**Investment on Shares and Debentures to Total Working Fund**



### 4.3 Profitability Ratios

Profitability ratios are very helpful to measure the overall efficiency of operations of a firm. It is a true indication of the financial performance of each and every business organization. Here profitability ratios are calculated and evaluated in terms of the relationship between net profit and assets.

#### 4.3.1 Return on Loan and Advances

This ratio is computed dividing net profit (loss) by the total amount of loan and advances.

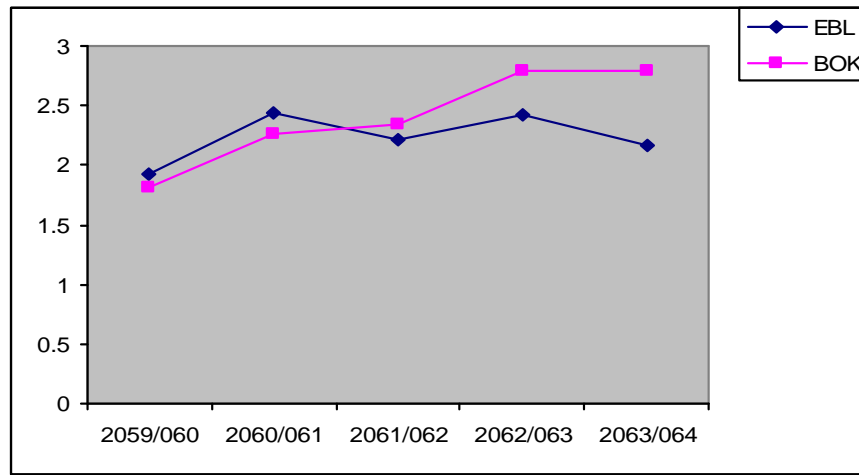
**Table: 4.9**  
**Return on Loan and Advances**

| <b>Years</b>   | <b>EBL</b>  | <b>BOK</b>  |
|----------------|-------------|-------------|
| 2059/060       | 1.92        | 1.81        |
| 2060/061       | 2.44        | 2.26        |
| 2061/062       | 2.21        | 2.35        |
| 2062/063       | 2.42        | 2.79        |
| 2063/064       | 2.17        | 2.79        |
| <b>Average</b> | <b>2.23</b> | <b>2.40</b> |
| S.D            | 0.21        | 0.41        |
| C.V            | 9.42        | 17.08       |

Source: Annex III & IV

From the table 4.9 it is depicted that return on loan and advance of EBL is 2.23 percent in an average in the period under study whereas that of BOK is 2.40 percent in an average. The average ratio of EBL is lower than BOK. The ratios of EBL is found to be in fluctuating but BOK is found to be increasing but which is stable in FY 2063/064. The higher ratio is 2.44 percent in FY 2060/061 for EBL, 2.79 percent in FY 2062/063 and FY 2036/064 for BOK. The S.D is 0.21 and 0.41 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 9.42 and 17.08 respectively. These facts are shown in the figure 4.9 to make easier to understand.

**Figure: 4.9**  
**Return on Loan and Advances**



#### 4.3.2 Return on Total Working Fund

Return on total working fund ratio measures the profit earning capacity of the banks by utilizing available resources i.e. total assets.

**Table: 4.10**

#### Return on Total Working Fund

**(Ratio in %)**

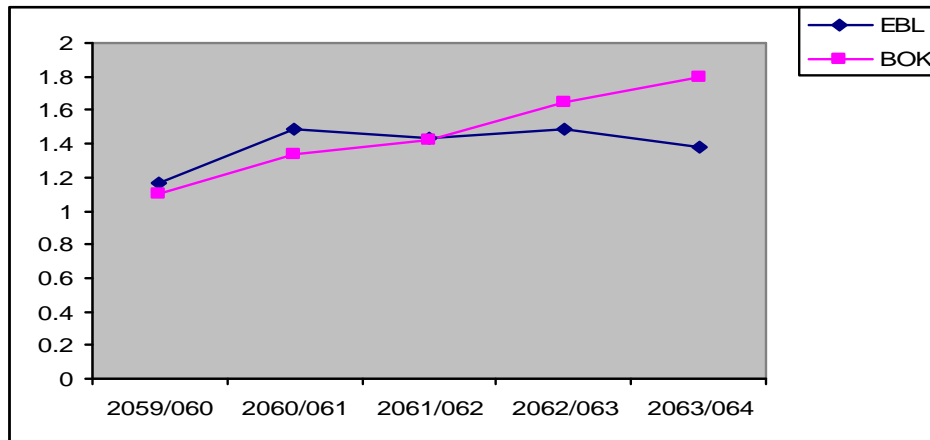
| <b>Years</b>   | <b>EBL</b>  | <b>BOK</b>  |
|----------------|-------------|-------------|
| 2059/060       | 1.17        | 1.10        |
| 2060/061       | 1.49        | 1.34        |
| 2061/062       | 1.43        | 1.42        |
| 2062/063       | 1.49        | 1.65        |
| 2063/064       | 1.38        | 1.80        |
| <b>Average</b> | <b>1.39</b> | <b>4.01</b> |
| S.D            | 0.13        | 0.27        |
| C.V            | 9.35        | 6.73        |

Source: Annex III & IV

From the table 4.10 it is depicted that return on total working fund of EBL is 1.39 percent in an average in the period under study whereas that of BOK is 4.01 percent in an average. The average ratio of EBL is lower than BOK. The ratio of EBL is found to be in fluctuating but BOK is found to be in increasing trend. The higher ratio is 1.49 percent in FY 2060/061 and FY 2062/063 for EBL, 1.80 percent in FY 2063/064 for BOK. The S.D is 0.13

and 0.27 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 9.35 and 6.73 respectively. These facts are shown in the figure 4.10 to make easier to understand.

