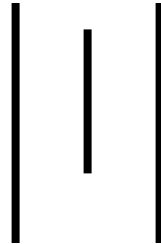


**A STUDY ON FUND MOBILIZATION**

**(A COMPARATIVE STUDY OF EVEREST BANK LTD, BANK OF  
KATHMANDU LTD, NEPAL INVESTMENT BANK LTD AND NEPAL  
INDUSTRIAL AND COMMERCIAL BANK LTD)**



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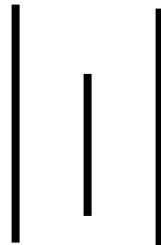
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**A THESIS SUBMITTED TO:**

**Office of the Dean**

**Faculty of Management**

**Tribhuvan University**

**In partial fulfillment of the requirements for the degree of  
Masters of Business Studies (MBS)**

**Kathmandu**

**November 2011**

# RECOMMENDATION

This is to certify that the thesis

Submitted by:  
**Susan Timila**

**Entitled:**

“A Study on Fund Mobilization”

(A Comparative Study of Bank of Kathmandu, Nepal Investment Bank , Everest Bank Limited & Nepal Industrial and Commercial Bank Limited.)

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*And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the degree of Master of Business Studies (MBS)*

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## DECLARATION

I hereby declare that the work reported in this thesis entitled " **A Study on Fund Mobilization**" (A Comparative Study of Bank of Kathmandu, Nepal Investment Bank , Everest Bank Limited & Nepal Industrial and Commercial Bank Limited.) submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (MBS) under the supervision of **Shehelata Kafle** of Shanker Dev Campus, T.U.

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Susan Timila

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## ABBREVIATIONS

AGM	:	Annual General Meeting
ALCO	:	Asset Liabilities Management Committee
BOD	:	Board of Directors
BOK	:	Bank of Kathmandu Ltd
CAR	:	Capital Adequacy Ratio
CPG	:	Credit Policy Guidelines
EBL	:	Everest Bank Ltd
FY	:	Fiscal Year
IRR	:	Interest Rate Risk
LLP	:	Loan Loss Provision
Ltd.	:	Limited
MBA	:	Masters of Business Administration
MBS	:	Masters of Business Studies
MOF	:	Ministry of Finance
NIB	:	Nepal Investment Bank Ltd
NIC	:	Nepal Industrial and Commerce Bank Ltd
NRB	:	Nepal Rastra Bank
RTS	:	Registrar to Share
S.D.	:	Standard Deviation
SD	:	Standard Deviation
SDC	:	Shanker Dev Campus
SEBON	:	Securities Board, Nepal
SEC	:	Stock Exchange Center
TU	:	Tribhuvan University

# CHAPTER- I

## INTRODUCTION

### 1.2 Background of the Study

The words deposit is one of the most important Domestic capital formation helps in making a country self sustainable. According to classical economist, one of the main factors that 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 are of growth of output which exceeds the rate of growth of population by the significant margin. Only with such rate of capital investment will the living standard begin to improve in developing country. In developing countries, the rate of saving is quite low and existing institutions are half successful in mobilizing such savings as most people have incomes so low that vertically all current income must be spent in maintain a subsistence level of consumption.

Investment is an essence of the national economy. Banking system is the integral part of investment system in productive sector. It involves the sacrifice of current rupees for future rupees. It is concerned with the allocation of present fund for later reward, which is uncertain. When people deposit money in a saving account in bank for example; the bank must invest the money in new factories and equipments to increase their production. In addition borrowing from the banks most issues stocks and banks that they sell to investors to raise capital needed for business expansion. Government also issues bonds to obtain funds to invest in such project such as the construction of dams, roads and schools. All such investments by individuals business and government involves a presto sacrifice

of income to get an expected future benefits. As a result, investment raises a nation's standard of living.

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

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

The commercial bank has been a vital ingredient for economic development. They are intermediaries, which mobilize funds through the prudent combination of investment portfolios in advanced countries. Whereas in Nepal the role of joint venture banks are still to be realized as an essential machine of mobilizing internal saving through various banking schemes in the economy. Hence, to uplift the backward economic condition of the country, the process of capital accumulation, among other prerequisites should be expedited. Capital accumulation plays an essential role in acceleration of the economic growth of nations. Which in turn is basically determined, among others by saving and investment propensities. But the capacity of saving in the developing country is quite low with a relatively higher marginal propensity of consumption. As a result developing countries are badly trapped into the vicious circle of poverty. The basic problem of these

countries is raising the level of saving and thus investments. In order to collect the enough saving, and put them into productive channels. Financial institutions like banks are necessary. It will be utilized within the economy and will either be diverted abroad or used for Unproductive consumption or speculative activities.

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

Bank is an institution that works for making the monetary transactions sound and effective. Bank collects deposits from the depositors and lends it to the people who are seeking credit for their own purposes. Bank accumulates the idle money from the scattered sources and lends it to the various productive sectors in an economy that certainly yields positive results in an economy, employment opportunities, economic activities and finally developing the whole economy. Rural people of under developed countries like Nepal need various banking facilities to enhance its economy. In most of the countries, the banks are generally concentrated in urban and semi urban sectors. They neglect rural sector due to heavy risk and low return, which is in fact, the main key to economic development without it other sectors of economy cannot be flourished.

### **1.1.4 History of Banking Development**

History tells us that it was the merchant who first evolved the system of banking by trading in commodities than money. Reviewing the history we can find that present day banker has three ancestor of particular note. These are merchant, lender, and the goldsmith. Lending and borrowing are almost as old as money itself but modern banking showed its seed in medieval Italy. The history of banking development, we can't forget the Bank of Casa de San Giorgio in Genoa, which was established in 1148; Bank of Venice was established in 1157 and the Bank of Genoa was established in 1148. In 1401, the Bank of Barcelona was established in Barcelona. In fact modern bank started to take rapid speed in forming & functioning from 17th century. During this period Bank of Milan, Bank of Florence and Bank of St. George were established in Genoa. In 1609, the Bank of Amsterdam was established in Holland, like wise in 1610, Bank of Hamburg was established in Germany and the Bank of England was established in England.

The initiation of formal banking system in Nepal commenced with the establishment in 1937 of Nepal Bank Limited (NBL), the first Nepalese commercial bank. The country's central bank, Nepal Rastra Bank (NRB) was established in 1956 by Act of 1955, after nearly two decades of NBL having been in existence. A decade after the establishment of NRB, Rastriya Banijya Bank (RBB), a commercial bank under the ownership of Nepal Government was established. Thereafter Nepal Government adopted open and liberalized policies in the mid 1980s reflected by the structural adjustment process, which included privatization, tariff adjustments, liberalization of industrial licensing, easing of terms of foreign investment and more liberal trade and foreign exchange regime was initiated. With the adoption of liberalization policy, there has been rapid development of the domestic financial system both in terms of number of financial institutions and as ratio of financial assets to the GDP. As of July 2005, the number of commercial banks has reached 17 and their branches numbered 375. A total of 60 finance companies and other Development Banks and numerous credit cooperatives have also been established. Total financial assets in 2004/2005 reached around 54.09 percent of GDP and the M2/GDP ratio, which shows the financial sector development or financial deepening increased from 12.4 percent in 1975 to 50.9 percent in 2000.

In the context of banking development, the 1980s saw a major structural change in financial sector policies, regulations and institutional developments. Nepal Government emphasized the role of the private sector for the investment in the financial sector. The financial sector liberalization, started already in the early eighties with the liberalization of the interest rates, encompassed further deregulation of interest rates, relaxation of entry barriers for domestic and foreign banks, restructuring of public sector commercial banks and withdrawal of central bank control over their portfolio management (Acharya et al, 2003). These policies opened the doors for foreigners to enter into banking sector under joint venture. Consequently, the third commercial bank in Nepal, or the first foreign joint venture bank, was set up as Nepal Arab Bank Ltd (now called as NABIL Bank Ltd ). in 1984. There after, two foreign joint venture banks, Nepal Indosuez Bank Ltd. (now called

as Nepal Investment Bank) and Nepal Grindlays Bank Ltd (now called as Standard Chartered Bank Nepal Ltd.) was established in 1986 and 1987 respectively. Thereafter, another 12 commercial banks have been established within the period of 12 years. Nepalese banking system has now a wide geographic reach and institutional diversification. Although, Nepalese financial sector is dynamic, a lot of scope for development of this sector exists. This is because the banking and non-banking sectors have not been able to capture all the potentialities of business till this time. It is evident from the Rural Credit Survey Report that the majority of rural credit is supplied by the unorganized sector at a very high cost – perhaps being at two or three time of the formal sector - suggesting that the financial sector is still in the path of gradual development. Overdue loans and inefficiency of the older and the larger of commercial banks have aggravated and have been made to compete with the new trim banks with no rural operations. Also, the commercial banks, domestic or joint venture have shown little innovation and positive attitude in identifying new areas of saving and investment opportunities. Following table reflects the present development of commercial banking institutions in Nepal.

**Table 1.1**  
**List of Commercial Banks in Nepal**

<b>S.N</b>	<b>Commercial Banks</b>	<b>Head Office</b>
1	Nepal Bank Ltd.	Kathmandu
2	Rastriya Banijya Bank Ltd.	Kathmandu
3	NABIL Bank Ltd.	Kathmandu
4	Nepal Investment Bank Ltd.	Kathmandu
5	Standard Chartered Bank Nepal Ltd.	Kathmandu
6	Himalayan Bank Ltd.	Kathmandu
7	Nepal SBI Bank Ltd.	Kathmandu
8	Nepal Bangladesh Bank Ltd.	Kathmandu
9	Everest Bank Ltd.	Kathmandu
10	Bank of Kathmandu Ltd.	Kathmandu
11	Nepal Credit & Commerce Bank Ltd.	Siddarthanagar
12	Lumbini Bank Ltd.	Narayangadh
13	Nepal Industrial & Commercial Bank Ltd.	Biratnagar
14	Machhapuchhre Bank Ltd.	Pokhara

15	Kumari Bank Ltd.	Kathmandu
16	Laxmi Bank Ltd.	Birgunj
17	Siddhartha Bank Ltd.	Kathmandu
18	Agricultural Development Bank Ltd	Kathmandu
19	Global Bank Ltd.	Birgunj
20	Citizen Bank Ltd	Kathmandu
21	Prime Commercial Bank Ltd	Kathmandu
22	Sunrise Bank Ltd	Kathmandu
23	Bank Of Asia Nepal Ltd	Kathmandu
24	Development and Credit Bank Ltd.	Kathmandu
25.	NMB Bank Ltd.	Kathmandu
26.	Kist Bank Ltd	Kathmandu
27.	Janta Bank Ltd	Kathmandu
28.	Civil Bank Ltd	Kathmandu
29.	Mega Bank Ltd	Kathmandu
30.	Commerce & Trust Bank Ltd	Kathmandu
31.	Century Bank Ltd	Kathmandu

Source: [www.nrb.org.np](http://www.nrb.org.np)

## 1.2 Profiles of the Banks under Study

### Bank of Kathmandu

Started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. Bank of Kathmandu aims to facilitate the nation's economy and to become more competitive globally. Bank of Kathmandu Limited has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public. Bank of Kathmandu's main aim is to contribute to the sustainable development of the nation by mobilizing domestic savings and channeling them to productive areas by using the latest banking technology to provide better, reliable and efficient services at a reasonable cost; to facilitate trade by making financial transactions easier, faster and more reliable through relationships with foreign banks and money transfer agencies; and to contribute to the overall social development of Nepal.

