# CHAPTER ONE INTRODUCTION

#### **1.1 General Background of the study**

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 a rte 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.

The origin of the word "Bank" is linked to the Latin word "bancus", Italian word "banca", and French word "banquet" all of which mean a bench.

Money lenders in the streets of major cities of Europe used benches for acceptance and payment of valuables and coins. And when they were unable to meet their liabilities, the depositors used to break their benches, the term "bankruptcy" is derived thereof. Since there is no unanimity, and it is difficult to say exactly whether the term "bank" has been derived from "bancus", "banca", or German word "bank" meaning Joint Stock Company. Despite strong criticism from the church regarding charging interest, modern banking showed 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 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 (1609) was very popular. The Bank of Hindustan established in 1790 is regarded as the first bank of India. Similarly, Bank of England (1694) and Nepal Bank Limited (1994) is regarded as the first bank of England and Nepal respectively.

A bank is an institution that provides financial service, particularly taking deposits and extending credit. Currently the term bank is generally understood as an institution that holds a banking license. Banking licenses are granted by bank regulatory authorities and provide rights to conduct the most fundamental banking services such as accepting deposits and making loans. There are also financial institutions that provide certain banking services without meeting the legal definition of a bank, so-called non-banking financial company. Banks nowadays do a large numbers of financial transactions while financial institutions are authorized to do limited transactions only. Hence, a bank can be defined as the financial department

store which renders a host of financial services besides taking deposits and giving loans. Some definitions of a bank are as follows:

According to Kent, "A bank is an organization whose principal operations are concerned with the accumulation of the temporarily idle money of the general public for the purpose of advancing to other for expenditure."

As per Banking Regulation Act of India- "Banking means the accepting for the purpose of lending or investment of deposit of money from the public repayable on demand or otherwise, and withdrawal by cheque, draft, or otherwise."(**B. Sharma, P.2, 2011**)

Capital formation is one of the important factors in economic development. The capital formation leads to increase in the size of national output, income and employment, solving the problem of inflation, balance of payment and making the economy free from foreign debts burden. Domestic capital formation helps in making a country self-sustainable. According to classical economists, one of the main factors which helped capital formation is the accumulation of capital, profit made by the business community, constituted the major part of savings of the community, and that savings were assumed to be invested. They thought capital formation indeed plays a decisive role in determining the level and growth of national income, and hence economic development. It seems unquestionable that the insufficient capital accumulation is the most serious limiting factor in underdeveloped countries. In the views of many economists, capital occupies the central and strategic position in the process of economic development of an underdeveloped economy, which lies in a rapid expansion of the rate of its capital investment so that it attains a rate of growth of output which exceeds the rate of growth of population by the significant margin. Only with such a rate of capital investment will the living standard begin to improve in a developing country. In developing countries, the rate of saving is quite low and existing institutions are half successful in mobilizing such saving as most people have incomes so low that vertically all current income must be spent in maintaining a subsistence level of consumptions. (Higgins, 1968:804)

Deposit mobilization is one of the essential tools for the economic development of an underdeveloped and developing countries. The developed countries' deposit collection for capital formation is easy due to developed capital market in every sector. In contrast, in the developing countries like Nepal, low national income, low per capital income, lack of technical knowledge, vicious cycle of poverty, lack of irrigation and fertilizer, pressure of population increase, geographical conditions etc. are the main problems, and therefore the effective and efficient deposits mobilization could be a very significant tool for sound economic development. Banking thus increases the supply of funds by collecting lodgments from public and then combining them with its capital and reserve fund. Their lodgments are accepted as current, saving and fixed accounts. Overall, however they fall into demand and time deposits. The former payable as and when demand is made and later after the expiry of stated period. (Nigam, B.M.L. 1987:25)

For the development of any country, first it is required to have enough capital. Nepal lacks the adequate capital for its development planning. Due to this reason so many development planning are in pending. If there is enough capital available, it can invest into the profitable project and contribute significantly in the National GDP. Investment promotes economic growth and contributes to a nation's wealth. When people deposit money in

a saving account in a bank for example, the bank must invest by lending the funds for various business companies. These firms in return, may invest the money in new factories and equipments to increase their production. In addition borrowing from the banks, most issue 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 capital incentive project as the construction of dams, roads and schools. All such investments by individuals, business and government involve an important sacrifice of income to get an expected future benefits. As a result, investment raises a nation's standard of living. (The World Bank, 1966: 232)

Commercial banks are the hearts of our economic system since they hold the deposit of millions of persons, government and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms and government. Thus, their task is to provide the collecting point for saving of relatively small average amount from a large number of individual sources and invest them into a productive and needed sector of the country so as to develop the nation. The importance of commercial banks may be measured in number of ways. Banks are still the principal means of making payments through the checking accounts, credit cards and electronic transfer services they offer. In the same way commercial banks are important because of their ability to create money from excess reserves made available from the public's deposits. Commercial banks have today gained paramount trust in the public. Their functions are not confined to just accepting deposits and giving loans but they also render a wide range of services covering different strata of the society. These include providing legal and exploitation free services, financial

intermediation and capital creation, fund transfer, trade promotion, safety of valuables, employment, and collection of cheques, issue of credit cards, debit cards, travelers' cheques, smart cards, and payments of utilities.

The financial sector of Nepal is composed of banking sector and nonbanking sector. Banking sector comprises Nepal Rastra Bank (NRB) and commercial banks. Nepal's formal financial system began in 1937 with the establishment of the Nepal Bank Limited which was the first commercial bank in the country. Later another commercial bank, The Rashtriya Banijya Bank, was set up in 1966. Over time, other banking institutions were set up; however, foreign banks were allowed to operate only in 1984, as part of a more open policy to attract modern technology and management into the banking sector. Thus financial liberalization started with the establishment of the first joint venture bank, Nepal Arab Bank Ltd., after which a number of venture banks were launched. (**B. Sharma, P.4, 2011**)

NRB (2008) stated that the functioning of the banks can be classified into Class A, Class B, Class C and so on. Class "A" includes 27 licensed commercial banks that can be government-owned, privately-owned or jointly owned by government and the private sector. They collect deposits from public, invest in loans and overdrafts, sell and purchase bills, open letter of credit for export and import, provide bank guarantee, deal in foreign exchange and invest in stock and bonds. Class "B" includes 58 development banks. They take high risk by providing loans for venture capital. They provide loans to industry, agriculture, import-export, cottage and small industries, cooperatives. Further, finance companies fall under "C" class with 79 companies operating to provide service. They accept fixed and saving deposits with higher rate of interest. They provide loans to industries

and individuals and charge higher rate of interest. Micro Credit Development Banks comes under "D" class with 12 banks. Moreover, 16 savings and credit co-operatives (limited banking) and 46 non-government organization (NGOs) are also actively participating in its own way.

The number of banks as per its class is given below:

# Table No.: 1.1Number of Banks and Non-bank Financial Institutions

<b>Regulator for Banking Activities</b>	Nepal Rastra Bank
Class A: Commercial Banks	32
Class B: Development Banks	87
Class C: Finance Companies	79
Class D: Micro Credit Development Banks	21

Source: Nepal Rastra Bank Report as of Mid-June 2012

Thus commercial banks are important parts of the financial sector of Nepal. Among these commercial banks Nabil Bank Limited, Himalayan Bank Limited and Everest Bank Limited are prominent and popular private commercial joint venture banks of Nepal.

# **1.2 Brief Profiles of the Selected Banks**

# 1.2.1 Nabil Bank Limited

Nabil Bank was established in 1984 in joint venture with Dubai Bank with a view and objectives of extending international standard modern, professionalized and efficient banking services to various segments of the society.

Nabil has 52 networks and branches that spread out around the nation with the objective of providing services to both the business community and the common people. The head office is located at Durbarmarg, Kathmandu and other branches are at different parts of Nepal. Annual report 2011/12 of the bank states, "in order to make our presence felt in every walk of life and serve people across all social strata and segments, we have expanded our network by adding more branches that totals to 51 points of representation in the nation." (NABIL Annual Report, 2011/12)

The various ranges of Nabil Bank product and services include deposit, loan and advances, trade finance activities, remittance facilities, and foreign exchange activities. Nabil Bank provides round clock service to its customers through a large network of Automated Teller Machine (ATMs) installed all over Nepal.

#### 1.2.2 Himalayan Bank Limited (HBL)

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Himalayan Bank's head office is located at Thamel and it has two other branches in Kathmandu valley at New Road and Maharajgunj. Besides these it has 33 other branches outside the Kathmandu valley (HBL Annual Report, 2011/2012). HBL holds of a vision to become a leading bank of the country by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the bank. Its mission is to become preferred provider of quality financial services in the country.

Himalayan Bank offers a wide range of deposit products: fixed deposit, saving deposit, current account, premium saving account, call deposit, *BISHESH* saving account, recurring saving account and jumbo term deposit.

Similarly, international banking, remittance services, safe deposit locker, card services, SMS banking and internet banking are also the products and services of Himalayan Bank.