**Figure: 4.10**  
**Return on Total Working Fund**



#### 4.3.3 Total Interest Earned to Total Working Fund

This ratio reflects the extent to which the banks are successful in mobilizing these total assets to acquire income as interest. Higher the ratio higher will be the income as interest.

**Table: 4.11**  
**Total Interest Earned to Total Working Fund**

(Ratio in %)

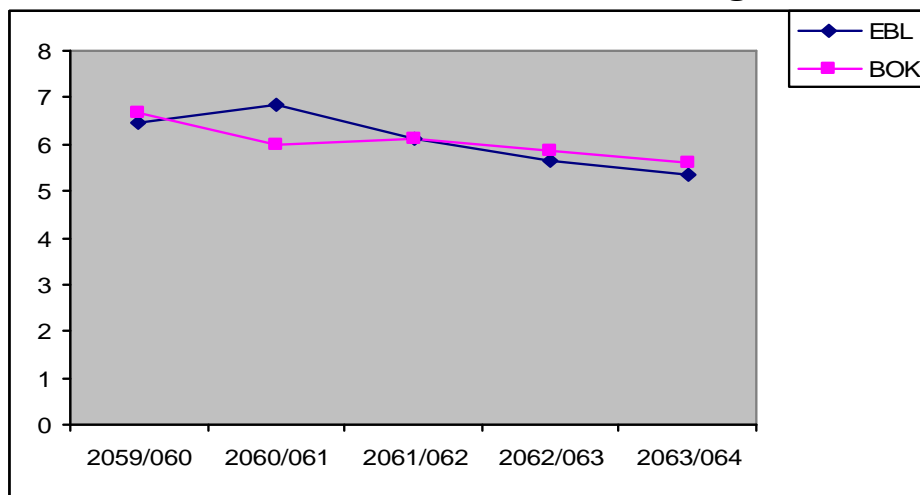
| Years          | EBL         | BOK          |
|----------------|-------------|--------------|
| 2059/060       | 6.46        | 6.67         |
| 2060/061       | 6.84        | 5.97         |
| 2061/062       | 6.13        | 6.12         |
| 2062/063       | 5.66        | 5.85         |
| 2063/064       | 5.34        | 5.62         |
| <b>Average</b> | <b>6.09</b> | <b>17.14</b> |
| S.D            | 0.60        | 0.39         |
| C.V            | 9.85        | 2.28         |

Source: Annex III & IV

From the table 4.11 it is depicted that total interest earned to total working fund ratio of EBL is 6.09 percent in an average in the period under study whereas that of BOK is 17.14 percent in an average.

The average ratio of EBL is lower than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 6.84 percent in FY 2060/061 for EBL, 6.69 percent in FY 2059/060 for BOK. The S.D is 0.60 and 0.39 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 9.85 and 2.28 respectively. These facts are shown in the figure 4.11 to make easier to understand.

**Figure: 4.11**  
**Total Interest Earned to Total Working Fund**



#### **4.3.4 Total Interest paid to Total Working Fund**

This ratio measures the percentage of total interest expenses against total working fund. A high ratio indicates higher interest expenses on total working fund and vice-versa.

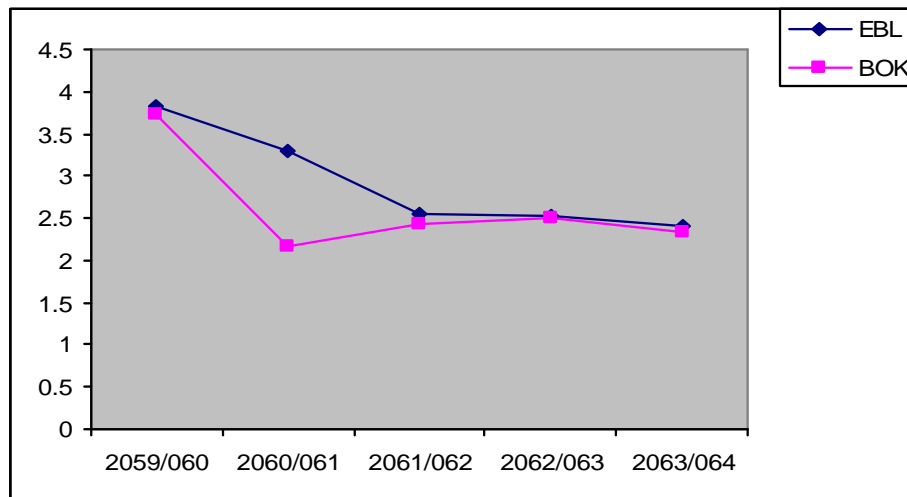
**Table: 4.12**  
**Total Interest paid to Total Working Fund**  
**(Ratio in %)**