The shareholding is as follows:

- i. Promoters 42%
- ii. General Public 58%

### **Nepal Investment Bank**

Established in 1986, which was previously known as the Nepal Indosuez Bank is a joint venture between Nepali and French partners namely Credit Agricole Indosuez. This bank made a preemptive move as being one of the first financial banks under complete Nepali Management taken over by the Nepali consortium led by P.B Pandey. The institution has showed positive growth in terms of profit, loans and debt. It has also been awarded the banker of the year on 2003, 2005, and 2007.

The bank has issued debentures worth NRs. 550 million in the last few years in order to raise more funds for its expansion. It currently has 19 branches and is in the process of opening three more, in Janakpur, Nepalgunj and Thamel. A group of companies under P.B Pandey holds 50% of the shares, Rashtriya Banijya Bank holds 15%, Rashtriya Beema Sansthan 15%, and the remaining 20% being held by the general public.

### **Nepal Industrial and Commercial Bank**

Started operations in July 1998 as the first commercial bank in the country capitalised at NRs. 500 m. In April 2005, after an assessment done by NRB under CAEL rating system, NIC Bank was rated the highest among all private sector banks in the country. The bank has an authorized Capital of NRs, 1billion with a paid-up capital of NRs. 944 million. The bank is the first banks to be issued ISO 9001:2000 for Quality Management System. The bank currently operates 12 branches across the country with its registered office at Biratnagar but the head office in Kathmandu. NIC Bank became the number 1 in Nepal to be provided a line of credit by International Finance Corporation (IFC), an arm of World Bank Group under its Global Trade Finance Program enabling the bank's Letter of Credit to accepted/confirmed by more than 200 banks worldwide.

Holdings:

- Promoters 65%
- Public 35%

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

Started its operations in 1994 and joined hands with Punjab National Bank (PNB), India as its joint venture partner in 1997. Everest Bank has an authorized capital of Rs. 1 billion with paid up capital being Rs. 813 million of which Rs. 378 million i.e. 73% of it comprises of ordinary shares and 27% of non redeemable preference shares. The bank has been conferred with the “Bank of the Year 2006, Nepal” award by The Banker, a publication of The Financial Times, London. The bank was bestowed with the “NICCI Excellence award” by Nepal India Chamber of Commerce and Industry for its spectacular performance under finance sector.

The current shareholdings of the company are as follows:

- Promoters 50%
- Public 30%
- Foreign Investors 20%

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

This study focuses on the history of the deposit mobilization of total commercial banking system and four sampled banks BOK, NIB, NIC and EBL. This study is made the especial aim of observing the deposit mobilization position of total commercial banking system in Nepal and comparing the deposit mobilization position of BOK, NIB, NIC and EBL. Therefore the study certainly focuses on the elements related to deposit mobilization. The study focuses on the analysis of efficiency of deposit mobilization of total commercial banking system and four sampled banks.

### **1.8 Statement of the Problem**

Nepal is underdeveloped country and rapid economic development is the basic need of the country. Development by its means is not possible within a short period and it takes a

long time for the proper development of a country, it has to build up infrastructure. In Nepal, the process of development started only after 1956 A. D. when the first five year plan came into practice.

Capital in fact, plays the leading role for the economic development of a country. But in Nepal, there is shortage of capital. There are various sources of accumulating capital internal and external sources. Under external sources: aid, grants and loans are the main sources. In internal sources: accumulating capital, taxes, public enterprises, public debt are the popular in our country. But due to underdevelopment, poverty, lack of banking knowledge the desired capital for the development of the country cannot be accumulated from those internal sources. So, it can be said that in Nepal's present situation bank deposit is dependable and permanent sources of capital accumulation. The need of deposit mobilization for economic development of a country is no more to question. But we are facing an acute problem of resources mobilization. We have 25 commercial banks in Nepal which are very much considered to be vital financial institution to mobilize domestic resources. Under the prevalence of these situations the study has try to deal with following problems.

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

### **1.9 Objective of the Study**

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

The main objectives of the study are:

- To analyze the financial factors like liquidity management, efficiency and profitability position in relation to deposit mobilization of Bank of Kathmandu, Nepal Investment Bank and Nepal Industrial and Commercial Bank.
- To observe the trend of deposit.
- To analyze the relationship between deposits and loans & advances/ Investment.
- The effectiveness of deposit mobilization of commercial banks.
- To examine how far the interest rates of deposits have positive relationship with the deposit collection of commercial banks.
- To see the impact of an interest rates of loan on the credit extended by commercial banks.
- To provide suggestions and recommendations to the concerned for the further improvement.

### **1.10 Significance of the Study**

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

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

- Important to know how well the bank is utilizing its deposits.

- Important to policy formulator and also be useful for academic professionals, students particularly those involves in commerce, CA and financial institutions to formulate policies and plans on the basis of the performance of the bank.
- Important to the management party of selected banks for the evaluation of the performance of their bank and comparison with other banks.
- Important for the investors, customers (depositors, loan takers) and personnel of bank to take various decisions regarding deposits and loan advances.
- This study has been equally important to the others who are interested to know about the area. It may encourage to researcher to research further.

### **1.11 Limitation of the Study**

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

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

### **1.8 Organization of the Study**

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

#### **Chapter I: Introduction**

It is an introductory chapter which contains background of the study, profiles of the companies, Focus of the study, objective of study, Significance of the study, limitations of study.

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

The second chapter deals with the study of related books and research work which are already published and conducted by different experts and researcher in the field of deposit mobilization of bank.

## **Chapter III: Research Methodology**

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

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

The fourth chapter introduces the main aspect of the study. It is analyzing chapter which deals with analysis and interpretation of data using financial and statistical tools. Major findings of the study have been presented at the end of this chapter.

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

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

## **CHAPTER- II**

### **REVIEW OF LITERATURE**

Review of literature can be defined as the process of reviewing the studies or other relevant research works done in the subject matter so that all the past studies and conclusions and the deficiencies may be known. It helps to know the past research works in the related topics and its outcome and offer vital links with various trends and phases in the researches. It helps to identify problems, determine methodology for the research work and avoid unintentional replication of previous research work and help to interpret the significance of research's results in a precise manner. An effective research is based upon the past knowledge, a survey of past literature helps to eliminate the duplication of what has been done. A review of previous related research helps to formulate a satisfactory structure for the new project.

To explore the relevant and true facts for the research purpose, this chapter highlights the literature available related to the study. An attempt has been made to look into bank publication, periodicals and central bank's rules and regulations. In addition, informal interviews with bank personnel and a few customers/ borrowers have been aimed to receive.

This chapter is basically concerned with review of literature relevant to the topic "Deposit Mobilization of BOK, NIB NIC and EBL". Every study is very much based on past knowledge. The previous studies cannot be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past studies.

"Literature Review is basically a "Stock Taking" of available literature in one's field of research. The literature survey thus provides us with the knowledge of the status of their

field of research” (Wolf and Pant 2000, p: 30). Therefore, this chapter has its own importance in the study.

## **2.2 Conceptual Review**

Bank is an institution which deals in money and credit. Banks are the institution which acts as an intermediary between different kinds of people and institutions who are in need of money and who can supply money at certain rate of interest. A bank simply carries out the work of exchanging money, providing loan, accepting deposits and transferring the money.

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

Commercial banks collect capital in terms of the deposit of the general public and mobilize to the productive fields to activate the entire economic sector. Banking provides security to the deposits of the general public and organization on one hand and pays interest on such deposit on the other and encourage saving. 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. It is the financial institution, which provides wide range of banking services such as saving, credit payment, remittance, issuing letter of credit, issuing guarantee, agency function and earn profit as interest, commission etc.

The concept of bank can be made clear from the following definitions also:

"Commercial bank" a bank dealing with the general public, accepting deposit from and making loans to large numbers of household and small firms. Such banks are known in the UK as retail or high street banks. They also provide various services for depositors, including provision of cash and credit cards, storage facilities for valuables and documents, foreign exchange, stock broking, mortgage finance and executor services. Commercial banks are contrasted with central banks, and with investment, merchant and

other specialist banks which deal little with the general public "(Oxford dictionary of economics 2004, p: 65).

"Commercial banks are those who pool together the savings of the community and arrange for their productive use. They supply the financial need of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant loans in the form of cash credits and overdrafts. "Accepting the financing, the Bank also renders services like collection of bills and cheques, safe keeping of valuables, financial advising etc. to their customers" (Vaidya, 2001, p: 38).

Commercial Banks are those banks who pool together the savings of the community and arrange for their productive use. They supply the financial needs of moderns business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial Banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short terms needs of trade and industry such as working capital financing. They can not finance in fixed assets. They grant loans in the forms of cash credits and overdrafts. Apart from financing they also render services like collection of bills and checks, safe keeping of valuables financing advising etc. to their customers.

Therefore a bank can be defined as a financial institution which deals with the monetary activities by accepting deposits, lending to the varies parties against securities and performing agency service to its clients/ Customers.

### **2.1.2 Role of Commercial Banks in Nepal**

Commercial bank plays the vital role in economic development of countries like Nepal which is totally depending upon the agriculture. Commercial banks provide blood as a

financial support to the industrial sectors, trade and commerce so that the production will be continued. For all the development, the regular supply of financial resources is a prerequisite. Commercial Banks are those banks that are engaged in commercial banking transactions and exclude from this description such banks are established for achieving certain specific goals such as co operatives, agricultural and industrial banks, much wider activities in relation to the Economic Development of the country have been empowered to the banks. Apart from strictly performing commercial functions, Commercial Banks so described in the act are empowered to perform such functions as undertaking of agency business. In the issue of Shares & Debentures for public corporations guaranteeing & underwriting foreign exchange business under the restriction imposed by Foreign Exchange Act, Rules, Orders & Notifications; advancing loans for period not exceeding one year against the security of the jewelers , gold & silver ornaments the mortgage of land & buildings, for acquiring plant & machinery ; and receiving deposits of government money according to the order of Nepal Government in those places where there are no branches of the NRB or RBB or where the NRB gives its consent to remit through bills of exchange and checks in Nepal and foreign countries and so on. Recently central bank has cleared that the commercial bank also can work as government bank for the public like Everest bank is working for Inland Revenue office. Some important roles of commercial bank are listed below.

### **i Economic Development**

Commercial banks collect the capital in terms of deposit from unproductive sectors and supply as loan in productive sectors like agriculture, industry trade and commerce. The objectives of the commercial banks are to mobilize the idle resources in productive uses collecting them from scattered and various sources. Its role in economic development is thus immense in order to bring out mobility of resources to meet the ever increasing needs of financing or the various economic activities. It is quite clear that commercial banks are the most important institutions of capital formation that imply mainly saving, investment and productions which ultimately lead to the economic development of a country.

## **ii Generating Employment Opportunity**

Now in Nepal financial institutes are developing as a financial industries which also creating employment opportunity to creative and capable personnel. In current situation commercial banks are providing more than 5000 employment opportunity.

## **iii Money Supply**

Commercial banks play the vital role in money supply. Central bank of the country issues the money in the market which will supply by the commercial bank. With the help of commercial bank issue money will go up to the hand of public.

## **iv Commercial Banks Helps in Regional Development**

Commercial banks help in regional development as well. In the context of expanding the businesses commercial banks opens its branches in different parts of the country, which helps in the development of the regional development.