#### **1.2.3 Everest Bank Limited:**

Everest bank limited EBL started its operations in 1994 with a view and objective extending professionalized and efficient banking services to various segments of the society. EBL join hand with Punjab National Bank (PNB), India as its join venture partner in 1997.

PNB is the largest nationalized bank in India having 110 years of banking history with more than 4500 offices all over India. Of which 1400 branches are inter-connected. PNB has over one thousands ATMs spread across India. As on 31/3/05, PNB had a total business of INR 1,63,000 mores and posted a net profit a INR 1410 corers. Drawing its strength from its joint venture partner, EBL has been steadily growing in its size and operations and established itself as a leading private sector Bank. EBL is rank as No.2 Bank by NRB as per CAELS.

The bank in association with smart choice technology (SCT) is providing ATM services for its customers. EBL debt card can be assed at more than 50 ATMs and over 250 points of sales across the nation. The bank is also managing the SCT ATM at Tribhuvan International Airport for the convenience of the customers and travellers, the first and the only bank in Nepal to place ATM outlet at the airport.

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

The development of a nation depends upon its domestic resources. Banking sector plays vital role in allocation and utilization of such resources. Integrated and speedily development of a country is possible when competitive banking services reaches all the corners of the country. The commercial banks can play a vital role in mobilizing the resources in developing as well as developed countries. Those institutions can induce the public to save their valuable funds, and they can help to mobilize the society. In this way the saving can enter into banking channel from the informal sector. Banks are the financial intermediaries; they collect the surplus money as deposit from the surplus units and provide the deficit money as loans and advances to the deficit units, thus helping in Credit Creation process.

This study deals with the liquidity, efficiency, profitability, and risk position of commercial banks as an aid to economic development of the country by making survey of deposits and credits of commercial banks and their utilizations to fulfil the financial needs of different sectors of the economy.

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

Deposit Mobilization is the most important factor for promoters, shareholders and managements. After 1984 several joint venture banks have been established in the country in short period. There is high flow of money in the market but less viable and investible project. Most of the commercial banks are continuously benefiting to shareholders and returning them adequate profit. Several JVBs have been established in our country within short period of time. Deposit mobilizing policy of JVBs may differ from each other but there is no optimum utilization of shareholders fund to have greater return in any bank. NRB played important role to make commercial

bank to mobilize their deposit in good sector. For this purpose NRB has imposed many rules and regulations so the bank can have sufficient liquidity and security (NRB, 2012).

NABIL, HBL and Everest have been collecting comparatively enough deposit from the beginning. They make profit by making investment in the form of loan and advance and mobilize the deposit on government securities and bond or others. Deposit mobilization is always related with risk and returns. It is always appropriate to state that the objective is to make a lot of money by recognizing the possible losses. Deposit mobilizing policy also involves the identification of the potential categories of financial assets for consideration in the ultimate portfolio.

Owing to the importance of proper deposit mobilization not only to the bank themselves but also to the overall economy of the country, it is necessary to understand its various aspects in-depth in the prominent banks of Nepal. Furthermore, it is imperative to understand the positions of the banks comparatively so as to have meaningful understanding of the situation, and to make decisions or formulate policies for the solution of the problems. Many questions regarding the positions of banks in various aspects of deposit mobilization especially deposit growth, loans and advances, investment, and net profit have remained still unanswered. Thus, there is a need of a systematic comparative study to answer the questions regarding various aspects of deposit mobilization of banks in Nepal. Therefore, this study will specifically deal with the following research questions:

- What are the differences regarding deposit growth of NABIL, HBL and Everest Bank Limited?

- What are the differences regarding the loans and advances of NABIL, HBL and Everest Bank Limited?
- What are the differences regarding the investment of NABIL, HBL and Everest Bank Limited?
- Are there significant relationships between the total deposits, loans and advances, total investment, total assets, and net profit? How do NABIL, HBL and Everest Bank Limited compare regarding such relationships?

# 1.5 Objectives of the Study

The main objective of this study is to find out the differences in deposit mobilization of Himalayan Bank, Nabil Bank Limited and Everest Bank Limited. Thus the specific objectives of this research are as follows:

- ) To analyze and compare the deposit growth of NABIL, HBL and Everest Bank Limited.
- ) To analyze and compare the proportion of the loans and advances of NABIL, HBL and Everest Bank Limited.
- ) To analyze and compare the investment of NABIL, HBL and Everest Bank Limited.
- ) To find out the relationships between total deposits, loans and advances, total investment, total assets, and net profit, and to compare such relationships of NABIL, HBL and Everest Bank Limited.

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

In Nepal, banking industry has been playing significant role for the overall financial and economic development of the country through deposit mobilization. According to the Nepal Rastra Bank research report, banking and financial institution are contributing around 10% to its national GDP. Our country consists of many rural areas but expansion of the banking services to rural areas are very limited due to the lack of proper infrastructure and sound policies and directives from the regulatory authority also. This study covers the deposit and credit portion of NABIL, HBL and Everest Bank Limited, so it reveals the financial portion of the bank and occupies an important role in the series of the studies on NABIL, HBL and Everest Bank Limited. The significances of the study are as follows:

- This study is very much important for NABIL, HBL and Everest Bank Limited to develop plans and policies as per the findings and recommendations presented on this study.
- This research work may be extended in future by adding the sampling framework and research tools application.
- This study is also very important for the investors, customers, and personnel of the bank to make various decisions regarding deposit and loan and advances.
- This study could be very much helpful for all the people interested to know about the deposit mobilization in NABIL, HBL and Everest Bank Limited.

#### **1.7 Limitations of the Study**

The main focus of the study is to point out the financial position of NABIL, HBL and Everest Bank Limited. This study is based on secondary data only, and there is an acute problem of accuracy of data in Nepal. Even the financial statements of Nepalese enterprises published by them are not readily available, since they are treated as confidential. Data published differ to some extent which mars the accuracy and reliability of the data. In Nepal preparation of multiple financial statements are very much common practices in private sectors, hence the findings and conclusions based on the available financial statements may not be perfectly accurate in reality. Furthermore, the main objective of this study is to fulfil the partial requirement of MBS course of Tribhuvan University, Nepal. Therefore, the study cannot cover all the dimensions of the subject and cannot penetrate to the extreme depth. Following are the major limitations of the study.

- a) Time and resource constraints have limited the area covered by the study; hence out of 32 commercial banks only NABIL, HBL and Everest Bank Limited are included on the study.
- b) The study covers only the periods of five fiscal years, from 2008 to 2012.
- c) The study is based on the secondary data and sources are limited to the financial statements of the concerned banks which are extracted from the progress report of related banks, Nepal Stock Exchange (NEPSE), Central Bureau of Statistics and other published and unpublished articles

- d) The accuracy of the research work is dependent on the data provided by the concerned banks and financial institutions. No attempt is made to examine the reliability of the available secondary data.
- e) Only selected statistical and financial tools are used for the data presentation and analysis.

# **1.8 Organization of the study**

The study is organized into following chapters in order to make the study easy to understand.

# **Chapter I: Introduction**

It is an introductory chapter which contains background of the study, profiles of the companies, statement of the problem, objectives of the study, limitations of problem, and organization of the study.

### **Chapter II: Literature Review**

It is concerned with review of literature. It includes conceptual framework, review of books, review of research papers, and published and unpublished master's thesis.

### **Chapter III: Research Methodology**

It is one of the most important chapters of the study which deals with the research methodology. It includes methodology used to achieve the objectives of the study, sources of data, population and sample, financial and statistical tools used.

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

This chapter deals with analysis and interpretation of data using financial

and statistical tools. Major findings of the study will be presented at the end of this chapter.

# **Chapter V: Summary, Conclusions and Recommendations**

It is the last part of the study which provides the summary, conclusion, and recommendations for improving the future performance of the sample banks. Finally bibliography and appendices will also be presented at the end of the thesis work.

# CHAPTER- TWO LITERATURE REVIEW

This chapter devotes to review some of the existing literature regarding the deposit mobilization of commercial Banks. In this regard, various books, journals, and articles concerned to this topic have been reviewed. The first part of the chapter deals with the conceptual framework of the study and the second part is concern with the review of previous article, Journals and dissertation.

#### 2.1 Basic Concept of Commercial Bank

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 of 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 is 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 commends 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.

#### **Classical Theories of Interest Rates**

The classical theory argues that the rate of interest is determined by two forces: 1) the supply of savings, derived mainly from households and 2) the demand for investments capital coming mainly from the business sector.

**Saving by Households;** Generally most of the savings in modern industrialized economies are carried out by individual and families. For these households, saving is simply abstinence from consumption spending. Current savings, therefore, are equal to the difference between current income and current consumption expenditures. In making the decision on the timing and amount of saving to be done, households typically consider several factors: the size of current and long-term income, the desired savings target, and the desired proportion of income to be set aside in the form of savings. Interest rates affect an individual's choice between saving and current consumption. The classical theory of interest assumes that individual have a definite time preference for current over future consumption. It considers the payment of interest as a reward for waiting the postponement of current consumption in favor of greater future consumption. The higher interest rate increases the attractiveness of saving (and future consumption) for some quantity of current consumption.