| <b>Years</b>   | <b>EBL</b>  | <b>BOK</b>  |
|----------------|-------------|-------------|
| 2059/060       | 3.82        | 3.72        |
| 2060/061       | 3.29        | 2.17        |
| 2061/062       | 2.55        | 2.42        |
| 2062/063       | 2.52        | 2.51        |
| 2063/064       | 2.41        | 2.33        |
| <b>Average</b> | <b>2.92</b> | <b>7.05</b> |
| S.D            | 0.61        | 0.62        |
| C.V            | 20.89       | 8.79        |

Source: Annex III & IV

From the table 4.12 it is depicted that total interest paid to total working fund ratio of EBL is 2.92 percent in an average in the period under study whereas that of BOK is 7.05 percent in an average. The average ratio of EBL is lower than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 3.82 percent in FY 2059/060 for EBL, 3.72 percent in FY 2059/060 for BOK. The S.D is 0.61 and 0.62 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 20.89 and 8.79 respectively. These facts are shown in the figure 4.12 to make easier to understand.

**Figure: 4.12**  
**Total Interest paid to Total Working Fund**



#### 4.4 Risk Ratios

This ratio checks the degree of risk involved in the various financial operations. For this study, following risk ratios are used to analyze and interprets the financial data and investment policy.

##### 4.4.1 Liquidity Risk Ratio

The liquidity risk of the bank defines its liquidity need for deposit. This ratio is low if funds are kept idle as cash and bank balance but this reduces profitability. Higher liquidity ratio indicates less profitable return and vice-versa. This ratio is calculated by dividing cash and bank balance to total deposit.

**Table: 4.13**  
**Liquidity Risk Ratio**

**(Ratio in %)**

| <b>Years</b>   | <b>EBL</b>   | <b>BOK</b>  |
|----------------|--------------|-------------|
| 2059/060       | 17.02        | 11.23       |
| 2060/061       | 7.83         | 10.11       |
| 2061/062       | 10.39        | 8.28        |
| 2062/063       | 11.17        | 6.95        |
| 2063/064       | 13.15        | 10.62       |
| <b>Average</b> | <b>11.91</b> | <b>9.44</b> |
| S.D            | 0.43         | 1.77        |
| C.V            | 3.61         | 18.75       |

Source: Annex III & IV

From the table 4.13 it is depicted that liquidity risk ratio of EBL is 11.91 percent in an average in the period under study whereas that of BOK is 9.44 percent in an average. The average ratio of EBL is higher than BOK. The ratios of banks are found to be in fluctuating. The higher ratio is 17.02 percent in FY 2059/060 for EBL, 11.23 percent in FY 2059/060 for BOK. The S.D is 0.43 and 1.77 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 3.61 and 18.75 respectively. These facts are shown in the figure 4.13 to make easier to understand.

**Figure: 4.13  
Liquidity Risk Ratio**



#### 4.4.2 Credit Risk Ratio

Generally credit risk ratio shows the proportion of non performing assets in the total investment plus loan and advances of a bank.

**Table: 4.14  
Credit Risk Ratio**

| Years          | (Ratio in %) |              |
|----------------|--------------|--------------|
|                | EBL          | BOK          |
| 2059/060       | 81.50        | 85.41        |
| 2060/061       | 87.63        | 85.55        |
| 2061/062       | 83.08        | 86.65        |
| 2062/063       | 87.73        | 86.61        |
| 2063/064       | 87.01        | 85.05        |
| <b>Average</b> | <b>85.39</b> | <b>85.85</b> |
| S.D            | 2.90         | 0.73         |
| C.V            | 3.40         | 0.85         |

Source: Annex III & IV

From the table 4.14 it is depicted that credit risk ratio of EBL is 85.39 percent in an average in the period under study whereas that of BOK is 85.85 percent in an average. The higher ratio is 87.73 percent in FY 2062/063 for EBL, 86.65 percent in FY 2061/062 for BOK. The S.D is 2.90

and 0.73 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 3.40 and 0.85 respectively. These facts are shown in the figure 4.14 to make easier to understand.

**Figure: 4.14  
Credit Risk Ratio**



#### 4.5 Statistical Tools

The statistical analysis includes various methods of measuring relationship between two or more than tow variables as well as their significance. In this study, different relationships have been calculated with the help of Karl person’s formula of correlation co efficient and calculating PE for measuring significant correlation.

##### 4.5.1 Coefficient of Correlation between Deposit and Loan and Advance

The relationship between deposit and loan and advance is evaluated in order to measure deposit mobilization of the banks. The following result is obtained for selected banks.

**Table 4.15.1**

##### **Correlation Coefficient between Deposit and Loan and Advance**

| <b>Banks</b> | r     | P.E. | 6P.E | Significance/Insignificance |
|--------------|-------|------|------|-----------------------------|
| EBL          | 0.997 | 0.02 | 0.12 | Significant                 |
| BOK          | 0.96  | 0.02 | 0.12 | Significant                 |

Source: Annex V & VI

The calculation of correlation coefficient between deposit and loan and advance is 0.997, shows the positive correlation for EBL. The P.E is 0.02 and the 6P.E is 0.12. The correlation is significant due to the value “r” which is more than six times the value of PE, which is 0.997.