## **v Helps in Development of Foreign Trade**

Commercial banks help to develop foreign trade. It issues letter of credit and plays a role of guarantor in international trade. Commercial bank also provides different modes of payment like demand draft, telegraphic transfer etc.

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

Banks collect unused money from public by providing attractive sound interest and can earn profit by lending it on mainly in business organization, industrial and agriculture sectors and investing in government bonds. So, the main function of commercial banks is to mobilize idle resources in productive areas by collecting it from scattered sources and generating profit. There are many functions performed by commercial banks which may be summarized follows:

#### **a. Accepting Deposits**

The main objective of the commercial banks is to collect the deposit. Commercial banks accept the deposit from the public who has surplus funds under three main headings namely current, saving and fixed deposits.

##### **1. Current Deposit**

Current deposits are also known as demand deposits. The demand deposit in which an amount is paid immediately at the time of any account holder's demand is called demand deposit. Though the bank can't gain profit by investing it in new sector after taking from the customer, this facility is given to the customer. Therefore, the bank does not give interest on this account.

##### **2. Saving Deposit**

In saving deposits, there is restriction on the maximum amount that can be deposited and also withdrawals from the account. This deposit is suitable and appropriate for the people

of middle class who have low income and small saving. The bank usually pays small interest to the depositors against their deposits.

### **3. Fixed Deposits**

Fixed deposit is the one, which a customer is required to keep a fixed amount with the bank of specific periods, generally by those who do not need money for the stipulated period. She/he is not allowed to withdraw the amount before expiry of the period. The rate of interest is higher than other deposit. The bank pays a higher interest as such on deposit

#### **b. Advancing Loan**

Commercial bank collects funds by taking all kinds of deposits and then it mobilizes by providing loans and advances. Direct loans and advances are given to all types of persons against the personal security of the borrowers or against the security of movable and immovable properties. There is various method of advancing loans e.g.

- Overdraft
- Cash credit
- Direct loans
- Discounting bill of exchange etc.
- TR Loan
- Project Loan
- Working capital Loan

#### **c. Agency Services**

A commercial bank provides a range of investment services. It undertakes to buy and sell securities on behalf of its clients. The banks undertake the payment of subscriptions premiums rents etc. It collects checks, bills, promissory notes, dividends, interest etc on behalf of the customers. The bank charges a small amount of commission for those services. It also acts as correspondent or representative of its customers, others, banks and financial institutions.

#### **d. Credit Creations**

Credit creation is one of the important functions of the commercial banks. In order to earn profits, they accept deposits and advance loans by keeping small cash in reserve for day to day transactions. When a bank advances a loan, it opens an account to draw money by cheque according to his needs. By granting a loan, the bank creates credit or deposits.

#### **e. Other Functions**

Other functions of the commercial banks include the following:

- Assist foreign trade
- Offers security brokerage services
- Security brokerage service

#### **2.1.4 Credit Creation by Commercial Banks**

One of the important functions of commercial bank is the creation of credit. Credit creation is the multiple expansions of banks demand deposits. It is an open secret now that banks advance a major portion of their deposits to the borrowers and keep smaller parts of deposits to the customers on demand. Even then the customers of the banks have full confidence that the depositor's lying in the banks are quite safe and can be withdrawn demand. The banks exploit this trust of their clients and expand loans by much more time than the amount of demand deposits possessed by them. This tendency on the part of the commercial banks to expand their demand deposits as a multiple of their excess cash reserve is called creation of credit.

The single bank cannot create credit. It is the banking system as a whole which can expand loans by many times of its excess cash reserves. Further, when a loan is advanced to an individuals or a business concern, it is not given in cash. The bank opens a [deposit](#) account in the name of the borrower and allows him to draw upon the bank as and when required. The loan advanced becomes the gain of deposit by some other bank. Loans thus make deposits and deposits make loans.

Credit Creation is most important function of commercial bank, like other financial institute bank aim to earn profit by making advance to other. Therefore, some time bank is called a factory of credit creation. Everyone know that people cannot [withdrawal](#) money in simultaneous, some with draw while other deposit at same time. So bank encourages credit creation by given advance to other, keep small cash in reserve se for day to day transaction.

We know that the bank provides overdraft facility to a customer on the basis of some security. The bank enters the amount of the overdraft in the existing account of the customers & the customer is allowed to overdraw his account up to the fixed limit subject to the condition that the amount overdrawn from time to time is more than fully covered by the market value of the securities lodged with the bank. The amount may be used to buy goods & services. He can make payment by issuing cheques in settlement of his transactions. This process gives the bank an additional supply of money which did not exist before.

"A bank also creates a deposit by making investments by buying government bonds& securities. The bank pays for the bond through a cheque on itself to the central bank. If it buys security from others, it creates the amount in the account of the seller, provided he is the bank's customers. Otherwise it pays by cheque which is deposited in some other bank. In all such cases, liabilities & assets in the banking system on the whole are increased. Thus loans by create deposits or credit is created by banks" (Vidya, 2001, p: 42-44).

Some writers stress on the fulfillment of credit needs of various sectors which insure investment. The investment lending policy of commercial bank is based on the profit maximization as well as the enhancement of the country.

### **2.1.5 Resources of Nepalese Commercial Banks**

Commercial banks are those banks who pool together the deposit as main resources and arrange for their productive use. Nepalese financial market is highly comparative in the terms of resources collection which are also effecting in deposit interest rate. The major financial resources of Nepalese commercial banks are listed in below.

**a) Equity Share Capital**

Share capital is one of the important terms in banking sectors but not a major resource of finance. Normally in Nepal Share capital is defined as equity share capital. Share capital includes Share capital and general reserve. As per NRB for commercial bank 70% of Share capital is collected from the Promoter share holders and remaining 30% are collected from General Public. General reserve is also share holder funds which are separated from the net profit. As per NRB guidelines for commercial bank minimum Rs.2, 000,000,000 is required as paid up capital.

**b) Preference Share Capital**

Commercial bank can also collect the financial resources by issuing the preference share capital to the general public. In Nepali market except by Everest bank capital is not collected by issuing Preference Share Capital.

**c) Deposits**

Deposits are the main financial resources for the commercial bank. 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. There are mainly three types of deposits: current, saving and fixed. Saving and fixed deposit are interests bearing account where as current is not interest bearing account for the commercial bank.

**d) Borrowing**

Some time Financial resources collected by Share capital and deposit may not fulfill the necessities of the society. To fulfill the need of society commercial collect the resources as a borrowing from other financial organization. In Nepal borrowing mean collecting

resources from other financial organization as a loan under this method commercial banks have to pay high rate of interest as compare to the deposit.

### **2.1.6 Concept of Deposit**

Deposit is nothing more than the assets of an individual which is given to the bank for safe-keeping with an obligation to get something (interest) from it. To a bank these deposits are liabilities. Commercial bank Act 2031 (1974) defines “Deposits” as the amount deposited in a current, savings or fixed accounts of a bank or financial institution (Bhandari, 2003, p 73).

The deposits are subject to withdrawals by means of cheque on a short notice by customers. There are several restrictions on these deposits, regarding the amount of deposit, number of withdrawal etc. These are considered more as investments and hence they earn some interest. The rate of interest varies depending on the nature of the deposits. The bank attracts deposits from customers by offering different rates of interest and different kinds of facilities. Though the bank plays an important role in influencing the customer to save and open deposit accounts with it, it is ultimately the customer who decides whether s/he should deposit his surplus funds in current deposit a/c, saving deposits or fixed/time deposit a/c. Bank deposits arise in two ways. When the banker receives cash, it credits the customer’s account, it is known as a primary or a simple deposit. People deposit cash in the banking system and thereby convert one form of money, cash, into another form, bank money. They prefer to keep their money in deposit accounts and issue cheques against them to their creditors. Deposits also arise when customers are granted accommodation in the form of loans. When a bank grants a loan to a customer it doesn’t usually pay cash but simply credits the customer's 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.

### **2.1.7 Types of Deposits**

Banks are innovating and offering new deposit plans and pricing scheme to win the competition in challenging banking market. The number and rang of deposit service offered by banks is indeed impressive. At the same time, many of them are often confusing for bank's general customers. Like colors and shades of lipsticks manufacturing company, deposit plans designed to attract customer funds today come in more than 30 various, each plan having different features intended to match business and household needs. The deposits are collected under variety of accounts. On the basis of nature and features deposits can be classified into three types. The basic three types of deposits most common in modern banking market are.

#### **a) Current Deposit**

Current deposits are also known as demand deposits. A demand deposit is a deposit that can be withdrawn on demand at any time and in any amount up to the full amount of the deposit. Though the bank can't gain profit by investing it in new sector after taking from the customers, this facility is given to the customer. Therefore, the bank doesn't give interest on this account. In these deposits, banks provide the accountholders with the facilities of payment services, safekeeping funds, and recordkeeping for any transactions carried out by cheques. Interest payments have been prohibited on current account. It is also called checking accounts in the United States.

#### **b) Saving Deposit**

Saving account is another important source for the commercial bank. Recently NRB has circulated that the saving account can only opened by the individual person. Saving accounts pay interest to the deposits, but have no specific maturity date on which the funds need to be withdrawn or reinvested. Any amount can be withdrawn from saving accounts up to the amount deposited. Under normal circumstances, customers can withdraw their money from a saving account simply by presenting cheques and now also withdraw by using the ATM machine.

#### **c) Fixed Deposit**

Fixed deposits are deposits on which the depositor and the bank agree that the money will not be withdrawn without substantial penalty to the depositor before a specific date. For the fixed deposit of client commercial bank provides the certificates called Fixed deposit Receipts. Fixed Deposit has not liquidity as compare to the saving account because it can use only after the expiry of fixed deposit date. Fixed deposits required a minimum deposit amount.

#### **d) Call Deposits**

Call deposit is the hybrid deposit which incorporates the characteristics of both current and saving's deposit. In call deposits money can be withdrawn at call and it also earns certain rate of interest. Recently NRB has restated to open the saving account for the Corporate houses as well as NGOs so this organization are opening the call account from which some interest are earned and can withdraw money whenever required. The interest rate is fixed on negotiation between the bank and the depositor.

#### **2.1.8 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.

### **2.1.9 Deposits Mobilization**

Every bank board of directors formulates a deposits mobilization policy statement in order to define the objectives of a bank's liquidity management and investment portfolio. In banking sectors mobilization is concerned with investing the collected public saving in income generating sectors like providing loan, investing in government bonds, treasury bills, foreign currency etc. Sustainability of commercial bank is totally depending upon the deposit mobilization of the bank. Proper mobilization of deposit will help to generate more profit, safety in investment and reliability toward the society or public which will increase the goodwill as well as help in maximization the wealth.

The main objective of Deposit Mobilization is to convert idle saving into active saving” (NBL, 2037 N0.4, p: 7). Saving refers to that part of the total income which is more than the expenditure of the individual. In other words,  $\text{saving} = \text{Total income} - \text{total expenditure}$ . Basically saving can be divided into two parts: Voluntary saving & Compulsory Savings. Amount deposited in different accounts of Commercial Bank, investment in government securities are some examples of voluntary saving. A commercial bank collects deposit through different accounts like fixed, saving & current.

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 apart 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.

### **2.1.10 Need for Deposits Mobilization**

Capital is essential for each and every sectors of investment. Without capital, trading, business commercial, industrial sectors will not be sustained. Such capital will supply by the commercial bank as a deposit mobilization. Deposit mobilization is start from the saving. Saving in a financial institution; security, liquidity and return. Rural poor want to invest in a secure location and seek confidence to know that their funds will be protected. Some point are listed in below which also cleared the need of deposit mobilization.