**Saving by Business Firms;** Most business hold savings balances in the form of retained earnings (as reflected in their equity or net worth accounts).

The volume of business saving depends on two key factors: the level of business profits and the dividend policies of corporations. These two factors are summarized in the retention ratio, the ratio of retained earnings to net income after taxes. This ratio indicates the proportion of business profits retained in the business for investment purposes rather than paid out as dividends to the owners. The critical element in determining the amount of business savings is then the level of business profits. If profits are expected to rise, business will be able to draw more heavily on earnings retained in the firm and less heavily on the money and capital markets for funds. The result is a reduction in the demand for credit and a tendency toward lower interest rates. Higher interest rates in the money and capital markets typically encourage firms to use internally generated funds more heavily in financing projects. Conversely, lower interest rates encourage greater use of external funds by raising it from the money and capital markets.

**Saving by Government;** Governments also save though less frequently than households and businesses. In fact, most government saving (i.e. a budget surplus) appears to be unintended saving that arises when government receipts unexpectedly exceed the actual amount of expenditures. Income flows in the economy (out of which government tax revenues arise) and the pacing of government spending programs are the dominant factors affecting government savings.

The savings made by business, government and households are important determinants of interest rate but they are only one side. The other side is investment spending, made by business firms, government and in some cases households. Business requires huge amounts of funds each year to purchase equipment, machinery and inventories and to support the

construction of new buildings and other physical facilities. The majority of business expenditures for these purposes consist of what economists call replacement investment. But according to the classical economist, interest rate and invest able fund have inverse relationship. At low rates of interest, more investment projects become economically viable.

#### **The Loanable Fund Theory**

In this theory, the main theme is the supply and demand for loanable funds (i.e. lending & borrowing) determines the interest rate. It is a monetary theory of interest since it focuses on the financial factors that influence interest rates (i.e. borrowing and lending). In addition, the loanable fund theory is a short-run, partial equilibrium explanation in which some factors produce a change in the interest rate, but there is no analysis of the long-run impact of this change in the interest rate and on the level of employment, income, and production of the resulting impact of changes in employment, income and production on the interest rate. The major sources of supply of loanable fund are from two sources: First, the amount of saving by households, business, governments and Second is the amount of new money created by the commercial banking system.

**Saving:** It refers to the postponement of current consumption. The decision to save is the decision to forgo current consumption in order to have a larger quantity of consumption in the future (**Cooper & Fraser, 1983, P.160**). Individual or household save for a variety of reasons but there is little evidence to suggest that the quantity of loanable funds supplied through saving is clearly influenced by the level of the interest rate. Business saving refers to the net income after taxes of the firm, less any cash dividends i.e. retained earnings. There is little reason to believe that the volume of saving

at business firm is strongly influenced by the level of interest rates. For governments, the volume of saving is defined as the difference between revenues and expenditures such that saving exists when revenues exceed expenditures (a budget surplus).

**New Money:** Although the volume of saving is the principal source of loanable funds in financial markets, the supply of the loanable funds may be increased through the creation of new money beyond the amount made possible by current saving. The amount of new money created is determined jointly by the actions of the commercial banking system and the central bank. Commercial banks use any excess reserves to make loans and purchase securities and create money (demand deposits) through the credit creation process. However, the ability of commercial bank to create money is limited by the central bank through the use of its monetary policy tools like open-market operations, reserve requirement changes, and discount rate changes.

#### The Liquidity Preference Theory of Interest Rate

The loanable funds approach to interest rate determination focuses on supply and demand for loanable fund. An alternative approach the liquidity preference view focuses on the liquidity preference instead of the supply and demand for money. It is assumed that individuals inherently prefer money among all financial assets since money can be used to make payments and is thus the most liquid assets. Wealth holders are persuaded to hold financial assets other than money only because these non-money assets offer interest returns which do not exist in the holding of idle money. Further the greater the spread between the yields on non money financial assets and money, less the demand for money holdings and greater the demand for other financial assets and vice versa.

#### **The Rational Expectation Theory**

This theory is new to the financial market so it is in still development stage. The main theme of this theory is that "money and capital markets are highly efficient institutions in digesting new information affecting interest rates and security prices." (Peter S. Rose, 1997, P.211) This theory assumes that equilibrium interest rate depends upon the change in investor's expectation regarding future security prices and return. Investor's decision towards the borrowing and lending funds come from the availability of new information. When new information appears about investment, saving or the money supply, investors begin immediately to translate that new information into decision to borrow and lend funds. So rapid is the process of the market digesting new information that security prices and interest rates presumably impound the new data from virtually the moment they appear. In the absence of new information, next period's interest rate will be equal to current periods interest rate. In other words, the knowledge of past interest rate will not be a reliable forecast of future interest rate. In a perfect efficient market it is impossible to win excess returns continuously by trading on publicly available information.

#### **2.2.2 Concept of Deposit**

Deposit is the sum of money lodged with a bank, discount house or other financial institution (**Shrestha M.K & Bhandari D.R, 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 D.R, 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 D.R, 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 extent credit by purchasing government securities, bond and shares for several reasons. Some of them are given as:

- It may want to space it's maturating 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 confirm 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 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 collects 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 earns profit by investing the funds in different sector through the principle of profit earning. Banks invests 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
- J 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
- J 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:

- J Salary of Employee
- J Allowances
- J Pension
- ) Advertisement
- J Stationery
- / Provident Fund
- ) Rent
- J Income tax

- ) Donation
- *J* Insurance
- J 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

**Sharma B.** (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.

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 F.J, 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 S. (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.

**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 B.(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
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- 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 S.B** (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:

**Maharjan**, (2008) concluded that the entire research work has focused on the comparative study on deposit mobilization of commercial banks. For the study, four commercial banks i.e. Himalayan Bank Ltd. (HBL), Siddhartha Bank Ltd. (SBL), Nabil Bank Ltd. (NBL) and Standard Chartered Bank Nepal Ltd. (SCBNL) 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.

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. **Hada N. (2009)**, concluded that, deposits are the oxygen for commercial banks and its mobilization in another equally important aspect of commercial banks. After conducting the study with various tools following conclusions can be drawn:

- The deposit positions of commercial banks are increasing every year. More and more people are using banking system and depositing cash in commercial banks. The deposit collection mechanisms of commercial banks are properly executed. In the context of the sample bank Kumari Bank is able to collect more amount of deposit than Siddhartha Bank.
- The commercial banks are able to collect deposit in all form current, saving fixed and call. The majority portion of the total deposit is dominated by call deposit which is over 30% of the total deposit and after that saving deposit comprises over 20% of the total deposit. The portion of interest free deposit cannot also be neglected, commercial banks are able to increase such type of deposits also.
- The loans and advances of commercial banks are in increasing trend. The total loan of sample banks is Rs.42 million out of total deposit of Rs.47million. This shows that commercial banks are able to mobilize deposits in the form of loan and advances. Also there is positive

correlation between total deposit and loan and advances. In the comparison of both sample bank Kumari Bank is able to grant more credit in the form of loan and advances.

- The loan management of the sample banks are also satisfactory. The amount of performing loan is almost 90% of the total loan. Also the loan and advances are positively related to the total deposit, this shows that commercial banks are able to manage their loans. The lesser amount of non performing loan shows that commercial banks are able to invest in the good opportunities in the form of loans, and able are able recover their loans. In terms of non performing loans, Siddhartha Bank has slightly higher ratio than Kumari Bank.
- After loans and advances commercial banks has mobilized their funds in direct investment and other investment also. Investment in government securities and treasury bills are the second important tools of deposit mobilization. The ratio of investment of investment Kumari Bank is greater than that of Siddhartha Bank, which shows that Kumari Bank is more liberal in investing in different financial tools.
- The liquidity position of Kumari Bank is better than Siddhartha Bank Limited because it has higher amount of cash and bank balances than Siddhartha Bank.

- The interest income of commercial banks is also increasing every year. In this respect also Kumari Bank is able to earn more interest than Siddhartha Bank. The total interest income of commercial bank comprises largely of interest earned from loans and advances, over 90% of the interest income comprises of the income from loan which is also the same in the case of the sample banks.
- Interest expenses of the commercial banks largely consist of the interest paid on the deposit collected. Interest on the call deposit is the largest in the commercial banks. In comparison of the sample bank Kumari Bank has higher interest expenses than Siddhartha Bank.
- Siddhartha Bank has high return on loans and advances ratio than that of Kumari Bank.
- Siddhartha Bank has high return on investment ratio than that of Kumai Bank.
- Kumari Bank is able to collect more interest from loan and advances than Siddhartha Bank. But the interest from investment of Siddhartha Bank is greater than Kumari Bank.