At the same time, BOK has 0.96 of correlation coefficient. The P.E is 0.02 and the 6 P.E is 0.12, which shows the positive correlation for BOK. The correlation is significant due to the “r” which is more than six times the value of P.E that is 0.96.

#### **4.5.2 Coefficient of Correlation between Deposit and Total Investment**

The relationship between deposit and total investment is evaluated in order to measure deposit mobilization of the banks. The following result is obtained for selected banks.

**Table 4.15.2**

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

| <b>Banks</b> | r     | P.E.  | 6P.E  | Significance/Insignificance |
|--------------|-------|-------|-------|-----------------------------|
| EBL          | 0.834 | 0.092 | 0.552 | Significant                 |
| BOK          | 0.387 | 0.256 | 1.536 | Insignificant               |

Source: Annex VII & VIII

The calculation of correlation coefficient between deposit and total investment is 0.834, shows the positive correlation for EBL. The P.E is 0.092 and the 6P.E is 0.552. The correlation is significant due to the value “r” which is more than six times the value of PE, which is 0.834.

At the same time, BOK has 0.387 of correlation coefficient. The P.E is 0.256 and the 6 P.E is 1.536, which shows the positive correlation for BOK. The correlation is insignificant due to the “r” which is less than six times the value of P.E that is 0.387.

#### **4.5 Major Findings**

1. The cash and bank balance to total deposit ratio of EBL is 11.91 percent in an average in the period under study whereas that of BOK is 9.44 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 3.43 and 1.77 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 28.80 and 18.75 respectively.
2. The cash and bank balance to total current assets ratio of EBL is 87.70 percent in an average in the period under study whereas that of BOK is 75.57 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 16 and 15.28 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 18.24 and 20.22 respectively.
3. The investment on government securities to current assets ratio of EBL is 197.58 percent in an average in the period under study whereas that of BOK is 196.69 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 68.81 and 28.89 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 34.83 and 14.69 respectively.
4. The loan and advance ratio of EBL is 7347 percent in an average in the period under study whereas that of BOK is 71.62 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 1.99 and 3.75 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 2.71 and 5.24 respectively.
5. The total investment to total deposit ratio of EBL is 26.97 percent in an average in the period under study whereas that of BOK is 29.37 percent in an average. The ratios of banks are found to be in fluctuating. The

S.D is 4.20 and 3.25 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 15.57 and 11.07 respectively.

6. The loan and advances to total working fund ratio of EBL is 62.46 percent in an average in the period under study whereas that of BOK is 60.88 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 1.78 and 2.20 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 2.86 and 3.61 respectively.
7. The investment on government securities to total working fund ratio of EBL is 21.52 percent in an average in the period under study whereas that of BOK is 24.94 percent in an average. The ratios of banks are found to be in fluctuating.. The S.D is 2.91 and 3.25 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 13.52 and 13.03 respectively.
8. The return on loan and advance of EBL is 2.23 percent in an average in the period under study whereas that of BOK is 2.40 percent in an average. The ratios of EBL is found to be in fluctuating but BOK is found to be increasing but which is stable in FY 2063/064. The S.D is 0.21 and 0.41 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 9.42 and 17.08 respectively.
9. The return on total working fund of EBL is 1.39 percent in an average in the period under study whereas that of BOK is 4.01 percent in an average. The ratio of EBL is found to be in fluctuating but BOK is found to be in increasing trend. The S.D is 0.13 and 0.27 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 9.35 and 6.73 respectively.

10. The total interest earned to total working fund ratio of EBL is 6.09 percent in an average in the period under study whereas that of BOK is 17.14 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 0.60 and 0.39 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 9.85 and 2.28 respectively.
11. The total interest paid to total working fund ratio of EBL is 2.92 percent in an average in the period under study whereas that of BOK is 7.05 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 0.61 and 0.62 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 20.89 and 8.79 respectively.
12. The liquidity risk ratio of EBL is 11.91 percent in an average in the period under study whereas that of BOK is 9.44 percent in an average. The ratios of banks are found to be in fluctuating. The S.D is 0.43 and 1.77 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 3.61 and 18.75 respectively.
13. The credit risk ratio of EBL is 85.39 percent in an average in the period under study whereas that of BOK is 85.85 percent in an average. The S.D is 2.90 and 0.73 for EBL and BOK respectively. As well as the C.V. for EBL and BOK are 3.40 and 0.85 respectively.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary**

In the last chapter of this study is summary, conclusion and recommendations have discussed and explored the facts and matters required for various parts of the study. Having completed the basic analysis required for the study, the researcher must point out the mistakes and error and also correct them by giving suitable suggestions for further improvement. Therefore, this summarized and recommended tasks of the researcher of the study would be meaningful to the top management of the bank to initiate the action and achieve the desired result.