- Capital is needed for the development of any sector of the country. The objective of deposit mobilization is to collect the scattered capital in different forms within the country.
- The need of deposit mobilization is felt to control unnecessary expenditure, if there is no saving, the extra money that the people have, can flow forwards buying

unnecessary and luxury goods. So, the government also should help to collect more deposit, steeping legal procedures to control unnecessary expenditures

- Commercial banks are playing a vital role for National Development. Deposit mobilization is necessary to increase their activities. Commercial banks are granting loan not only in productive sectors but also in other sectors like food, grains, gold and silver etc.
- It is much more important to analyze the collected deposit in one priority sectors of a country. In our developing country's we have to promote our business and other sectors by investing the accumulated capital towards productive sectors.

Deposit mobilization plays a vital role for the economic development of an underdeveloped and developing country rather than developed one. It is because a developed country does not feel the need of deposit mobilization for capital formation due to developed capital markets in every sector. But in an under developed country and developing country, deposit mobilization plays a great role in such countries. Low National income, low per capita income, lack of technical knowledge, vicious cycle of poverty, lack of irrigation and fertilizer, pressure of over population, geographical conditions etc. are the main problems of economic development of an under developed country like Nepal. So far the developments of these sectors concerned, there is needs of more capital. Again, instead of the developments of a particular sector, the development of every sector should go side by side. So, the development process of these sectors on one side and to accumulate the scattered and unproductive sectors deposit on the other is the felt need of an under developed country. We can take this in our country's present context (NRB, Banker's Prakashan, 1984: No. 24:12).

## **2.2 Review of the Related Studies**

This part consists of a review of past studies conducted by other researchers which are relevant to the topic.

### **2.2.1 Review of Articles**

**Bhatta** (2054), on his article “financial policies to prevent financial crisis” has given more emphasis on Nepalese financial market sector. He has mention the financial crisis occurred in China, Mexico, South Asia, Russian Federation Ecuador, Brazil & Argentina. This crisis affected all this economic by posing negative effect in their real output. He has also focused on Nepalese financial market, which is directly affected by the national and international events. The most effected event was September 11 incident in the U.S.A., have added more to the fragility in the global financial market. In present context in many part of the world, the move towards liberalization is getting its momentum on one hand and process of economic development is being threatened due to various anticipated incidents on the other. He has define a financial crisis is a description to financial markets in which adverse selection and moral hazard problems become much worse, so that financial markets are unable to efficiently channel funds to those who have the most productive investment opportunities. He has given light on the dynamics of financial crisis dividing it into three stages. Also he has suggested the policies to prevent financial crisis. Following policies are supposed to be applicable for preventing financial crisis.

- Prudential supervision.
- Accounting standards & disclosure requirements.
- Legal and judicial system.
- Monetary policy and price stability.
- Exchange rate regimes and foreign exchange reserves.
- Capital controls.
- Restrictions on foreign denominated debt.
- Reduction of the role of the state owned financial institution.
- Encouraging market based discipline.
- Entry of foreign banks.
- Limitation of too-big –to fail in the corporate sector.
- Sequencing financial liberalization etc.

Lastly he has conducted that there is no doubt that the key to preventing future financial crisis is to implement sound domestic economic policies and build robust financial institutions. The experiences of the crisis hit countries, especially during the decade of nineties, has proved that a country opening to liberalized economic policy should adopt sequencing policies constraining the pace of participation on the global market place until a sound domestic infrastructure can be put into place (Bhatta, 2054 B.S.).

**Bajracharya** (2047), through his article “Monetary Policy & Deposit Mobilization in Nepal” has concluded that the mobilization of domestic savings is one of the monetary policies in Nepal. For this purposes commercial banks stood as the vital & active financial intermediary for generating resources in the form of deposit of the private sector so for proving credit to the investor in different aspects of economy (Bajracharya, 2047 BS, p:93-97). Fry, in the article, “Resources Mobilization & Financial Development in Nepal” says that the interest rate fixing authorities causes adverse effect on income distribution. Interest rate affects the savings & its mobilization. A high interest rate diverts the resources from unproductive tangible assets into financial claim. For Nepalese people & Nepalese undeveloped money & capital market, interest can be taken as an important weapon in mobilizing the internal resources. Higher interest rate pushed people to some money & it allows people to invest into best opportunities (Fry, 1974, p: 15). Joshi the chief officer of NRB in the topic “Rural Saving Mobilization in Nepal” states that: The ability to save & the incentive to save are the two major determinants of saving. The incentive to save as reflected in NRB real interest rate policy can be stretched for with profit. It is highly probable that the further increase in the growth rate of financial saving can materialize if a flexible policy is pursued to keep real interest rate at a positive level (Joshi, 1994, p: 65-66).

Eventually the deposit expansion is to be bounded constrained by the low saving ability of the people as indicated by stagnant per capita GDP over the past decade. For a sustained growth of deposits or of overall saving rate what is needed more is to increase the income level of the people in order therefore to make saving mobilization strategy effective & successful policy measures should be taken considering two aspects of the

strategy. In short run, policy should focus on the appropriate steps to tap saving within the existing banking framework while the long run measures should be adopted with a review to raising the investment rate & making it more productive.

The researchers suggest the following points to increase and to extend volume of credit;

- Effective publicity and attractive prizes.
- Branch expansion policy.
- Extend the house saving account.
- Revision in interest rate policy.
- Credit planning.
- Win the confidence of local people.
- Investment in priority sector.

**Pradhan** (2053), in his article “Deposit Mobilization, its Problem and Prospects” has presented that deposit is the life-blood of every financial institutions, like commercial bank, finance company, and co-operative or non-government organization. He further adds in consideration of most of banks and finance companies, the latest figure dopes produce a strong feeling that serious review must be made of problems and prospects of deposit sector. Leaving few joint venture banks, other organizations rely heavily, on the business deposit and credit disbursement (Pradhan, 2053 BS, p: 9-10).

The writer has highlighted following problems of deposit mobilization in Nepalese context.

- Most of the Nepalese do not go for saving in institutional manner, due to the lack of good knowledge. However, they are very much used of saving be it in the form of cash or ornaments. Their reluctance to deal with institutional system is governed by the lower level of understanding about financial organization process, withdrawn system, and availability of depositing facilities and so on.
- Unavailability of the institutional services in rural areas.
- Due to lesser office hours of banking systems people prefers holding and cash in the personal possession.

- No more mobilization and improvement of the employment of deposits and loan sectors.

The writer has also recommended for the prosperity of deposit mobilization which are as follows;

- By providing sufficient institutional services in the rural areas.
- By cultivating the habit of using rural banking unit.
- By adding services hour system to bank.
- NRB could also organize training programs to develop skilled man power.
- By spreading co- operative to the rural areas for development of mini-branch services to these backward areas.

**Kafle** (2053) in his article entitled “NRB and its Policies for Monetary Control” opines that liberalization, the effect on deposit seems to be positive in the later period as it increased from 17.74 to 21062% of nominal GDP. And, this, there was a positive effect on saving mobilization, however in the case of loan and advances, commercial banks were found to be underlet because the percentage of loans and advances to nominal GDP was only 100.6 & 11.9 in the two period respectively (Kafle, 2053 B.S. p:15).

**Shrestha**, in her Ph.D. thesis entitled. “Investment planning of Commercial Banks in Nepal.” Has concluded that bank portfolio (loan and investment) of commercial banks has been influenced by the variable securities rates. Investment is planning and operation of commercial banks in Nepal has not been found satisfactory in terms of profitability, safety, liquidity, productivity, and social responsibility. To overcome this problem she has suggested “commercial; bank should take their investment function with proper business attitude and should perform lending and investment operation efficiently with proper analysis of the project.

**Shrestha**, Deputy Chief officer of NRB Banking operation department, has given a short glimpse on the “Portfolio Management in Commercial Banks, Theory and Practice” Shrestha has highlighted issue in the article.

The portfolio management becomes very important both the individual and the institutional investors. Invest would like to select a best mix of invests assets subject to the following aspects.

- Higher return which is comparable with alternative opportunities available according to the risk class of investors.
- Good liquidity with adequate safety of investment.
- Certain capital gain.
- Maximum tax concession.
- Flexible investment.
- Economic efficient and effective investment mix.

In view of above aspects following strategies are adopted.

- Do not hold any single security; try to have a portfolio of different securities.
- Do not put all the eggs in the one basket; to have diversified investment.
- Choose such a portfolio of securities, which insures maximum return with minimum risk or lower of return with added objectives of wealth maximization.

However, Shrestha has also presented following approach to be adopted for designing a good portfolio and its investment.

- To find out the invisible assets (generally securities) having scope for the better returns depending upon individual characteristics like age, health, need, disposition, liquidity, tax liability etc.
- To find out the risk of securities depending upon the attitude of investor towards risk.

- To develop alternative investment strategies for selecting a better Portfolio, this will insure a trade-off between risk and return. So, as to attach the primary objectives of wealth maximization at lower risk.
- To identify of securities for investment to reduce volatility of return and risk.

Shrestha has presented two types of investment analysis technique; i.e. fundamental analysis and technical analysis to consider any securities such as equity, debenture or bond and other money and capital market instrument. He has suggested that the bank having international network can also offer access to global financial markets. He has pointed out the requirements of skilled manpower, research and analysis team and proper management information system (MIS) in any commercial banks to get success in portfolio management and customer confidence.

According to Shrestha, the portfolio management activities of Nepalese commercial banks at present are in nascent stage however, on the other hand, most of the banks are not doing such activities so far because of following reasons.

- Unawareness of the clients about the services available.
- Hesitation of taking risk by the clients to use such facilities.
- Lack of proper techniques to run such activities in the best and successful manner.
- Less developed capital market and availability of new financial instruments in the financial markets

Regarding the joint venture commercial banks, they are very eager to provide such services but because of above mentioned problems very limited opportunities are available to the banks for exercising the portfolio management.

Shrestha has drawn following conclusion-

- The survival of the banks depends upon its own financial health and various activities.
- In order to develop and expand the portfolio management activities successfully, the investment management mythology of a portfolio manager should reflect high

standard and give their clients the benefits of global strength, local insights and prudent philosophy.

- With the disciplined and systematic approval to the selection of appropriate countries, financial assets and the management of various risks; the portfolio manager could enhance the opportunities for each investor to earn superior return over time.
- The Nepalese banks having greater network and access to national and international capital markets have to go for portfolio management activities for the increment of their fee based income as well as to enrich the clients based and to contribute in national economy.

### **2.2.2 Review of Dissertations**

In time of research of secondary sources it found that some student from T.U. and other management campus have conducted several thesis works. Some of them are supposed to be relevant for this study is presented below.

**Thapa** (2000), in her thesis paper, “A comparative study on investment policy of Nepal Bangladesh bank ltd. and other joint venture banks of Nepal” has compared the investment activities NBBL with only two of the joint venture banks. By taking five years data, she has recommended in two ways, first statement recommendation and second theoretical recommendation. In statement recommendation, she has suggested about investment in government securities, OBS operation loan recover act, sound credit collection policy, project oriented approach, effective portfolio management, innovative approach to bank marketing and banking facilities. In theoretical recommendation she has suggested about liberal lending policy and cost management strategy

This study conducted by Pant entitled, “A study of deposit collection and utilization of commercial banks in Nepal” with the main objectives:

- To find out whether commercial banks have been able to collect deposit from different sector.