In the view of Shakya S. (2008) the following findings are as:

- ) It is seen that the deposit collection of HBL is changed. Firstly it has decreased and after that it increase rapidly up to 19.92% in 2005/2006. The Percentage change of deposits of Nabil is in every financial year is fluctuating. It indicates that the year 2005/2006 recorded a progressive rate of growth in total deposits are going to increase.
- HBL and Nabil of the trend analysis for five years shows that the saving deposit has increase in the following year. NABIL, the highest trend value in FY 2005 is Rs 1015.4 million. Whereas, the same of the HBL is Rs 1696.6 million
- ) The trend analysis of HBL and Nabil for five years shows that the fixed deposit has increase in the following year. NABIL, the highest trend value in FY 2005 is Rs 323 million. Whereas, the same of the HBL is Rs 772 million

The tread analysis of Nabil for five years shows that the current deposit has increase in the following year which the highest trend value is Rs 289.4 million in FY 2005. The tread analysis of HBL for five years shows that the current deposit has decline and then after increase in the following years. HBL, the highest trend value in 2001and 2005 is Rs 659.4 million.

) The tread analysis of HBL for five years shows that the margin deposit has increase in the following year which the highest trend value is Rs 57.8 million in FY 2005. The tread analysis of Nabil for five years shows that the margin deposit has decline and increase in FY 2005 which the highest trend value is Rs 39.8

- ) The overall growth rate of sector wise investment is highest in case of Nabil with the growth rate of 17.11% followed by HBL with rate of 12.75%. The banks should allocate more funds for sector wise investment for more productive growth results.
- ) In case of priority and deprived sector loans, two banks have negative growth in the case of priority loans. While in the case of deprived sector loans, its shows the growth rate of 8.14% and 23.35% of Nabil and HBL respectively.

There is positive correlation between deposits and investment of Nabil. Coefficient of determination shows about 37% variation in investment is explained by the independent variable deposits. The value of r is significant. There is positive correlation between deposits and investment of HBL. Coefficient of determination shows about 41% variation in investment is explained by the independent variable deposit. The value of r is significant.

## CHAPTER- THREE RESEARCH METHODOLOGY

#### 3.1 Introduction

"Research Methodology is a way to systematically solve about the research problem." In other words, research methodology describes the method and process applied in the entire aspect of the study. Methodology refers to the various sequential steps under take by a researcher in studying the problems with certain objectives in view. The basic objective of the present research is to highlight the current position of investment and deposit policy of commercial bank of Nepal. I have selected two commercial banks for the purpose of my research work, which are Nabil Bank LTtd., Himalyan Bank Ltd and Everest Bank Ltd. This study has been based on secondary sources of data. The research methodology is followed to achieve the basic goal and objective of this study. The following methodology has been adopted in this study.

#### 3.2 <u>Research Design</u>

Research design is a purpose scheme of action proposed to be carried out in a sequence during the process of research focusing on the management problem to be tackled. It must be a scheme of problem solving through proper analysis, for which systematic arrangement of managerial efforts to investigate the problem is necessary. It defines task of researcher from identifying a managerial problem and problem area to report writing with the help of collection, tabulation analysis and interpretation of data. "A researcher design is the management of conditions for collecting and analysis of data in manner that aims to combine relevance to the research purpose with economy in procedure."

A research design is a plan of action to be carried out in connection with a research project. It is, however, not an unbreakable rule, nor a hard and fast strategy. Research design helps the research to control the experimental extraneous and error variance of the particular research problem under the study topic. In this study the descriptive cum analytical research design has been followed to analyze the deposits and investment policy of the commercial banks in Nepal

As a matter of fact, research design must include all the aspect of a research project including formulation of scheme for testing of hypothesis and drawing logical conclusion.

Goode and Hatt have, however emphasized about drawing logical conclusion;" A basic aspect of research design therefore is setting up the research so as to allow logical conclusions to be drawn".



#### **Research Design**

#### **RESEARCH PROCESS**



#### 3.3 Source of Data Collection

The researcher must decide about the use of primary data at the outset in a research. In this fieldwork report, the investigator has used secondary method for data collection and has used annual reports, booklets published by the concerned organization, books and other publication as secondary source of information for analysis.

## 3.4 Population and Sample

The limitation of time and unavailability of the relevant data has forced me to make research on few commercial banks even though there are many CBS in Nepal. The both CBS are government owned i.e., Nabil bank & HBL, have been selected as sample for the present study. The 5 years deposit and investment data are taken for the study.

## 3.5 Data Processing

Numbers of Tables, essentials for the study have been prepared with the help of structural questionnaire and the secondary data given by NBL and RBB. Tables have prepared according to the nature of data, which are suitable for the discussion, and analysis of the problem.

## 3.6 Methods of data analysis

The collected data are analyzed by using different statistical and financial tools. The analysis of data will be done according to the pattern of data available. Wide varieties of methods can be applied according to reliability and consistency of data. Especially the following tools and models will be used to analyze the variables.

## 3.6.1 Financial Analysis

Financial Analysis or ratio is the mathematical relationship between two accounting figures. It is the whole process of analysis of financial statement of any business or industrial concern specially to take out credit decision.

## **Financial Tools Used**

## 1. Ratio Analysis

## A. Liquidity Ratio

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,

Cash and Bank Balance X Cash and Bank Balance 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

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, Cash and Bank Balance to Current Assets Ratio X Cash and Bank Balance 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:

Investment on Government Securities to Current Assets X Investment on Government Securities Current Assets

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

#### **B.** Assets Management Ratios

The asset management ratios, measures how effectively the firm is managing its assets. 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,

 $\label{eq:loan and Advances to Total Deposit X} \frac{Total \ Loan \ and \ Advance}{Total Deposit}$ 

#### 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:

 $Total \ Investment \ to \ Total \ Deposit \ X \frac{Total \ Investment}{Total \ Deposit}$ 

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,

# $Loan and Advances to Total Working Fund X \frac{Total Loan and Advances}{Total Working Fund}$

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:

Investment on Government Securities to Total Working Fund X Investment on Government Securities 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:

Investment on Shares and Debentures to Total Working Fund X <u>Investment on Shares and Debentrues</u> Total Working Fund

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

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#### **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,

Return on Loan and Advances  $X \frac{\text{Net Pr of it } fLoss A}{\text{Loan and Advances}}$ 

#### 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:

#### 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,

Total Interest Earned to Total Working Fund X Total Interest Earned 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:

Total Interest Paid to Total Working Fund X Total Interest Paid 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.

Liquidity Risk Ratio X Cash and Bank Balance 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:

Credit Risk Ratio X<sup>Total Investment ΓTotal Loan and Advances</sup> Total Assets

#### 3.6.2 Statistical Tools

Using various statistical tools, which are as follows, will draw out the relationship between different variables related to this study.

#### **1.** Mean $f_{\overline{x}}$

Since, huge and unwieldy masses of data are confusing and difficult to remember, so we need a unique value representing them the mean (averages) are the measures which condense a huge of data into single value representing the whole data, Simply, mean is the sum of all the observations divided by the number of observations. The equation for calculating the mean value is:

Where,

 $f_{\overline{x}}A =$ Sum of the observation

n = No. of observation (year)

#### 2. Standard Deviation

It gives the idea of the homogeneity or heterogeneity of the distribution and measures the variation of the data. It is defined as positive square root of the arithmetic mean of the square of the given distribution from their arithmetic mean and donated by Greek alphabet small sigma (). The equation for calculating standard deviation is:

$$=\sqrt{\frac{\int x \, z \, \overline{x} \, \widehat{A}}{n}}$$

#### **3.** Correlation Analysis

**Corr**elation means the relationship between two or more variables such that the change in one tends to be accompanied by the change in other. The measure of correlation calls the correlation co-efficient. Correlation Co-efficient (r) has been calculated by using the formula.

Where 
$$Y = y z \overline{y}$$

$$r_{xy} = x z \overline{x}$$

$$\mathbf{X} = x z \overline{x}$$

This formula is all called Product moment formula.

Where,

 $r_{xy}$  x Simple correlation of co-efficient between two variables 'X' and 'Y'

$$\mathbf{x} = (x \, \mathbf{z} \, \overline{\mathbf{x}})$$
$$\mathbf{Y} = (y \, \mathbf{z} \, \overline{\mathbf{y}})$$

# 1.1 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 to 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

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	14.48	10.35	9.73	9.84	9.28	10.74	1.91	17.88
HBL	6.18	12.17	10.03	9.04	6.43	8.77	2.25	25.66
EBL	11.13	3.56	6	14.88	2.23	7.56	4.76	62.96
Composite bank Ave.						9.02		
Yearly Ave	10.66	8.69	8.59	11.25	5.98			

(Ratio in %)

(Source: Annual reports of commercial banks.)

From the table 4.1, it is depicted that cash and bank balance to total deposit ratio of NABIL is 10.74 percent in an average in the period under study whereas that of HBL is 8.77 percent in an average as well as EBL has 7.56 percent. The average ratio of NABIL is higher than HBL and EBL. The ratios of banks are found to be in fluctuating. The higher ratio is 14.48 percent in FY 2007/08 for NABIL, 12.17 percent in FY 2008/09 for HBL and 14.88 percent in FY 2010/11 for EBL.