Basically, the entire research work has focused on the comparative study on deposit mobilization of commercial banks. For the study, four commercial banks i.e. Everest Bank Ltd. (EBL) and Bank of Kathmandu Ltd. (BOK) are taken as sample and analyzed their deposit mobilization. Five fiscal years secondary data, i.e. from the year 2059/060 to 2063/064, are taken for the study. The general objective of this study is to analyze the practice of deposit mobilization of the commercial banks. To meet the general objective, the other specific objectives are formulated as follows.

- ) To analyze the relationship between deposits and loans & advances.
- ) The effectiveness of deposit mobilization of commercial banks.
- ) To examine how far the interest rates of deposits have positive relationship with the deposit collection of commercial banks.
- ) To see the impact of an interest rates of loan on the credit extended by commercial banks.
- ) To provide suggestions and recommendations to the concerned for the further improvement.

To meet the research objectives this study was divided into five chapters. First is introduction chapter, which includes general background, focus of the study, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

Second chapter deals with review of available literatures in the field of the study being conducted. This includes review of the theories of the concerned topic, review of books and review of various empirical studies.

Third chapter explains the research methodology employed to conduct the study and tools and techniques used in analysis of the data as well. This chapter includes research design, source of data, population and samples, methods of data analysis and various financial and statistical tools.

Fourth chapter is devoted to the presentation, analysis and interpretation of the study through definite course of research methodology. In this chapter, all the data are compiled, processed and tabulated as per necessity and different tables; figures and diagrams are presented to make the study easier.

Fifth and the last chapter is conclusive and suggestive chapter. It includes summary of the study, conclusion of the main finding and recommendation for further improvement.

This study suffers from different limitations; it considers four commercial banks as samples out of total commercial banks in Nepal. Time and resources are the constraints of the study. Therefore the study may not be generalized in all case and accuracy depends upon the data collected and provided by the organization.

## **5.2 Conclusion**

From the analysis of liquidity ratio, the liquidity position of EBL is comparatively better than BOK. EBL has the highest cash and bank balance to total deposit and to current assets ratio.

The investment on government securities to current assets ratio of EBL is 197.58 percent in average; BOK has 196.69 percent in an average. In the beginning of the study period EBL and BOK both have increasing but they are fluctuating after that. EBL has highly fluctuating in last four years but it is slightly improve in last year only.

Considering asset management aspect of these banks, EBL is relatively successful to invest in productive sector and has mobilized its collected deposits to provide loan and advances for the purpose of earning profit. BOK is weak in investing its collected deposits in comparison to EBL. In the study period, BOK has in fluctuating trend. It is highly decrease in first year but it slightly increase in next year then again it is decreased.

BOK appears to be more successful to earn profit on loan and advances than EBL. The average ratio of return on total working fund indicates that working fund of EBL is well managed and efficiently utilized. But it was not able to receive high interest on its total working fund in comparison with BOK. BOK is in better position from the viewpoint of interest expenses. It seems to be successful to collect its working fund from less expensive sources in comparison to EBL, EBL can not able to pay interest with comparison of BOK.

Correlation coefficient between deposits and loan and advances indicates the positive relationship between the variables of EBL and BOK. In most of the cases it has been found that investment decision depends upon the deposits and only few decisions depend upon other variables. By

considering the probable error, the value of coefficient of determination of all banks is greater than that of 6 P.E. so it can be concluded that the value of correlation coefficient is significant i.e. there is significant relationship between total deposits and loan and advances for EBL. As well as BOK has also the positive correlation and it is significant.

Correlation coefficient between deposit and total investment of EBL and BOK elucidates the positive relationship. Most of the investment decision of these banks depends upon deposits and only few decisions are depend upon other variables. Moreover by considering the probable error, the value of coefficient of determination of EBL is higher than 6 P.E. so it is significant but there is significant relationship between deposits and total investment for BOK but there is positive relationship between them.

### **5.3 Recommendations**

The liquidity position of a bank may be affected by internal as well as external factors. The affecting factors may be interest rates, supply and demand position of loan and advances as well as savings, investment situations, central banks directives, the lending policies, capability of management, strategic planning and funds flow situations. The ratio of cash and bank balance to total deposit and current assets of EBL is higher than that of BOK. It means EBL has higher cash and bank balance than BOK and it indicates EBL has higher idle cash and bank balance. It may decrease profit of bank. EBL is recommended to mobilize its idle cash and bank balance in profitable sector as loan and advances.

The main source of commercial banks is collecting deposit from public who don't need that fund recently. So, it is recommended to collect more amounts as deposits through large variety of deposits schemes and facilities, like cumulative deposit scheme, prize bonds scheme, gift cheques scheme, recurring deposit scheme (life insurance), monthly interest scheme,

house building scheme, direct finance housing scheme, education loan scheme and many others.

Investment on those securities issued by government i.e. treasury bills, development bonds, saving certificates are free of risk and highly liquid in nature and such securities yield the low interest rates of a particular maturity due to lowest risk in future, it is more better in regard to safety than other means of investment. So, EBL is strongly recommended to give more importance to invest more funds in government securities instead of keeping them idle with this proverb “something is better than nothing”

As a private sector, commercial banks can not keep their eyes closed from the profit motive. They should be careful in increasing profit motive. They should be careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and all its customers. EBL’s profitability position is worst than that of BOK. So, EBL is strongly recommended to utilize risky assets and shareholders fund to gain highest profit margin. Similarly, it should reduce its expenses and should try to collect cheap fund being more profitable.