- To find out whether banks are to satisfy financial need of economy.
- To find out relationship between deposits and loans.
- For the purpose of study, activities of NBL and RBB are taken together the period of 1 year. Only secondary data are used in this study to gather the required information regarding existing position of commercial banks.

The writer found that deposits are collected much from individuals and deposits from organization is very low, similarly more loans are granted to the commercial sector and a little amount to the agriculture and industrial by commercial banks. They cannot utilize the deposit properly. The writer further found, there is positive relation between deposits and loan. The writer recommended that commercial banks should not limit their lending activities in only business sectors. Commercial banks also offer long term loans not only short term period. At last, he suggest that the fully interest rates should be changed by making it's more suitable to expand the services of commercial banks in all sectors (Thapa, 2000).

**Agrawal** (2002, in the thesis entitled, “A study on deposit and investment position of Yeti Finance Company Ltd.” has tried to examine the trend of deposit position and investment position of the Yeti finance company. That study was conducted on the basis of secondary data and used various financial tools to analyze the data. Study just covered only period of five years i.e. 1997 to 2001 (Agrawal, 2000).

The researchers have found that the deposit policy is not stale but has highly fluctuating trend and investment is gradually in increasing trend. The researcher found there is highly positively correlation between total deposit and total investment the researcher concluded that Finance Company has been found profit oriented, ignoring the social responsibility which is not a fair strategy to sustain in long run. Therefore, it is suggested the company should involve in social program which helps the deprive people who are depended helps in agriculture. Agriculture is the paramount of Nepalese economy so that any finance

company should not forget to invest in this sector. In order to do so, they must open their branches in remote area with an objective of providing cheaper financing services.

**Tandukar** (2003), in the thesis entitled “Role of NRB in deposit mobilization of commercial banks” has tried to examine role of NRB in deposit collection by the commercial banks and to analyze the trend, of deposits mobilization towards total investment and loan and advances. Projection is for five years i.e. (1998 to 2002). The data used in those studies is both secondary and primary nature. The researcher used different financial tools such as liquidity ratio, profitability ratio, risk ratio and coefficient of correlation, trend analysis as statistical tools. The researcher took 17 commercial banks as population and two banks i.e. NBBL and EBL as sample banks. The researcher has found that it can be said that all new directives of NRB of commercial banks are effective and it is good for both nation and the future of the banks but the loan classification and provisioning seems to be little bit uncomfortable to the commercial banks. Deposit and loan and advances of NBBL are higher than EBL but in case of the investment EBL is able to mobilize more funds than NBBL in this sector. The researcher has recommended to NBBL that diversification of loan and investment is highly suggested to the bank. As NBBL has given priority in investment in treasury bills which is risk free but it yields very low return to the bank and recommended to EBL to collect the deposit by initiating various new program to attract the customer for this it can play a higher interest rate than other banks recently providing (Tandukar, 2003).

The forgoing review of literature suggests that the deposits mobilization plays vital role in economic development of country. Deposit mobilization can be best examined using the factors, such as interest rate, loan and advances, investment, branch expansion etc.

**Shrestha M. K.** (2004) did a research on a topic of „Dividend policy and its impact on market price of stock“ collected the data of four joint ventures commercial banks covering five years data from 1998/99 to 2002/ 03.

The study carried out with the following objectives:

- To study dividend procedure followed by joint venture bank in the context of Nepal.
- To find out the impact of dividend policy on stock price.
- To find out the relationship of dividend with EPS, DPS, MPS, P/E ratio and D/P ratio of the sampled bank.
- To analyze factor affecting dividend policy of joint venture banks, legal aspects and shareholder's consideration.

Major findings of the study are as follows:

From the descriptive analysis, the research found there is not any consistency in dividend policy in the sample banks. It has indicated the need of dividend strategy as well as the need of proper analysis of the banks. The MPS is affected by the financial position and the dividend paid by the banks, in this regard the MPS of the sample banks is seen to be fluctuated, it denoted Nepalese investors are not treated fairly.

Most of the Nepalese banks from the very past have not profit planning and investment strategy. Which has imbalanced the whole position of the banks, it means consistency even in the earning.

Beside, all D/P ratios of the sample banks in many years are found more than popular practice (i. e. 40%). Lack of financial knowledge and the market inefficiency has affected the market price of the share in all the banks.

**Adhikari N.** (2005) made a research on a topic “corporate dividend practices in Nepal” the study has covered the period of 1999/2000 to 2003 /04 with the total observation of 47 firms in financial sector and 30 in non-financial sector. The basic objectives of the study are as follows:

- To examine the relationships between dividend and stock price.
- To analysis the properties of portfolio forms of dividends.
- To survey the opinion of financial executives on corporate dividend.

The following findings were as follows:

- Stock with large ratio of dividend per share to book value per share has higher liquidity.
- Stocks with larger ratio of dividend per share to book value per share have higher profitability.
- Positive relationship is there between the ratio of dividend per share to book value per share and turnover ratio.
- There is positive relationship between the ratio of dividend per share to the book value per share and interest coverage ratio.
- There is positive relationship between dividend payout ratio and current ratio whereas the negative relationship between dividend payout and quick ratio.
- There is negative relationship between dividend payout and the earnings before tax to net worth.
- There is positive relationship between dividend payout and interest coverage ratio.

**Sharma A.** (2006) A study on “Impact of dividend policy market price of share” was carried out by the Aparna Sharma in 2006 taking five joint venture commercial banks covering the five years period of 2000/01 to 2004/05.

In this thesis researcher had taken primary as well as secondary data to reach the conclusion point in this study. This study would be helpful those person who is in the post of financial decision maker especially.

The basic objectives of the study are as follows:

- To obtain in depth knowledge about the impact of dividend policy adopted by the firm to its market price of share as well as the overall valuation of the firm.
- To highlight the various aspects of dividend policies and practices in Nepal carried out by the banking sector.

- To analyze the variables such as profit retained earnings, growth rate and other relevant and variables to show relationship between the value and other factor affecting it.

The major findings of this study are as follows:

- The average earning per share of the company under study shows a positive result but it is fluctuating.
- The DPS distributed by the company is quite fluctuating and no regularly payment in dividend.
- The average price earnings ratio of the most company under study is satisfactory and quite stable.
- There were no criteria to adopt a certain payout ratio. There is haphazard payout ratio in the companies under study.
- The dividend per share is affected by EPS retention ratio net profit and net worth per share differently in different company.
- The market price per share is affected by the dividend related financial variable and other factors e.g. EPS, P/E ratio, Net-worth per share etc.

**Kuikel K. P.** (2008) A study on “Dividend policy and Practices in commercial Bank’s in Nepal” was carried out by the Kush Prasad Kuikel in 2008 taking three newly established commercial banks covering the five years period of 2002/03 to 2006/07.

In this thesis researcher had taken only secondary data to reach the conclusion point in this study.

The basic objectives of the study are as follows:

- To examine dividend policy and practices in Nepalese commercial banks
- To examine the relationship between earnings, dividends, retained earnings and market price of stocks, dividend Payout ratio, dividend yield and liquidation To analyze the effect of dividend in market price of share.

The main findings of this study are as follows:

- The correlation between Earning per share and Market per share is positive of all sample Banks.
- The dividend payout ratio was not constant during the study period except NABIL Bank.
- The study of the impact of cash dividend on market price of share revealed that dividend per share has positive impact on market price of share in all sampled banks.
- The Earning per share (EPS) and Market per share (MPS) seemed positively correlated in all sampled Bank. The highest relationship had been found in NBBL and Lowest in NABIL
- Changes in DPS affect the market price per share differently in all sampled Banks.
- Besides Dividend other factors also had been fluctuating and the MPS was higher than the Net worth per share.
- There were no sectors that have negative relationship between dividend per share and net profit.

## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

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

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

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

### **3.6 Research Design**

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

Basically, the proposed study is mainly based on two types of research design namely descriptive and analytical. Descriptive research design describes the general attitude of the Nepalese depositors, business environment, problems regarding the deposits mobilization aspects etc. Similarly, the analytical research design makes a thorough analysis of gathered facts and information and critically evaluates it as well.

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

### **3.7 Sources of Data**

The study is mainly based on secondary data. The secondary sources of data collections are those that have been used from published on used by someone previously. The secondary sources of data are Balance Sheet, Profit & Loss account, quarterly report and literature publication of the concerned banks. Some supplementary data and information have been collected from the authoritative sources like Nepal Rastra Bank, Nepal Stock Exchange Limited, Security Exchange Board, Economic Survey, National Planning

Commission, different journals, magazines and other published and unpublished reports documented by the authorities.

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

### **3.8 Population and Samples of the Study**

There are twenty seven commercial banks operating in Nepal which accept more than 80 percent of the total deposits and sanction more than 70 percent of total loans and advances out of the total depository institutions. Out of these banks, as a sample four commercial banks are selected for the study. The deposit mobilization positions of these four banks are studied comparatively with the deposit mobilization of aggregate commercial banks within the country.

### **3.9 Method of Analysis**

To achieve the objectives of the study, various financial, statistical & accounting tools have been used in this study. The analysis of data will be done according to pattern of data available. Because of limited time & resources, simple analytical statistical tools such as graph, percentage, Karl Pearson's coefficient of correlation, & the method of least square, are adopted in this study. Especially descriptive analysis method is used for the study. The various calculated results obtained through financial, accounting & statistical tools tabulated under different heading and these are compared with each other. Major tools used for the analysis of collected data are:

### **3.10 Necessary tools and Techniques for the Study**

This thesis work is based on financial as well as statistical analysis. Some major tools and techniques applied for making the thesis work more presentable are briefly considered below:

### **3.5.3 Financial Tools**

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

#### **Ratio Analysis**

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

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

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

#### **A) Liquidity Ratios**

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

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

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

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

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

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

## **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,

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

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

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

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

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

### **C) Profitability Ratios**

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

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

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

$$\text{Return on Loan and Advances} = \frac{\text{Net Profit (Loss)}}{\text{Loan and Advances}}$$

### **D) Growth Ratios**

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

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

iv) Growth ratio of net profit

### 3.5.4 Statistical tools

In this study, some important statistical tools have been used to present and analyze the data for achieving the objectives. Such as Standard Deviation, Coefficient of Variance, Correlation Simple regression etc.

#### i. Standard Deviation

The standard deviation is a mathematical formula for the average distance from the average. An analyst may wish to calculate the standard deviation of historical returns on a stock or a portfolio as a measure of the investment's riskiness. The higher the standard deviation of an investment's returns, the greater the relative riskiness because of uncertainty in the amount of return. Standard deviation can be calculated by using following formula.

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

Where,

$\bar{X}$  = Arithmetic mean

X = Observation

N = Number of observation

#### ii. Coefficient of Variance (C.V)

A statistical measure of the dispersion of data points in a data series around the mean. The coefficient of variation represents the ratio of the standard deviation to the mean, and it is a useful statistic for comparing the degree of variation from one data series to another, even if the mean are drastically different from each other. In the investing word, the coefficient of variation allows to determine how much volatility (risk) are assuming in comparison to the amount of return can expect from investment. In simple language, the lower the ration the ration of standard deviation to mean return, the better risk returns trade off. It is calculate as.

$$CV = \frac{S.D}{Mean} \times 100\%$$

Where,

$$\text{Standard deviation (S.D)} = \sqrt{\frac{\sum(X-\bar{X})^2}{N}}$$

### **iii. Coefficient of Correlation Analysis (r)**

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

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

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

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

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

The nearer the value of  $r$  to  $+1$ , the closer will be the relationship between two variables and the value of  $r$ , the lesser will be the relation (Bajracharya, 2057, p 256-257).