With the comparison to composite bank average NABIL is higher and HBL and EBL are lower. The cash and Bank Balance to total Deposit ratio of NABIL has above the yearly average in all FY except 2010/11. HBL is above the yearly average in all FY except FY 2007/08 and FY 2010/11 and the EBL has below the yearly average in all FY except FY 2007/08 and FY 2010/11.

The S.D is 1.91,2.25 and 4.76 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 17.88, 25.66 and 62.96 respectively. The Higher CV of EBL shows the higher risk and the lower CV of NABIL shows the lower risk among the selected banks. These facts are shown in the figure 4.1 to make easier to understand.



Figure: 4.1 (A) Cash and Bank Balance to Total Deposit


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## 4.1.2 Cash and Bank Balance to Current Assets Ratio

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

### **Table: 4.2**

## **Cash and Bank Balance to Current Assets Ratio**

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	17.79	12.46	12.29	11.39	10.93	12.97	2.48	19.07
HBL	9.98	14.54	12.14	10.48	8.02	11	2.19	19.93
EBL	7.91	8.46	9.10	10	7.43	8.58	0.91	10.61
Composite bank Ave.						10.85		
Yearly Ave	11.89	11.82	11.18	10.63	8.8			

## (Source: Annual reports of commercial banks.)

Table 4.2, represents that the Cash and Bank Balance to Current Assets ratio of NABIL is 12.97 percent in an average in the period under study whereas that of HBL is 11 percent in an average and EBL has 8.58 percent. The average ratio of NABIL is higher than HBL and EBL. NABIL and HBL have the higher and EBL has lower average ratio with comparison to composite bank average. NABIL has above ratios with comparison to yearly average in all year. But EBL has below the yearly average ratio as well as HBL has also lower except FY 2008/09 and 2009/10.

The higher ratio is 17.79 percent in FY 2007/08 for NABIL, 14.54 percent in FY 2008/09 for HBL and 10 percent in FY 2010/11 for EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 19.07, 19.93 and 10.61 percent respectively. Under the CV the EBL is better than NABIL and HBL. These facts are shown in the figure 4.2 to make easier to understand.

# Figure: 4.2(A) Cash and Bank Balance to Current Assets Ratio



**Figure: 4.2(B)** 

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



#### 4.1.3 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.

## Table: 4.3

**Investment on Government Securities to Current Assets Ratio** 

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	10.42	11.76	21.59	20.37	17.13	16.25	4.48	27.58
HBL	37.93	14.52	14.02	18.17	24.11	21.75	8.86	40.72
EBL	14.81	36.75	17.87	11.69	54.07	27.04	16.09	59.5
Composite bank Ave.						21.68		
Yearly Ave	21.05	21.01	17.83	16.74	31.77			

(Source: Annual reports of commercial banks.)

From the table 4.3, it is denoted that Investment on Government Securities to Current Assets ratio of NABIL is 16.25 percent in an average in the period under study whereas that of HBL is 21.75 percent in an average as well as 27.04 percent for EBL. The average ratio of EBL is higher than NABIL and HBL. The ratios of the banks are found to be in fluctuating. The higher ratio is 21.59 percent in FY 2009/10 for NABIL, 37.93 percent in FY 2007/08 for HBL and 54.07 percent in FY 2011/12 for EBL.

With the comparison to Composite Bank Average HBL and EBL have higher average ratios and NABIL has lower average ratio. In all year the ratio of NABIL has below the yearly average except FY 2009/10 and FY 2010/11, where as HBL has also below in all year except FY 2007/08 and FY 2010/11 but the ratio of EBL has above the yearly average except FY 2007/08 and FY 2007/08 and FY 2010/11.

The S.D is 4.48, 8.86 and 16.09 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 27.58, 40.72 and 59.5 percent respectively. These facts are shown in the figure 4.3 to make easier to understand.







Figure: 4.3(A)

**Investment on Government Securities to Current Assets Ratio** 



## 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 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. This ratio can be obtained dividing loan and advances by total deposits.

#### **Table: 4.4**

#### Loan and Advances to Total Deposit Ratio

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	66.94	72.76	69.53	76.54	75.62	72.28	3.59	4.96
HBL	63.37	73.58	77.43	77.14	73.72	73.05	5.11	6.99
EBL	78.86	73.43	76.24	76.98	79.08	76.91	2.05	2.67
Composite bank Ave.						74.08		
Yearly Ave	69.72	73.26	74.4	76.89	76.14			

(Source: Annual reports of commercial banks.)

From the table 4.4, it is denoted that Loan and Advances to Total Deposit ratio of NABIL is 72.28 percent in an average in the period under study whereas that of HBL is 73.05 percent in an average and 76.91 percent in an average for EBL. The average ratio of EBL is higher than NABIL and HBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 76.54 percent in FY 2010/11 for NABIL, 77.43 percent in FY 2009/10 for HBL and 79.08 percent in FY 2011/12 for EBL. With the comparison to composite bank average EBL has higher average ratio than NABIL and HBL. The ratios of NABIL is below with the comparison to yearly average in all years where as HBL has above in all year except FY 2007/08 and 2011/12. But the EBL has above in all year with the comparison to yearly average.

The S.D is 3.59, 5.11 and 2.05 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 4.96, 6.99 and 2.67 percent respectively. These facts are shown in the figure 4.4 to make easier to understand.



Figure: 4.4(A) Loan and Advances to Total Deposit Ratio

## **Figure: 4.4(B)**



Loan and Advances to Total Deposit Ratio

## 4.2.2 Total Investment to Total Deposit Ratio

Investment is one of the major sources of earning of profit. This ratio indicates how properly firm's total deposits have been invested on different sectors of other companies.

#### **Table: 4.5**

<b>Total Investment to</b>	<b>Total</b>	<b>Deposit Ratio</b>
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(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	31.15	28.56	29.46	27.53	25.55	28.45	1.87	9.17
HBL	41.89	25.11	22.45	21.43	21.15	26.41	7.87	29.78
EBL	21.11	17.85	13.56	18.83	16.91	17.65	2.48	14.04
Composite bank Ave.						24.17		
Yearly Ave	31.38	23.84	21.82	22.60	21.20			

(Source: Annual reports of commercial banks.)

From the table 4.5, it is predicted that Total Investment to Total Deposit ratio of NABIL is 28.45 percent in an average in the period under study whereas that of HBL is 26.41 percent in an average as well as EBL has 17.65 percent in an average. The average ratio of NABIL is higher than HBL and EBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 31.15 percent in FY 2007/08 for NABIL, 41.89 percent in FY 2007/08 for HBL and 21.11 percent in FY 2007/08 for EBL respectively. With the comparison to composite bank average NABIL and HBL are higher and EBL is lower average ratio. With the comparison to yearly average ratio of selected banks NABIL has above in all year except FY 2007/08 where as HBL has above in all year except FY 2010/11 and FY 2011/12. But EBL has below in all year.

As well as the C.V. for NABIL, HBL and EBL are 9.17, 29.78 and 14.07 respectively. These facts are shown in the figure 4.5 to make easier to understand.

## **Figure: 4.5(A)**



## **Total Investment to Total Deposit Ratio**

**Figure: 4.5(B)** 

## **Total Investment to Total Deposit Ratio**



### 4.2.3 Loan and Advances to Total Working Fund Ratio

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

```
(Ratio in %)
```

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	82.21	87.55	87.72	88.61	89.08	87.03	2.48	2.85
HBL	92.15	87.96	91.45	89.52	91.99	90.61	1.62	1.78
EBL	55.85	90.22	88.23	51.71	95.03	76.20	18.49	24.26
Composite bank Ave.						84.61		
Yearly Ave	76.74	88.91	89.13	76.61	92.03			

(Source: Annual reports of commercial banks.)

From the table 4.6, it is refers that Loan and Advances to Total Working Fund ratio of NABIL is 87.03 percent in an average in the period under study whereas that of HBL is 90.61 percent in an average as well as EBL has 76.20 percent in an average. The average ratio of EBL is lower than NABIL and HBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 89.08 percent in FY 2011/12 for NABIL, 92.15 percent in FY 2007/08 for HBL and 95.03 percent in FY 2011/12 for EBL. With the comparison to composite bank average the average ratios of NABIL and HBL are higher and EBL is lower. With the comparison to yearly average,

ratios of NABIL has below in all years except FY 2007/08 and 2010/11 where as HBL has above in all years except FY 2008/09 and FY 2011/12 and EBL has below in all years except FY 2008/09 and 2011/12.

The S.D is 2.48, 1.62 and 18.49 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 2.85, 1.78 and 24.26 respectively. These facts are shown in the figure 4.6 to make easier to understand.



Figure: 4.6(A) Loan and Advances to Total Working Fund Ratio

## **Figure: 4.6(B)**

Loan and Advances to Total Working Fund Ratio



## 4.2.4 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.

## **Table: 4.7**

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

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	10.42	11.76	21.59	20.37	17.13	16.23	4.48	27.61
HBL	37.93	14.52	14.02	18.17	24.11	21.45	8.86	41.31
EBL	14.81	36.75	17.87	11.67	54.07	27.03	16.09	59.53
Composite bank Ave.						21.57		
Yearly Ave	21.05	21.34	41.57	16.74	31.77			

(Source: Annual reports of commercial banks.)