BOK is also recommended to mobilize the deposit to make profitability position in the market. It should reduce its unnecessary expenses and cost to maximize the profit margin. These banks are strongly recommended to give more importance to invest more funds in government securities instead of keeping them idle.

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**ANNEX I**  
**Everest Bank Limited (EBL)**

**(Rs. In Million)**

| FY       | Total Deposit | Cash & Bank | Investment in Govt. Securities | Investment on Shares & Debentures | Current Assets | Total Assets | Total Investment | Loan & Advance | Total Working Fund | Net Profit | Total Interest Earned | Total Interest Paid |
|----------|---------------|-------------|--------------------------------|-----------------------------------|----------------|--------------|------------------|----------------|--------------------|------------|-----------------------|---------------------|
| 2059/060 | 6694963060    | 1139568776  | 1599350560                     | 79164000                          | 1131568776     | 8052209125   | 1653977060       | 4908460647     | 8052209125         | 94180428   | 520173568             | 307638902           |
| 2060/061 | 8063902086    | 631804931   | 2466428694                     | 91439000                          | 819249931      | 9608570861   | 2535657694       | 5884122609     | 9608570861         | 143566683  | 657249073             | 316366263           |
| 2061/062 | 10097690989   | 1049259208  | 2100289702                     | 245967000                         | 1619259208     | 11732516418  | 2128931852       | 7618671476     | 11732516418        | 168214611  | 719297855             | 299565269           |
| 2062/063 | 13902444988   | 1552967494  | 3548616968                     | 246060802                         | 1619927494     | 15959284687  | 4200515220       | 9801307676     | 15959284687        | 237290936  | 903411137             | 401397351           |
| 2063/064 | 18186253441   | 2391420594  | 4704632426                     | 1109978299                        | 2391420494     | 21432574300  | 4984314586       | 13664081664    | 21432574300        | 296409281  | 1144408308            | 517166241           |

**ANNEX II**  
**Bank of Kathmandu Limited (BOK)**

**(Rs. In Million)**

| FY       | Total Deposit | Cash & Bank | Investment in Govt. Securities | Investment on Shares & Debentures | Current Assets | Total Assets | Total Investment | Loan & Advance | Total Working Fund | Net Profit | Total Interest Earned | Total Interest Paid |
|----------|---------------|-------------|--------------------------------|-----------------------------------|----------------|--------------|------------------|----------------|--------------------|------------|-----------------------|---------------------|
| 2059/060 | 6170711570    | 692712110   | 1510705678                     | 225059000                         | 723062410      | 7444816949   | 1816148858       | 4542700102     | 7444816949         | 82127662   | 496808827             | 276705159           |
| 2060/061 | 7741645424    | 782882941   | 2371775077                     | 284434000                         | 1055203941     | 9496344672   | 2477409627       | 5646698444     | 9496344672         | 127473189  | 567097226             | 206297050           |
| 2061/062 | 8942748598    | 740520480   | 2146619488                     | 680124627                         | 1069394337     | 985730464    | 2598253410       | 5942579472     | 985730464          | 139529721  | 607095662             | 241639164           |
| 2062/063 | 10485359239   | 728697092   | 2658369057                     | 682853504                         | 1322744471     | 12278329302  | 3374711966       | 7259082579     | 12278329302        | 202440627  | 718121378             | 308155647           |
| 2063/064 | 12388927294   | 1315903941  | 2332041251                     | 1034821267                        | 1575182569     | 14570798804  | 2992433866       | 9399327617     | 14570798804        | 262386980  | 819003947             | 339181011           |

**ANNEX III**  
**Everest Bank Limited (EBL)**

**(Ratio in %)**

| FY       | Cash & Bank to TD | Cash & Bank to CA | Inv on Gov. Securities to CA | Loan & Advance to TD | Total Investment to TD | Loan & Advance to TWF | Inv on Gov. Securities to TWF | Inv. on Share & Debenture to TWF | Net Profit to Loan & Advance | Net Profit to TWF | Total Interest Earned to TWF | Total Interest Paid to TWF |
|----------|-------------------|-------------------|------------------------------|----------------------|------------------------|-----------------------|-------------------------------|----------------------------------|------------------------------|-------------------|------------------------------|----------------------------|
| 2059/060 | 17.02             | 100.71            | 141.34                       | 73.32                | 24.70                  | 60.96                 | 19.86                         | 0.98                             | 1.92                         | 1.17              | 6.46                         | 3.82                       |
| 2060/061 | 7.83              | 77.12             | 301.06                       | 72.97                | 31.44                  | 61.24                 | 25.67                         | 0.95                             | 2.44                         | 1.49              | 6.84                         | 3.29                       |
| 2061/062 | 10.39             | 64.80             | 129.71                       | 75.45                | 21.08                  | 64.94                 | 17.90                         | 2.10                             | 2.21                         | 1.43              | 6.13                         | 2.55                       |
| 2062/063 | 11.17             | 95.87             | 219.06                       | 70.50                | 30.21                  | 61.41                 | 22.24                         | 1.54                             | 2.42                         | 1.49              | 5.66                         | 2.52                       |
| 2063/064 | 13.15             | 100.00            | 196.73                       | 75.13                | 27.41                  | 63.75                 | 21.95                         | 5.18                             | 2.17                         | 1.38              | 5.34                         | 2.41                       |