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

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

Correlation coefficient between deposits and loan and advances measures the degree of relationship between two variables i.e. X and Y. In this analysis, deposit is independent variables (X) and loan and advances is dependent variables (Y).

The main purpose of calculating correlation coefficient is to justify whether the deposits are significantly used in proper way or not and whether there is any relationship between these two variables.

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

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

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

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

**c) Simple Regression**

Regression and correlation analysis are the techniques of studying how the variations in one series are related to the variations in another series. Measurement of the degree of relationship between two or more variables is called correlation analysis and using the relationship between a known variable and an unknown variable to estimate the unknown one is termed as regression analysis. Thus, correlation measures the degree of relationship between the variables while regression analysis shows how the variables are related. Thus, regression and correlation analysis determines the nature and the strength of relationship between variables. The equation of regression line where the dependant variables Y is determined by the independent variable X is given by:

$$Y = a + b X$$

$a = Y$ - intercept, Where:  $b =$  slope of the regression line (i.e. it measures the change in  $Y$  per unit  $X$ ) or regression coefficient of  $Y$  on  $X$

#### **d) Multiple Regression**

Assuming that all variables are closely related, we can estimate the unknown value of one variable from the given or known values of the other variables. Multiple regression analysis is a logical extension of the simple linear regression analysis. In multiple regression analysis, instead of single independent variable, two or more independent variables are used to estimate the unknown values of dependant variables. The multiple regression equation describes the average relationship between dependant variable and two or more independent variables and this relationship is very much useful for estimating (or predicting) the dependant variable. Thus, the multiple regression equation of  $X_1$  on  $X_2, X_3$  and  $X_4$  is an equation for estimating a dependant variable  $X_1$ , from three independent variables  $X_2, X_3$  and  $X_4$ .

The multiple regression equation of dependant variables  $X_1$  on three independent variables

$X_2, X_3$  &  $X_4$  is given by:

$$X_1 = a + b_1x_2 + b_2x_3 + b_3x_4$$

Where,

$a = x_1$  – intercept = the value of  $x_1$  when three independent variables  $x_2, x_3$  and  $x_4$  are zero.

$b_1 =$  the partial regression coefficient of  $x_1$  on  $x_2$  when  $x_3$  &  $x_4$  are held constant

$b_2 =$  the partial regression coefficient of  $x_1$  on  $x_3$ , when  $x_2$  &  $x_4$  are held constant

$b_3 =$  the partial regression coefficient of  $x_1$  on  $x_4$ , when  $x_2$  &  $x_3$  are held constant

#### **e) Coefficient of Determination**

The coefficient of determination gives the percentage variation in the dependant variable that is accounted for by the dependant variable/s. In other words, the coefficient of determination gives the ratio of expected variance to the total variance. The coefficient of determination is given by the square of the correlation coefficient, i.e.  $r^2$

$$\text{So the coefficient of determination} = r^2 = \frac{\text{Expected variance}}{\text{Total Variance}}$$

#### **f) Test of Hypothesis**

A quantitative statement about population parameter is called a hypothesis. In other words, it is an assumption that is made about the population parameter and then its validity is tested. It may or may not be found valid in verification. The act of verification involves testing the validity of such assumptions which, when undertaken on the basis of sample evidence, is called statistical hypothesis or testing of hypothesis. The main goal of testing hypothesis is to test the characteristics of hypothesized population parameter based on sample information whether the difference between the population parameter and sample statistics is significant or not. The act of verification involves testing the validity of such assumption which, when undertaken on the basis of sample evidence, is called statistical hypothesis or the testing of hypothesis. For the test of hypothesis t-test is made in this study.

#### **g) t - statistics**

t –statistics is applied for the test of small sample. If the sample size is less than 30 i.e. called small sample and t-test is used. The following formula is used to test an observed sample correlation coefficient:

$$r = \frac{r}{\sqrt{1 - r^2}} \times \sqrt{(n - 2)}$$

Where,

r= simple correlation coefficient

n= number of pair observations

## **CHAPTER -IV**

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

Presentation and analysis of data is an important stage of the research study. The main purpose of analyzing the data is to change it from an unprocessed form into an understandable presentation. The analysis of data consists of organizing data by tabulating and then placing that data in presentable form by using figures and tables.

The main objective of the study is to analyze the deposit collection and its mobilization of commercial banks, analyze the cost of deposits, find the position of deposit mobilization, and to compare the total deposit with total loan and investments of the commercial banks.

This chapter contains the analysis and interpretation of the available and relevant data of four commercial banks selected as the sample banks. Five years' data period covering from the F/Y 2063/064 to 2066/67 B.S. (2006/07 A.D to 2009/010 A.D) have been analyzed and interpreted as per the research methodology defined in chapter three. In the following section, the relevant and generated data (i.e. both primary and secondary) relating to the study is presented in tabular form and analyzed it in systematic way. To analyze the data, various financial as well as statistical tools are employed.

#### **4.2 Ratios Analysis**

Financial ratios are designed to evaluate a financial statement and clarified about the position of the concerned organization, like liquidity ratio clarified about the liquidity position on the given date, return ratio cleared about the returning position of the organization. From an investor's standpoint, ratio analysis predict the future is what financial statement analysis is all about, while from management's standpoint, financial statement analysis is useful both to help anticipate future conditions and, more important, as a starting point for planning actions that will improve the firm's future performance.

### 4.2.1 Liquidity Ratios Analysis

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.

#### Cash and Bank Balance to Total Deposit

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

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

(Ratio in %)

<b>Name of Bank</b>	<b>2062/063</b>	<b>2063/064</b>	<b>2064/65</b>	<b>2065/066</b>	<b>2066/067</b>	<b>Average</b>
BOK	12.55	10.62	9.10	12.07	8.85	10.64
NIB	17.13	12.90	10.90	16.96	13.61	14.30
EBL	17.33	13.15	11.13	18.50	21.17	16.25
NIC	6.84	5.96	9.11	9.38	13.06	8.87

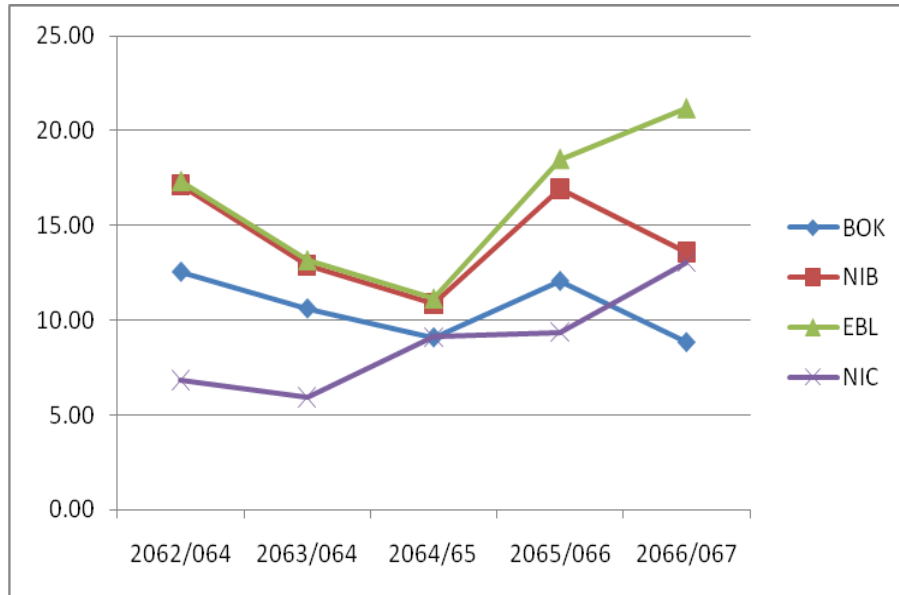
(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

From the table 4.1 it is depicted that cash and bank balance to total deposit ratio of BOK is 10.64 percent in an average in the period under study whereas that of NIB is 14.30 percent in an average as well as EBL has 16.25 percent and NIC has 8.87percent. The average ratio of EBL is higher than BOK, NIB and NIC which is shows that EBL is more cense about the liquidity situation or EBL had maintained better liquidity situation. The ratios of banks are found to be in fluctuating. The higher ratio is 12.55 percent in FY 2062/063 for BOK, 17.13 percent in FY 2062/063 for NIB, 21.17 percent in FY 2066/067 for EBL and 13.06 percent in FY 2066/067 for NIC.

These factors also cleared by the figure no. 4.1.

**Figure 4.1**

**Cash and Bank Balance to Total Deposit**



#### **4.1.2 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.

#### **Loan and Advances to Total Deposit Ratio (CD)**

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 4.2**

**Loan and Advances to Total Deposit Ratio**

(Ratio in %)

Name of Bank	2062/063	2063/064	2064/65	2065/066	2066/067	Average
BOK	69.23	75.87	78.71	81.00	83.90	77.74
NIB	71.04	67.50	78.36	77.61	81.74	75.25
EBL	71.01	75.13	76.49	73.43	76.24	74.46
NIC	75.93	88.81	86.09	87.80	79.73	83.67

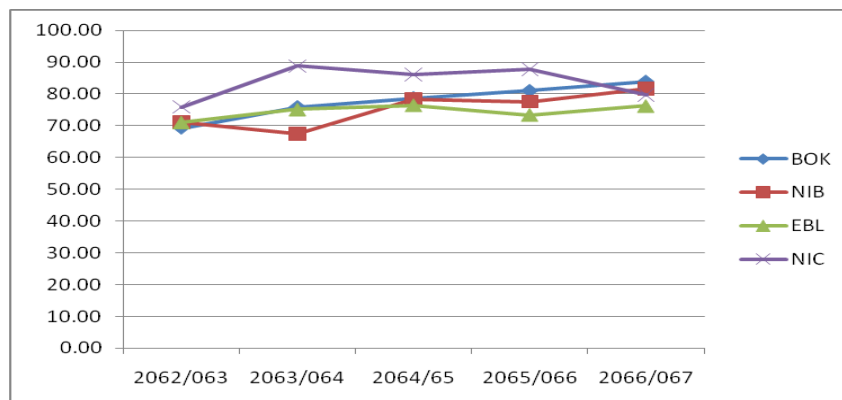
(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

From the table 4.2 it is depicted that Loan and Advances to Total Deposit ratio of BOK is 77.74 percent in an average in the period under study whereas that of NIB is 75.25 percent in an average as well as 74.46 percent in an average for EBL and 83.67 percent in an average for NIC. The average ratio of NIC is higher than BOK, NIB and EBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 83.90 percent in FY 2066/067 for BOK, 81.74 percent in FY 2066/067 for NIB, 76.49 percent in FY 2064/065 for EBL and 88.81 percent in FY 2063/064 for NIC and the lowest ratio is 75.87 in FY 2063/064 for BOK, 67.50 percent in FY 2063/064 for NIB, 71.01 in FY 2062/063 for EBL and 75.93 in FY 2062/063 for NIC. These facts are shown in the figure 4.2 to make easier to understand.