From the table 4.7, it is refers that Investment on Government Securities to Total Working Fund ratio of NABIL is 16.23 percent in an average in the period under study whereas that of HBL is 21.45 percent in an average and 27.03 percent in an average for EBL. The average ratio of EBL is higher than NABIL and HBL. The ratios of the banks are found to be in fluctuating. The higher ratio is 21.59 percent in FY 2009/10 for NABIL, 37.93 percent in FY 2007/08 for HBL and 54.07 percent in FY 2011/12 for EBL.

With the comparison to composite bank average NABIL and HBL are lower and EBL is higher. Again with the comparison to yearly average the ratios of NABIL has below in all years except FY 2010/11 as well as HBL has also below in all yeas except FY 2008/09 and FY 2010/11 and EBL has below in all years except FY 2008/09 and 2011/12.

The S.D is 4.48, 8.86 and 16.09 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 27.61, 41.31 and 59.53 respectively. These facts are shown in the figure 4.7 to make easier to understand.







**Figure: 4.7(B)** 

**Investment on Government Securities to Total Working Fund Ratio** 



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

Investment on shares and debentures to total working fund ratio shows the investment of insurance companies 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.

#### **Table: 4.8**

**Investment on Shares and Debentures to Total Working Fund Ratio** 

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	12.51	11.27	4.34	4.49	4.31	4.18	4.89	116.82
HBL	4.5	3.2	2.4	2.6	2.4	3.02	0.79	26.35
EBL	3.24	7.28	4.18	1.79	7.35	4.77	2.21	46.43
Composite bank Ave.						3.99		
Yearly Ave	6.75	7.25	3.64	2.96	4.67			

(Ratio in %)

(Source: Annual reports of commercial banks.)

From the table 4.8, it is depicted that Investment on Shares and Debentures to Total Working Fund ratio of NABIL 4.18 percent in an average in the period under study whereas that of HBL is 3.02 percent in an average and 4.77 percent in an average for EBL. The average ratio of EBL higher than NABIL and HBL. The ratios are found to be in fluctuating. The higher ratio is 12.51 percent in FY 2007/08 for NABIL, 4.5 percent in FY 2007/08 for HBL and 7.35 percent in FY 2011/12 for EBL. With the comparison to

composite bank average the average ratio of NABIL and EBL are higher and HBL is lower. Again with the comparison to yearly average the ratios of NABIL has above in all years except FY 2011/12, HBL has below in all years and the EBL has above in all years except Fy 2010/11.

The S.D are 4.89, 0.79 and 2.21 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are116.82, 26.35 and 46.43 respectively. These facts are shown in the figure 4.8 to make easier to understand.

#### **Figure: 4.8(A)**

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



#### **Figure: 4.8(B)**



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

## **4.3 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:

## 4.3.1 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.

#### **Table: 4.9**

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

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	3.49	3.74	3.53	3.6	4.07	3.69	0.21	5.69
HBL	3.15	2.95	1.74	2.83	2.84	2.70	0.49	18.15
EBL	2.4	2.61	2.95	2.94	2.97	2.77	0.23	8.30
Composite bank Ave.						3.05		
Yearly Ave	3.01	3.1	2.74	3.12	3.29			

(Source: Annual reports of commercial banks.)

From the table 4.9, it is depicted that Return on Loan and Advances ratio of NABIL is 3.69 percent in an average in the period under study whereas that of HBL is 2.70 percent in an average as well as EBL has 2.77 percent in an average. The average ratio of NABIL is higher than HBL and EBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 4.07 percent in FY 2011/12 for NABIL, 3.15 percent in FY 2007/08 for HBL and 2.97 percent in FY 2011/12 for EBL. With the comparison to composite bank average NABIL is higher and HBL and EBL are lower. Again with the comparison to yearly average the ratios of NABIL has above in all years except FY 2011/12, HBL has below in all years except FY 2007/08 and EBL has below in all years except FY 2009/10.

The S.D is 0.21, 0.49 and 0.23 for NABIL, HBL, and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 5.69, 18.15 and 8.30 percent

respectively. These facts are shown in the figure 4.9 to make easier to understand.



## Figure: 4.9(A)

**Return on Loan and Advances Ratio** 



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



## 4.3.2 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.

#### **Table: 4.10**

**Return on Total Working Fund Ratio** 

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Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	2.87	3.72	3.09	3.21	3.63	3.30	0.32	9.69
HBL	3.23	2.6	1.6	2.51	2.53	2.49	0.52	20.88
EBL	1.33	4.56	3.41	1.52	7.81	2.73	2.57	94.14
Composite bank Ave.						2.84		
Yearly Ave	2.48	3.63	2.7	2.41	4.66			

(Source: Annual reports of commercial banks.)

From the table 4.10, it is depicted that Return on Total Working Fund ratio of NABIL is 3.30 percent in an average in the period under study whereas that of HBL is 2.49 percent in an average and EBL is 2.73 percent in an average. The ratios of the banks are found to be in fluctuating. With the comparison to composite bank average the average ratio of NABIL is higher and HBL and EBL are lower. Again with the comparison to yearly average ratios NABIL has above in all years except FY 2011/12, HBL has below in all years except FY 2007/08 and FY 2010/11 and EBL has above in all years except FY 2007/08 and FY 2010/11. The higher ratio is 3.72 percent in FY 2008/09 for NABIL, 3.23 percent in FY 2007/08 for HBL and 7.81 percent in FY 2011/12 for EBL.

The S.D is 0.32, 0.52 and 2.57 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 9.69, 20.88 and 94.14

respectively. These facts are shown in the figure 4.10 to make easier to understand.



#### **Figure: 4.10(A)**

**Return on Total Working Fund Ratio** 



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



## 4.3.3 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.

#### **Table: 4.11**

**Total Interest Earned to Total Working Fund Ratio** 

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	7.61	8.89	11	12.25	13.16	10.58	2.06	19.47
HBL	7.33	8.07	9.9	11.78	12.21	9.85	1.94	19.69
EBL	4.59	15.62	12.73	7.07	15.54	9.09	4.66	51.26
Composite bank Ave.					13.63			
Yearly Ave	6.51	10.86	11.21	10.36	13.63			

(Source: Annual reports of commercial banks.)

From the table 4.11, it is depicted that Return on Total Interest Earned to Total Working Fund ratio of NABIL is 10.58 percent in an average in the period under study whereas that of HBL is 9.85 percent in an average and 9.09 percent EBL. The average ratio of NABIL is higher than other two banks. The ratios of the banks are found to be in fluctuating. With the comparison to composite bank average ratios NABIL and HBL are lower and EBL is higher. Again with the comparison to yearly average the ratios of NABIL has below in all year except FY 2007/08 and FY 2010/11, HBL has below in all year except FY 2007/08 and FY 2010/11 and EBL has above in all years except FY 2007/08 and FY 2010/11.

The higher ratio is 13.16 percent in FY 2011/12 for NABIL, 12.21 percent in FY 2011/12 for HBL and 15.62 percent in FY 2007/08 for EBL.

The S.D is 2.06,1.94 and 4.66 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 19.47, 19.69 and 51.26 respectively. These facts are shown in the figure 4.11 to make easier to understand.



Figure: 4.11(A) Total Interest Earned to Total Working Fund Ratio

**Figure: 4.11(B)** 

**Total Interest Earned to Total Working Fund Ratio** 



#### 4.3.4 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.

#### **Table: 4.12**

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

(Ratio	in	%)
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Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	2.92	3.66	5.33	6.87	6.75	5.11	1.59	31.23
HBL	4.19	3.22	4.88	6.53	7.38	5.24	1.52	29
EBL	1.87	7.23	6.45	13.53	20.59	9.93	6.49	65.45
Composite bank Ave.						6.76		
Yearly Ave	2.99	4.70	5.55	8.97	11.57			

#### (Source: Annual reports of commercial banks.)

From the table 4.12, it is depicted that Total Interest paid to Total Working Fund ratio of NABIL is 5.11 percent in an average in the period under study whereas that of HBL is 5.24 percent in an average and 9.93 percent in an average for EBL respectively. The average ratio of EBL is higher than NABIL and HBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 6.87 percent in FY 2009/10 for NABIL, 7.38 percent in FY 23011/12 for HBL and 20.59 percent in FY 2011/12 for EBL. With the comparison to composite bank average the average ratio of NABIL and HBL are lower and EBL is higher. Again with the comparison to yearly average

the ratios of NABIL has below in all years, HBL has below in all years except in FY 2007/08 and EBL has above in all years except FY 2007/08.

The S.D are 1.59, 1.

52 and 6.49 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 31.23, 29 and 65..45 respectively. These facts are shown in the figure 4.12 to make easier to understand.



Figure: 4.12(A) Total Interest paid to Total Working Fund Ratio

## **Figure: 4.12(A)**



**Total Interest paid to Total Working Fund Ratio** 

## 4.4 Risk Ratios

Generally, risk means uncertainty which lies in the business transaction of investment management. 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. The ratio of cash and bank balance to total deposit is an indicator of bank's liquidity of need. This ratio is calculated by dividing cash and bank balance to total deposit.