**ANNEX IV**  
**Bank of Kathmandu Limited (BOK)**

**(Ratio in %)**

| FY       | Cash & Bank to TD | Cash & Bank to CA | Inv on Gov. Securities to CA | Loan & Advance to TD | Total Investment to TD | Loan & Advance to TWF | Inv on Gov. Securities to TWF | Inv. on Share & Debenture to TWF | Net Profit to Loan & Advance | Net Profit to TWF | Total Interest Earned to TWF | Total Interest Paid to TWF |
|----------|-------------------|-------------------|------------------------------|----------------------|------------------------|-----------------------|-------------------------------|----------------------------------|------------------------------|-------------------|------------------------------|----------------------------|
| 2059/060 | 11.23             | 95.80             | 208.93                       | 73.62                | 29.43                  | 61.02                 | 20.29                         | 3.02                             | 1.81                         | 1.10              | 6.67                         | 3.72                       |
| 2060/061 | 10.11             | 74.19             | 224.77                       | 72.94                | 32.00                  | 59.46                 | 24.98                         | 3.00                             | 2.26                         | 1.34              | 5.97                         | 2.17                       |
| 2061/062 | 8.28              | 69.25             | 200.73                       | 66.45                | 29.05                  | 60.29                 | 21.77                         | 6.90                             | 2.35                         | 1.42              | 6.12                         | 2.42                       |
| 2062/063 | 6.95              | 55.09             | 200.97                       | 69.23                | 32.18                  | 59.12                 | 21.65                         | 5.56                             | 2.79                         | 1.65              | 5.85                         | 2.51                       |
| 2063/064 | 10.62             | 83.54             | 148.05                       | 75.87                | 24.15                  | 64.51                 | 16.00                         | 7.10                             | 2.79                         | 1.80              | 5.62                         | 2.33                       |

**ANNEX V**  
**Coefficient of Correlation between Deposit and Loan and Advances**  
**of EBL**

| FY       | Deposit<br>(x) | Loan and<br>Advance (y) | A= 1<br>dx= (x-<br>A) | A= 1<br>dy= (y-<br>A) | dx <sup>2</sup> | dy <sup>2</sup> | dx<br>.dy |
|----------|----------------|-------------------------|-----------------------|-----------------------|-----------------|-----------------|-----------|
| 2059/060 | 0.67           | 0.49                    | -0.33                 | -0.51                 | 0.11            | 0.26            | 0.17      |
| 2060/061 | 0.81           | 0.59                    | -0.19                 | -0.41                 | 0.04            | 0.17            | 0.08      |
| 2061/062 | 1.01           | 0.76                    | 0.01                  | -0.24                 | 0.00            | 0.06            | 0.00      |
| 2062/063 | 1.39           | 0.98                    | 0.39                  | -0.02                 | 0.15            | 0.00            | -0.01     |
| 2063/064 | 1.82           | 1.37                    | 0.82                  | 0.37                  | 0.67            | 0.13            | 0.30      |
| Total    | 5.69           | 4.19                    | 0.69                  | -0.81                 | 0.97            | 0.62            | 0.54      |

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n} = \frac{5.69}{5} = 1.138$$

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$r = \frac{\sum dx.dy - \frac{\sum dx. \sum dy}{n}}{\sqrt{\sum dx^2 - \frac{(\sum dx)^2}{n}} \sqrt{\sum dy^2 - \frac{(\sum dy)^2}{n}}}$$

$$= \frac{0.54 - \frac{0.69 \times (-0.81)}{5}}{\sqrt{0.97 - \frac{(0.69)^2}{5}} \times \sqrt{0.62 - \frac{(-0.81)^2}{5}}}$$

$$= 0.997$$

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

$$= 0.6745 \times \frac{1-(0.997)^2}{\sqrt{5}}$$

$$= 00.195$$

**ANNEX VI**  
**Coefficient of Correlation between Deposit and Loan and Advances**  
**of BOK**

| FY       | Deposit<br>(x) | Loan and<br>Advance (y) | A= 1<br>dx= (x-<br>A) | A= 1<br>dy= (y-<br>A) | dx <sup>2</sup> | dy <sup>2</sup> | dx<br>.dy |
|----------|----------------|-------------------------|-----------------------|-----------------------|-----------------|-----------------|-----------|
| 2059/060 | 0.62           | 0.45                    | -0.38                 | -0.55                 | 0.15            | 0.30            | 0.21      |
| 2060/061 | 0.77           | 0.56                    | -0.23                 | -0.44                 | 0.05            | 0.19            | 0.10      |
| 2061/062 | 0.89           | 0.59                    | -0.11                 | -0.41                 | 0.01            | 0.16            | 0.04      |
| 2062/063 | 1.05           | 0.73                    | 0.05                  | -0.27                 | 0.00            | 0.08            | -0.01     |
| 2063/064 | 1.24           | 0.94                    | 0.24                  | -0.06                 | 0.06            | 0.00            | -0.01     |
| Total    | 4.57           | 3.28                    | -0.43                 | -1.72                 | 0.27            | 0.73            | 0.32      |