**Figure 4.2**

**Loan and Advances to Total Deposit Ratio**



### **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 4.3**

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

(Ratio in %)

<b>Name of Bank</b>	<b>2062/063</b>	<b>2063/064</b>	<b>2064/65</b>	<b>2065/066</b>	<b>2066/067</b>	<b>Average</b>
BOK	32.18	24.15	20.24	15.39	16.09	21.61
NIB	27.60	29.60	19.95	15.85	17.24	22.05
EBL	30.43	27.41	21.10	17.85	13.56	22.07
NIC	28.29	15.89	17.67	19.42	30.98	22.45

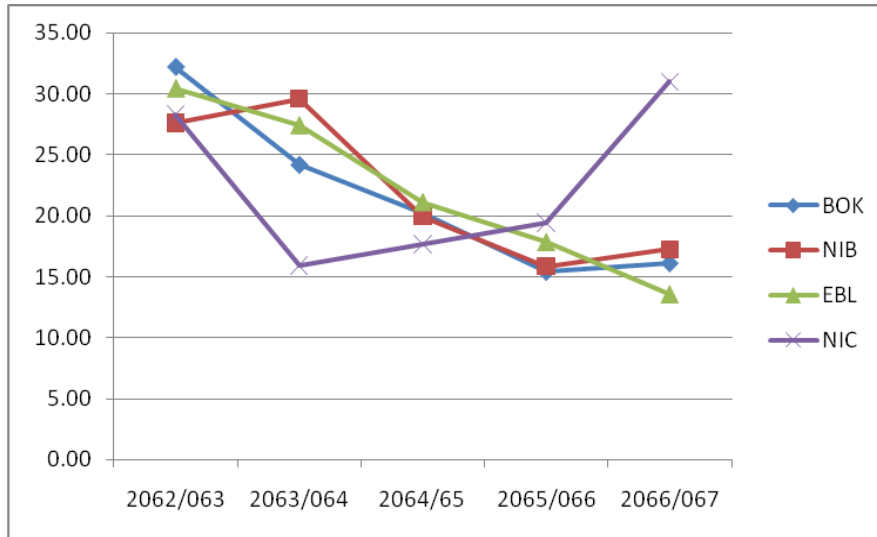
(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

From the table 4.3 it is depicted that Total Investment to Total Deposit ratio of BOK is 21.61 percent in an average in the period under study whereas that of NIB is 22.05 percent in an average as well as EBL has 22.07 percent in an average and NIC has 22.45 percent in an average. The average ratio of NIB and NIC is higher than BOK and EBL. The ratios of the banks are found to be in fluctuating.

The higher ratio is 32.18 percent in FY 2062/063 for BOK, 29.60 percent in FY 2063/064 for NIB, 30.43 percent in FY 2062/063 for EBL and 30.98 percent in FY 2066/066 for NIC and the lowest ratio is 15.39 percent in FY 2065/066 for BOK, 15.85 percent in FY 2065/066 for NIB, 13.56 percent in FY 2066/067 for EBL and 15.89 percent in FY 2063/064 for NIC. These facts are shown in the figure 4.3 to make easier to understand.

**Figure 4.3**

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



### 4.1.3 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:

#### Return on Loan and Advances Ratio

Return on Loan and advances ratio shows the percent of income on total mobilization of loan and advance. Effective mobilization of loan and advance earn higher rate of return and vice versa.

**Table 4.4**

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

(Ratio in %)

<b>Name of Bank</b>	<b>2062/063</b>	<b>2063/064</b>	<b>2064/65</b>	<b>2065/066</b>	<b>2066/067</b>	<b>Average</b>
BOK	2.79	2.79	2.90	3.15	2.99	2.92
NIB	2.29	2.74	2.58	2.49	3.09	2.64

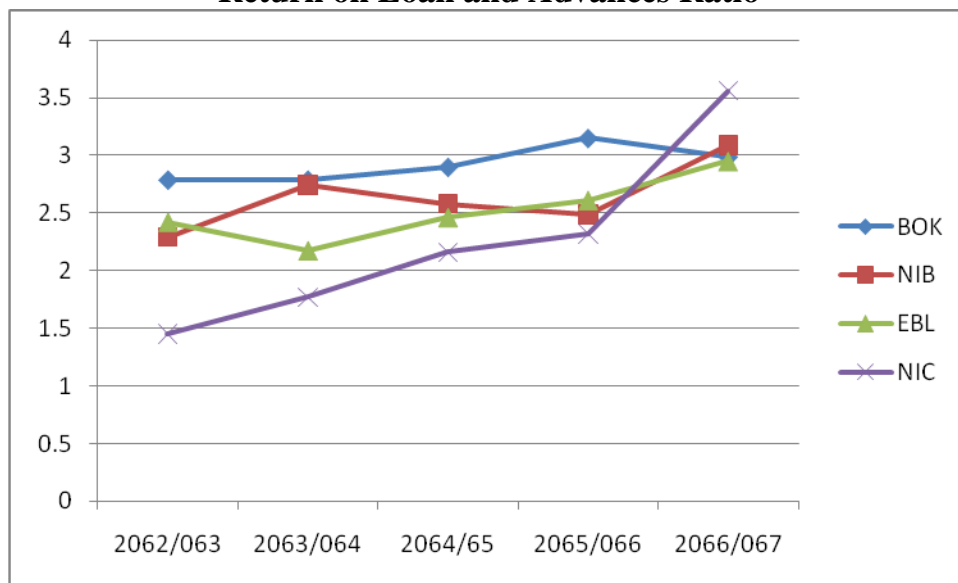
EBL	2.42	2.17	2.46	2.61	2.95	2.52
NIC	1.45	1.77	2.16	2.32	3.56	2.25

(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

From the table 4.4 it is depicted that Return on Loan and Advances ratio of BOK is 2.92 percent in an average in the period under study whereas that of NIB is 2.64 percent in an average as well as EBL has 2.52 percent in an average and NIC has 2.25 percent in an average. The average ratio of BOK is higher than NIB, EBL and NIC. The ratios of the banks are found to be in fluctuating.

The higher ratio is 3.15 percent in FY 2065/066 for BOK, 3.09 percent in FY 2066/067 for NIB, 2.95 percent in FY 2066/067 for EBL and 3.56 percent in FY 2066/067 for NIC. The lowest ratio is 2.79 percent in FY 2063/064 for BOK, 2.29 percent in FY 2062/063 for NIB, 2.17 percent in FY 2063/064 for EBL and 1.45 percent in 2062/063 for NIC. These facts are shown in the figure 4.4 to make easier to understand.

**Figure 4.4**  
**Return on Loan and Advances Ratio**



#### 4.1.4 Growth Ratios

Growth ratios show the percent increase in the deposit, investment return profit and other. The higher increment shows the better performance of selected commercial bank and low increment defines the lower performance of selected commercial bank. Under the Growth ratios following major sectors of commercial bank are selected.

## Analysis of Growth of Loan and Advance

Loan and advances are the main transaction of the commercial bank. The major element where the banks mobilize their funds is loan and advance. Commercial banks mobilize their deposit in productive sector for earning profit and making the financial position of the bank better. So, increasing growth rate is necessary for increasing the return of the bank.

**Table 4.5**  
**Growth of Loan and Advance**

(Ratio in %)

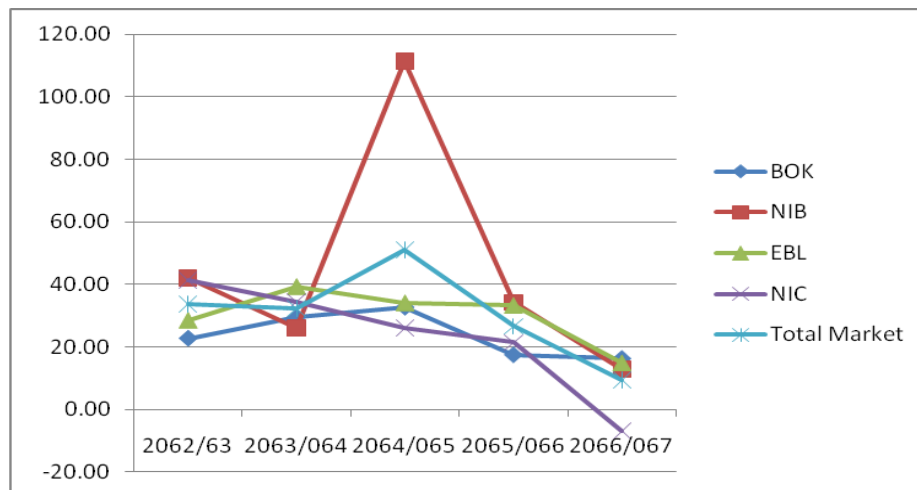
Name of Bank	2062/63	2063/064	2064/065	2065/066	2066/067
BOK	22.77	29.48	32.59	17.53	16.36
NIB	42.02	26.17	111.30	34.24	12.99
EBL	28.65	39.41	34.21	33.43	15.07
NIC	41.26	34.34	25.98	21.44	-6.93
Total Market	33.68	32.35	51.02	26.66	9.37

(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

Table No 4.5 is the presentation of the growth of loan and advance of the total commercial banking system and the sample bank. On the above table when the total market was increased by 51.02 percent on 2064/065 BOK was increased by 32.59 percent NIB increased by 111.30 percent EBL increased by 34.21 percent and NIC increased by 25.98 percent respectively. On that period NIB was the high efficient and NIC was lowest among the sample bank on compare with total market. On the fiscal year 2064/065 total loans and advance was increased by 51.02 percent whereas highest achievement by NIB by increasing 111.30 percent and low achievement by NIC that is 25.98 percent. On the fiscal year 2065/066 total market was decreased by 26.66 percent and among the sample bank highest increased by NIB by 34.34 percent whereas lowest increased by NIC by

21.44 percent. On the fiscal year 2066/067 among the sample period increased by lowest rate 9.37 percent, on that period highest increased by BOK by 16.36 percent whereas NIC had decrease by -6.93 percent. The ratios of the banks are found to be in fluctuating, which was also clarify by the following figure no 4.5

**Figure 4.5**  
**Growth of Loan and Advance**



### Analysis of Growth of Deposit

Deposit is the main source of financing for the commercial bank. Without the deposit bank can't provide loan and advance to their client. The main objectives of commercial bank are to safeguard the money of depositors and deposit mobilization. Higher increment in deposit of commercial bank presents better performance of commercial bank. Growth of deposit is presented in the following table.