# Table: 4.13Liquidity Risk Ratio

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	14.48	10.35	9.73	9.84	9.28	10.74	1.91	17.88
HBL	6.18	12.17	10.03	9.04	6.43	8.77	2.25	25.66
EBL	11.13	3.56	6	14.88	2.23	7.56	4.76	62.96

(Source: Annual reports of commercial banks.)

From the table 4.13, it is depicted that Liquidity Risk ratio of HBL is 10.74 percent in an average in the period under study whereas that of HBL is 8.77 percent in an average and 7.56 percent in an average for EBL. The average ratio of NABIL is higher than HBL and EBL. but its liquidity risk ratio is in decreasing trend except FY 2010/11. But other bank's ratios are found to be in fluctuating.

The higher ratio is 14048 percent in FY 2007/08 for NABIL, 12.17 percent in FY 2008/09 for HBL and 14.88 percent in FY 2010/11 for EBL and the lowest ratio is 9.28 percent in FY 2011/12 for NABIL, 6.18 percent in FY 2007/08 for HBL and 2.23 percent in FY 2011/12 for EBL. 14.88 of EBL in FY 2010/11 is the highest ratio for all over because in this year total deposit amount is very low for EBL with comparison of other years.

The SD are 1.91, 2.25 and 4.76 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 17.88, 25.66 and 62.96 respectively. These facts are shown in the figure 4.13 to make easier to understand.

Figure: 4.13(A) Liquidity Risk Ratio



Figure: 4.13(B) 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**

(Ratio in %)

Bank/Year	2007/08	2008/09	2009/10	2010/11	2011/12	Ave.	S.D	C.V.(%)
NABIL	84.31	87.57	88.09	89.02	88	87.40	1.615	1.85
HBL	92.66	87.06	87.95	86.31	82.77	87.35	3.184	3.65
EBL	88.03	81.12	80	84.13	97.12	86.08	6.174	7.17

(Source: Annual reports of commercial banks.)

From the table 4.14, it is depicted that Credit Risk ratio of NABIL is 87.40 percent in an average in the period under study whereas that of HBL is 87.35 percent in an average and 86.08 percent in an average for EBL. The average ratio of NABIL is higher than HBL and EBL. The highest credit risk ratio which is in FY 2011/12 for EBL because the difference of total assets and the sum of total investment and loan & advance is very few than other years that creates the higher ratio. The ratios of the banks are found to be in fluctuating. The higher ratio is 89.02 percent in FY 2010/11 for NABIL, 92.66 percent in FY 2007/08 for HBL and 97.12 percent in FY 2011/12 for EBL and the lowest ratio is 84.31 percent in FY 2007/08 for NABIL, 82.77 percent in FY 2010/11 for HBL and 80 percent in FY 2008/09 for EBL.

The S.D is 1.615, 3.184 and 6.174 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 1.85, 3.65 and 7.17

respectively. These facts are shown in the figure 4.14 to make easier to understand.

## **Figure: 4.14(A)**



#### **Credit Risk Ratio**

**Figure: 4.14(A)** 

## **Credit Risk Ratio**



#### **4.5 Statistical Tools**

The statistical analysis includes various methods of measuring relationship between two or more than two 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 commercial banks.

#### Table 4.15.1

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

Banks	r	P.E.	6P.E	Significance/Insignificance
NABIL	0.9869	0.0079	0.0474	significant
HBL	0.9474	0.0309	0.1854	significant
EBL	0.9930	0.0042	0.0252	significant

(Source: Apendix B.)

The calculation of correlation coefficient between deposit and loan and advance is 0.9869, shows the highly positive correlation for NABIL. The P.E is 0.0079 and the 6P.E is 0.0474. The correlation is significant due to the value "r" which is more than six times the value of PE, which is 0.9869.

At the same time, HBL bank has the highly positive correlation between deposit and loan and advance. The correlation is significant due to the value "r" which is more than six times the value of PE, which is 0.9474 as well as the EBL has 0.9930 of correlation coefficient. The P.E is 0.0309 and the 6P.E is 0.1854, which shows the highly positive correlation for HBL. The correlation is significant due to the "r" which is more than six times the value of P.E that is 0.1854. EBL has 0.9930 correlation coefficient, P.E is 0.0042 and 6 P.E is 0.0252, which shows the positive correlation for EBL. The correlation is significant due to the "r" which is more than six times the value of P.E.

### 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 commercial banks.

#### Table 4.15.2

Banks	r	P.E.	6P.E	Significance/Insignificance
NABIL	0.9826	0.01041	0.0625	Significant
HBL	-0.2901	0.27265	1.6360	Insignificant
EBL	0.8094	0.10403	0.6242	Significant

**Correlation Coefficient between Deposit and Total Investment** 

(Source: Apendix B.)

The calculation of correlation coefficient between deposit and Total Investment is 0.9826 shows the highly positive correlation for NABIL. The P.E is 0.01041 and the 6P.E is 0.0625. The correlation is significant due to the value "r" which is more than six times the value of PE. At the same time, HBL bank has the negative correlation between deposit and Total Investment. The P.E is 0.27265 and the 6P.E is 1.6360. The correlation is insignificant due to the value "r" which is less than six times the value of PE. And the EBL, has 0.8094 of positive correlation coefficient. The P.E is 0.10403 and the 6 P.E is 0.6242, which shows the positive correlation for EBL. The correlation is significant due to the "r" which is more than six times the value of P.E.

#### 4.6 Major Findings

- 1. The cash and bank balance to total deposit ratio of NABIL is 10.74 percent in an average in the period under study whereas that of HBL is 8.77 percent in an average as well as EBL has 7.56 percent. The average ratio of NABIL is higher than HBL and EBL. The ratios of banks are found to be in fluctuating. The higher ratio is 14.48 percent in FY 2007/08 for NABIL, 12.17 percent in FY 2008/09 for HBL and 14.88 percent in FY 2010/11 for EBL.
- 2. The Cash and Bank Balance to Current Assets ratio of NABIL is 12.97 percent in an average in the period under study whereas that of HBL is 11 percent in an average and EBL has 8.58 percent. The average ratio of NABIL is higher than HBL and EBL. NABIL and HBL have the higher and EBL has lower average ratio with comparison to composite bank average. The C.V. for NABIL, HBL and EBL are 19.07, 19.93 and 10.61 percent respectively. Under the CV the EBL is better than NABIL and HBL.

- 3. The Investment on Government Securities to Current Assets ratio of NABIL is 16.25 percent in an average in the period under study whereas that of HBL is 21.75 percent in an average as well as 27.04 percent for EBL. The average ratio of EBL is higher than NABIL and HBL. The ratios of the banks are found to be in fluctuating. The higher ratio is 21.59 percent in FY 2009/10 for NABIL, 37.93 percent in FY 2007/08 for HBL and 54.07 percent in FY 2011/12 for EBL. The S.D is 4.48, 8.86 and 16.09 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 27.58, 40.72 and 59.5 percent respectively.
- 4. Loan and Advances to Total Deposit ratio of NABIL is 72.28 percent in an average in the period under study whereas that of HBL is 73.05 percent in an average and 76.91 percent in an average for EBL. The average ratio of EBL is higher than NABIL and HBL. The ratios of the banks are found to be in fluctuating. The S.D is 3.59, 5.11 and 2.05 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 4.96, 6.99 and 2.67 percent respectively. These facts are shown in the figure 4.4 to make easier to understand.
- 5. The Return on Loan and Advances ratio of NABIL is 3.69 percent in an average in the period under study whereas that of HBL is 2.70 percent in an average as well as EBL has 2.77 percent in an average. The average ratio of NABIL is higher than HBL and EBL. The ratios of the banks are found to be in fluctuating. The S.D is 0.21, 0.49 and 0.23 for NABIL, HBL, and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 5.69, 18.15 and 8.30 percent respectively.

- 6. The Liquidity Risk ratio of HBL is 10.74 percent in an average in the period under study whereas that of HBL is 8.77 percent in an average and 7.56 percent in an average for EBL. The average ratio of NABIL is higher than HBL and EBL. but its liquidity risk ratio is in decreasing trend except FY 2010/11. But other bank's ratios are found to be in fluctuating. The SD are 1.91, 2.25 and 4.76 for NABIL, HBL and EBL respectively. As well as the C.V. for NABIL, HBL and EBL are 17.88, 25.66 and 62.96 respectively.
- 7. The calculation of correlation coefficient between deposit and loan and advance is 0.9869, shows the highly positive correlation for NABIL. The P.E is 0.0079 and the 6P.E is 0.0474. The correlation is significant.. At the same time, HBL bank has the highly positive correlation between deposit and loan and advance and the correlation is significant. The EBL has 0.9930 of correlation coefficient, P.E is 0.0309 and the 6P.E is 0.1854, which shows the highly positive correlation for HBL. The correlation is significant due to the "r" which is more than six times the value of P.E that is 0.1854. EBL has 0.9930 correlation coefficient, P.E is 0.0042 and 6 P.E is 0.0252 which shows the positive correlation for EBL. The correlation is significant.
- 8. The calculation of correlation coefficient between deposit and Total Investment is 0.9826 shows the highly positive correlation for NABIL. The P.E is 0.01041 and the 6P.E is 0.0625. The correlation is significant.. At the same time, HBL bank has the negative correlation between deposit and Total Investment. The P.E is 0.27265 and the 6P.E is 1.6360 and the correlation is insignificant. The EBL, has
0.8094 of positive correlation coefficient. The P.E is 0.10403 and the 6 P.E is 0.6242, which shows the positive correlation for EBL and the correlation is significant.