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n} = \frac{4.57}{5} = 0.914$$

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$r = \frac{\sum dx.dy - \frac{\sum dx. \sum dy}{n}}{\sqrt{\sum dx^2 - \frac{(\sum dx)^2}{n}} \sqrt{\sum dy^2 - \frac{(\sum dy)^2}{n}}}$$

$$= \frac{0.32 - \frac{(-0.43) \times (-1.72)}{5}}{\sqrt{0.27 - \frac{(-0.43)^2}{5}} \times \sqrt{0.73 - \frac{(-1.72)^2}{5}}}$$

$$= 0.96$$

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

$$= 0.6745 \times \frac{1-(0.96)^2}{\sqrt{5}}$$

$$= 0.02$$

## ANNEX VII

### Coefficient of Correlation between Deposit and Total Investment of EBL

| FY       | Deposit (x) | Total Investment (y) | A= 250<br>dx= (x-A) | A= 115<br>dy= (y-A) | dx <sup>2</sup> | dy <sup>2</sup> | dx .dy |
|----------|-------------|----------------------|---------------------|---------------------|-----------------|-----------------|--------|
| 2059/060 | 0.67        | 0.17                 | -0.33               | -0.83               | 0.11            | 0.70            | 0.28   |
| 2060/061 | 0.81        | 0.25                 | -0.19               | -0.75               | 0.04            | 0.56            | 0.14   |
| 2061/062 | 1.01        | 0.21                 | 0.01                | -0.79               | 0.00            | 0.62            | -0.01  |
| 2062/063 | 1.39        | 0.42                 | 0.39                | -0.58               | 0.15            | 0.34            | -0.23  |
| 2063/064 | 1.82        | 0.50                 | 0.82                | -0.50               | 0.67            | 0.25            | -0.41  |
| Total    | 5.69        | 1.55                 | 0.69                | -3.45               | 0.97            | 2.46            | -0.22  |

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n} = \frac{5.69}{5} = 1.138$$

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$r = \frac{\sum dx.dy - \frac{\sum dx \cdot \sum dy}{n}}{\sqrt{\sum dx^2 - \frac{(\sum dx)^2}{n}} \sqrt{\sum dy^2 - \frac{(\sum dy)^2}{n}}}$$

$$= \frac{-0.22 - \frac{(0.69) \times (-3.45)}{5}}{\sqrt{0.97 - \frac{(0.69)^2}{5}} \times \sqrt{2.46 - \frac{(-3.45)^2}{5}}}$$

$$= 0.834$$

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

$$= 0.6745 \times \frac{1-(0.834)^2}{\sqrt{5}}$$

$$= 0.092$$

### ANNEX VIII

#### Coefficient of Correlation between Deposit and Total Investment of BOK

| FY       | Deposit<br>(x) | Total<br>Investment<br>(y) | A= 250<br>dx= (x-<br>A) | A= 115<br>dy= (y-<br>A) | dx <sup>2</sup> | dy <sup>2</sup> | dx<br>.dy |
|----------|----------------|----------------------------|-------------------------|-------------------------|-----------------|-----------------|-----------|
| 2059/060 | 0.62           | 0.18                       | -0.38                   | -0.82                   | 0.15            | 0.67            | 0.31      |
| 2060/061 | 0.77           | 0.25                       | -0.23                   | -0.75                   | 0.05            | 0.57            | 0.17      |
| 2061/062 | 0.89           | 0.26                       | -0.11                   | -0.74                   | 0.01            | 0.55            | 0.08      |
| 2062/063 | 1.05           | 0.34                       | 0.05                    | -0.66                   | 0.00            | 0.44            | -0.03     |
| 2063/064 | 1.24           | 0.30                       | 0.24                    | -0.70                   | 0.06            | 0.49            | -0.17     |
| Total    | 4.57           | 1.33                       | -0.43                   | -3.67                   | 0.27            | 2.71            | 0.36      |

Arithmetic Mean (AM) is given by,

$$\bar{X} = \frac{\sum X}{n} = \frac{4.57}{5} = 0.914$$

Karl Pearson's Correlation coefficient(r) can be obtained as:

$$r = \frac{\sum dx.dy - \frac{\sum dx \cdot \sum dy}{n}}{\sqrt{\sum dx^2 - \frac{(\sum dx)^2}{n}} \sqrt{\sum dy^2 - \frac{(\sum dy)^2}{n}}}$$

$$= \frac{0.36 - \frac{(-0.43) \times (-0.67)}{5}}{\sqrt{0.27 - \frac{(-0.43)^2}{5}} \times \sqrt{2.71 - \frac{(-0.67)^2}{5}}}$$

$$= 0.387$$

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

$$= 0.6745 \times \frac{1-(0.387)^2}{\sqrt{5}}$$

$$= 0.256$$