# 1.2 CHAPTER FIVE SUMMARY, CONCLUSION AND RECOMMENDATIONS

### **5.1 Summary**

Commercial banks are the financial institution established under law whose primary functions is to accept deposit and mobilize that deposit in the form of loans and advances and investment in various forms. Commercial banks are the institution that monetizes the economy.

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, three commercial banks i.e. NABIL Bank Ltd., Himalayan Bank Ltd. (HBL) and Everest Bank Ltd. are taken as sample and analyzed their deposit mobilization. Five fiscal years secondary data, i.e. from the year 2007/08 to 2011/12 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 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 and figures 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 three 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 under the liquidity ratio, cash and bank balance to total deposit ratio of NABIL is 10.74 which is higher than other two banks. The Cash and Bank Balance to Current Assets Ratio of NABIL is 10.93 so the liquidity position of NABIL is comparatively better than other two banks. But EBL has the highest investment on government securities to current assets ratio is 27.04 which is the higher than others. Liquidity position of HBL is comparatively lower than other banks.

Considering asset management aspect of these banks, NABIL 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. NABIL has weak condition in mobilizing its collected deposits and total working fund in loan and advances. HBL is weak in investing its collected deposits in working capital comparison to NABIL and EBL. In comparison to NABLL, EBL, HBL seems slightly successful in mobilizing total fund on different types of government securities to maximize its earning capacity. EBL has slightly successfully invested more working funds in debentures and shares of other company whereas HBL is in weak position to make investment on shares and debentures.

NABIL appears to be more successful to earn profit on loan and advances than other two banks. Profit earning capacity of HBL is considered too weak. The average ratio of return on total working fund indicates that working fund of NABIL is well managed and efficiently utilized. HBL was not able to receive high interest on its total working fund in comparison with other banks. On the other hand, NABIL has mobilized its working fund properly and its earning capacity is also high. EBL 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 other banks, HBL can not able to pay interest with comparison of other banks.

Correlation coefficient between deposits and loan and advances indicates the positive relationship between the variables of NABIL, EBL and HBL. 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 all banks.

Correlation coefficient between deposit and total investment of NABIL, HBL and EBL elucidates the positive relationship or there is high degree of positive correlation. 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 all banks are higher than 6 P.E. so it is significant i.e. there

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is significant relationship between deposits and total investment though there is positive relation between them. On the other hand there is significant relationship between deposits and total investment of all banks.

#### **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 NABIL is higher than that of other banks. It means NABIL has higher cash and bank balance than other banks and it indicates NABIL has higher idle cash and bank balance. It may decrease profit of bank. NABIL 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, NABIL 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. NABIL's profitability position is better than that of other two banks and also strongly recommended to utilize risky assets and shareholders fund to gain as much as highest profit margin. Similarly, it should increase its expenses in investment sector by making the efficient investment policy.

HBL and EBL are 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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Appendix-A Simple correlation and regression Analysis between Deposit and Loan and Advances

					(In '000
Year	X (Deposit)	Y(Loan and Advances)	XY	X <sup>2</sup>	Y <sup>2</sup>
2007/08	31	21	651	961	441
2008/09	37	27	999	1369	729
2009/10	46	32	1472	2116	1024
2010/11	49	38	1862	2401	1444
2011/12	55	41	2255	3025	1681
Total	218	159	7239	9872	5319

1) NABIL Bank Ltd.

00'000)

Coefficient of correlation (r)=
$$\frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$X \frac{5x7239 \text{ Z}218x159}{\sqrt{5x9872 \text{ Z}(218)^2} \sqrt{5x5319 \text{ Z}(159)^2}}$$
  
= 0.969  
Coefficient of Determination (r<sup>2</sup>) = 0.9389  
Probable error of correlation coefficient, P.E. (r) = 0.6745 x  $\frac{1-r^2}{\sqrt{n}}$   
= 0.0079

## 2) Himalayan Bank Ltd.

J		(In '000'000'000)			
Year	X (Deposit)	Y(Total Investment)	XY	X <sup>2</sup>	$\mathbf{Y}^2$
2007/08	31	20	620	961	400
2008/09	34	25	850	1156	625
2009/10	37	29	1073	1369	841
2010/11	40	31	1240	1600	961
2011/12	47	34	1598	2209	1156
Total	189	139	5381	7295	3983

Coefficient of correlation (r)=
$$\frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$X \frac{5x5381 Z189x139}{\sqrt{5x7295 Z(189)^2} \sqrt{5x3983 Z(139)^2}}$$
  
= 9474  
Coefficient of Determination (r<sup>2</sup>) = 0.8976

Probable error of correlation coefficient, P.E. (r) = 0.6745 x  $\frac{1-r^4}{\sqrt{n}}$ 

= 0.0309

			(In '000'000'000)				
Year	X (Deposit)	Y(Total Investment)	XY	$\mathbf{X}^2$	$\mathbf{Y}^2$		
2007/08	23	18	414	529	324		
2008/09	33	24	792	1089	576		
2009/10	36	28	1008	1296	1296		
2010/11	41	31	1271	1681	1681		
2011/12	46	36	1656	2116	2116		
Total	179	137	5141	6711	5993		

## 3) Everest Bank Ltd. (EBL)

Coefficient of correlation (r)=
$$\frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

 $X \frac{5x5141 Z179x137}{\sqrt{5x6711 Z(179)^2} \sqrt{5x5933 Z(137)^2}} = 0.8094$ Coefficient of Determination (r<sup>2</sup>) = 0.655 Probable error of correlation coefficient, P.E. (r) = 0.6745 x  $\frac{1-r^2}{\sqrt{n}} = 0.104$ 

## Appendix-B

Simple correlation and regression Analysis between Deposit and Total Investment

4) NABIL Bank Ltd.

		(In '000'000'000)			
Year	X (Deposit)	Y(totoal Investment)	XY	$\mathbf{X}^2$	Y <sup>2</sup>
2007/08	31	9	279	961	81
2008/09	37	10	370	1369	100
2009/10	46	13	598	2116	169
2010/11	49	13	637	2401	169
2011/12	55	14	770	3025	196
Total	218	59	2654	<b>98</b> 72	715

Coefficient of correlation (r)=
$$\frac{m\sum XY - \sum X\sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \cdot \sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$X \frac{5x2654 \text{ Z}218x59}{\sqrt{5x9872 \text{ Z}(218)^2} \sqrt{5x715 \text{ Z}(59)^2}}$$
  
= 0.9826  
Coefficient of Determination (r<sup>2</sup>) = 0.9655  
Probable error of correlation coefficient, P.E. (r) = 0.6745 x  $\frac{1-r^2}{\sqrt{n}}$   
= 0.01041

5) Himalayan Bank Ltd.

•			(In '000'000'000		<i>0</i> )
Year	X (Deposit)	Y(Total Investment)	XY	$\mathbf{X}^2$	$Y^2$
2007/08	31	13	403	961	169
2008/09	34	8	272	1156	64
2009/10	37	8	296	1369	64

2010/11	40	8	320	1600	64
2011/12	47	10	470	2209	100
Total	189	47	1761	7295	461

Coefficient of correlation (r)=
$$\frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$X \frac{5x1761 Z189x47}{\sqrt{5x7295 Z(189)^2} \sqrt{5x461 Z(47)^2}}$$
  
= -0.2901  
Coefficient of Determination (r<sup>2</sup>) = 0.0842  
Probable error of correlation coefficient, P.E. (r) = 0.6745 x  $\frac{1-r^2}{\sqrt{n}}$   
= 0.276

## 6) Everest Bank Ltd. (EBL)

			(In '000'000'000)			
Year	X (Deposit)	Y(Total Investment)	XY	$\mathbf{X}^2$	$\mathbf{Y}^2$	
2007/08	23	5	115	529	25	
2008/09	33	5	165	1089	25	
2009/10	36	5	180	1296	25	
2010/11	41	7	287	1681	49	
2011/12	46	7	322	2116	49	
Total	179	29	1069	6711	173	

Coefficient of correlation (r)=
$$\frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$X \frac{5x1069 Z179x29}{\sqrt{5x6711 Z(179)^2} \sqrt{5x173 Z(29)^2}}$$
  
= 0.8094  
Coefficient of Determination (r<sup>2</sup>) = 0.655  
Probable error of correlation coefficient, P.E. (r) = 0.6745 x  $\frac{1-r^2}{\sqrt{n}}$   
= 0.104