**Table 4.6**  
**Growth of Deposit**

(Ratio in %)

Name	2062/63	2063/064	2064/065	2065/066	2066/067
BOK	17.25	18.15	27.81	14.21	12.34
NIB	23.69	32.78	82.02	35.55	7.27
EBL	36.69	31.76	31.84	38.98	10.83
NIC	40.45	14.86	29.96	19.07	2.50

Market	29.52	24.39	42.91	26.95	8.24
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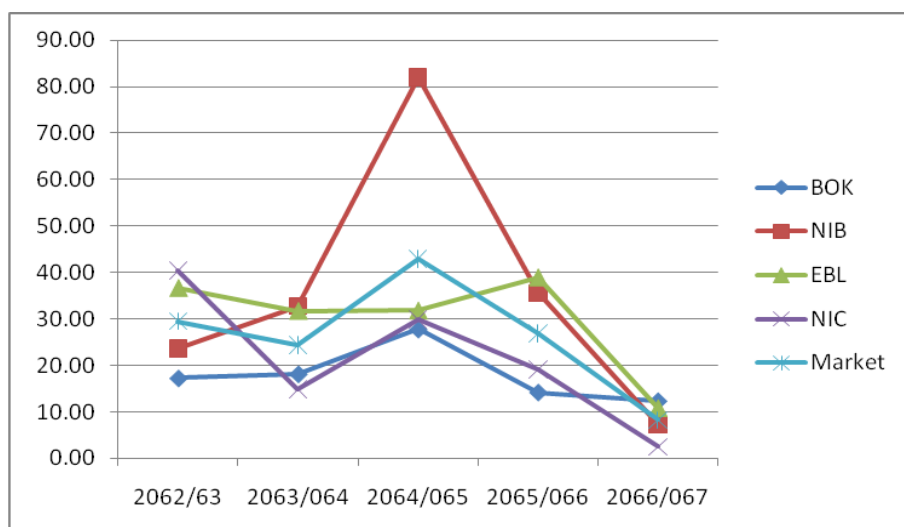
(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

On the above table 4.6 it is cleared that the growth rate of sample bank as well as banking system of deposit is fluctuate. Growth rate of total banking system (Market) on the fiscal year 2062/063, 2063/064, 2064/065, 2065/066 and 2066/067 are 29.52%, 24.39%, 42.91%, 26.95 % and 8.24% which shows that deposit was highly increased on the fiscal year 2064/065 in compare to other sample period and lowest on the fiscal year 2066/067 by 8.24%. From this analysis it can be decided that all commercial bank had shown the efficient performance on the fiscal year 2064/065 and low performance on the fiscal year 2066/067 on the side of deposit.

On the sample period BOK had higher rate of increment on the fiscal year 2064/065 by 27.81% and lowest increment on the fiscal year 2066/067 by 12.34%. NIB had highest average increment rate as compare with other sample bank. NIB had highest increment on the fiscal year 2064/065 by the 82.02% and lowest rate on the fiscal year 2066/067 by 7.27%. EBL had highest increment on the fiscal year 2065/066 by 38.98% and lowest on the fiscal year 2066/067 by 10.83%.

NIC had the highest increment on the fiscal year 2062/063 by 40.45% and lowest on fiscal year 2066/067 by 2.50%. This can be also justifying by the following Figure no 4.6.

**Figure 4.6**  
**Growth of Deposit**



### **Analysis of Growth of Investment**

Banks collect deposits from people and invest it to the various productive sectors. Banks have to collect adequate deposit; and invest it to the productive sector for regular return. The investment of the bank increases only when the bank is able to increase the collection of the deposit and mobilize the collected deposit well. If the investment of the bank is increasing, the return will be high.

**Table 4.7**  
**Growth of Investment**

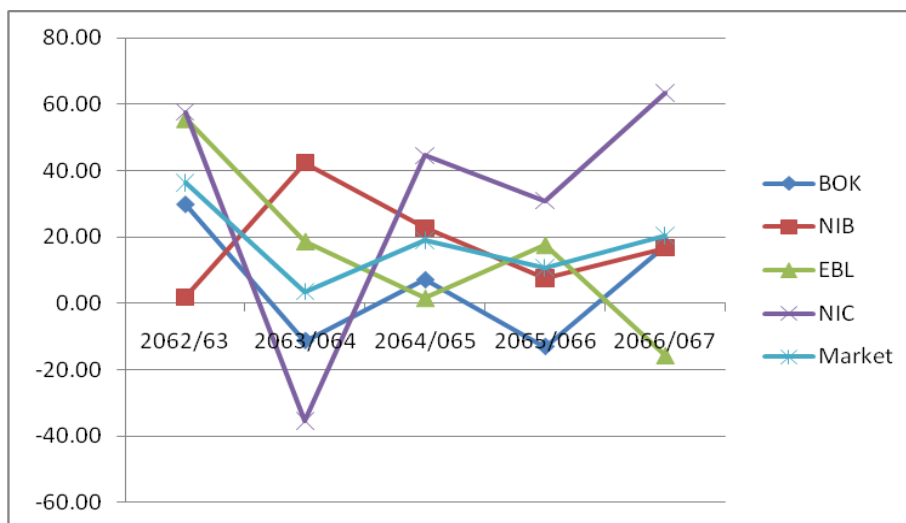
(Ratio in %)

<b>Name of Bank</b>	<b>2062/63</b>	<b>2063/064</b>	<b>2064/065</b>	<b>2065/066</b>	<b>2066/067</b>
BOK	29.88	-11.33	7.07	-13.12	17.45
NIB	21.86	42.41	22.69	7.65	16.70
EBL	55.64	18.66	1.51	17.57	-15.81
NIC	57.66	-35.50	44.51	30.91	63.48
Market	36.26	3.56	18.95	10.75	20.45

(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

The growth rate of total commercial banking system and sampled banks BOK, NIB, EBL and NIC are fluctuating during the study period. Growth rate of total commercial banking system for the years 2062/063, 2063/064, 2064/065, 065/066 and 2066/067 are 36.26 percent, 3.26 percent, 18.95 percent, 10.75 and 20.45 percent respectively, growth rate of BOK for same years are 29.88 percent, -11.33 percent, 7.07 percent -13.12 percent and 17.45 percent respectively, the growth rates of NIB for same years are 1.86 percent, 42.41 percent, 22.69 percent, 7.65 percent and 16.70 percent respectively, growth rates of EBL for same years are 55.6 percent 18.66 percent, 1.51 percent, 17.57 percent and -15.81 percent respectively and growth rate of NIC for same years are 57.76 percent, -35.5 percent, 44.51 percent, 30.91 percent and 63.48 percent respectively. After analyzing the above table on sample period NIC has the highest rate of increment on the fiscal year 2066/067 and lowest rate of increment on the fiscal year 2063/064. The ratios of the banks are found to be in fluctuating, which was also clarify by the following figure no 4.7

**Figure 4.7**  
**Growth of Investment**



### Analysis of Growth of Return

One of the most important objectives of the bank is to maximize the return. It is possible through the proper mobilization of deposit. If the bank is able to mobilize the deposit well, higher will be the return and the performance of the bank. The analysis net profit is consider as a return which was shown in following Table no 4.8 and figure 4.8

**Table 4.8**  
**Growth of Return**

(Ratio in %)

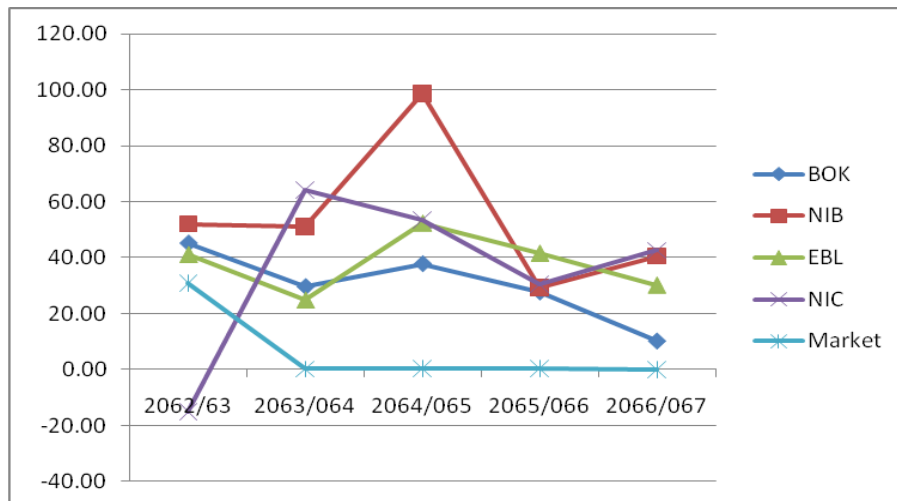
<b>Name of Bank</b>	<b>2062/63</b>	<b>2063/064</b>	<b>2064/065</b>	<b>2065/066</b>	<b>2066/067</b>
BOK	45.09	29.61	37.77	27.73	10.29
NIB	52.06	51.00	98.76	29.26	40.56
EBL	41.08	24.91	52.23	41.56	30.22
NIC	-15.10	64.07	53.37	30.60	42.62
Market	30.78	19.52%	35.97%	32.97%	1.23%

(Source: Banking and financial statistics and [www.nepalsharemarket.com](http://www.nepalsharemarket.com))

On above table no 4.7 the growth rate of return of total commercial banking system for the years 2062/063, 2063/064, 2064/065, 2065/066 and 2066/067 are 30.78 percent, 19.52 percent, 35.97 percent, 32.97 percent and 1.23 percent respectively, the growth rate of BOK for the same years are 45.09 percent, 29.61 percent, 37.77 percent, 27.73 percent and 10.29 percent respectively, the return increasing rate of NIB for same years are 52.06 percent, 51 percent, 98.76 percent, 29.26 percent and 40.56 percent respectively, for the case of EBL on same period increased rate are 41.08 percent 24.91 percent, 52.23 percent, 41.56 percent and 30.22 percent respectively and for NIC on same period are -15.10 percent, 64.07 percent, 53.37 percent, 30.60 percent and 42.62 percent respectively.

After analyzing these figures it is found that the growth rate of total commercial banking system is significantly higher on the fiscal year 2064/65. The growth of NIB is seemed highly on fiscal year 2064/065 which was 98.76 percent and lowest is -15.10 percent of NIC on fiscal year 2062/063. From above table analyze it is clearly show that on fiscal year 2064/065 was the efficient year for the commercial banking system which clarify the achievement of sample bank in the same period. This analyze also cleared by the figure 4.8

**Figure 4.8**  
**Growth of Return**



## 4.2 Correlation

Correlation may be defined as the degree of linear relationship existing between two or more variables. Two variables are said correlated when the change in the value of one variable is accompanied by the change of another variable.

### Analysis of Correlation Coefficient between Deposit and total Investment

The coefficient of correlation between deposit and investment is the degree of relationship between two variables. In this analysis, deposit is independent variable(x) and total investment is dependent variable(y). The purpose of this analysis is to justify whether the deposits are significantly used in proper way or not and whether there is any relationship between these variables.

**Table 4.9**

### Analysis of Correlation Coefficient between Deposit and total Investment

Name of Banks	Base on Evaluation			
	r	r <sup>2</sup>	Per	6Per
BOK	-0.263	0.069	0.280	1.684
NIB	0.982	0.096	0.010	0.063
EBL	0.588	0.746	0.197	1.18
NIC	-0.355	0.126	0.263	1.580
Total	0.238	0.476	0.187	1.126

*(Sources: Annex)*

Table no. 4.9 shows the correlation coefficient between deposit (independent variable) and total investment (dependent variable) of BOK, NIB, EBL, NIC and total commercial banking system, are -0.263, 0.982, -0.588, -0.35 and 0.238 respectively. This figure show the positive relationship between the variables of total commercial banking system, BOK and NIB and negative relationship between these variables to the EBL and NIC.

The coefficient of determination of the variables of BOK, NIB, EBL, NIC and total commercial banking system are 0.069, 0.964, 0.346, 0.126 and 0.238 respectively. It means 47.63% of the variation in investment of total commercial banking system is explained by the deposit, 6.9% of the variation in total investment of BOK is explained by the deposit, 9.6% of the variation in total investment of NIB is explained by deposit, 74.6% of the variation in total investment of EBL is explained by deposit, and 12.6% of the variation in total investment of NIC is explained by deposit.

Considering the probable error , the value of PEr of total commercial banking system is smaller than the value of correlation coefficient (i.e.r) and the value of PEr of BOK, NIB, EBL and NIC is greater than the value of correlation coefficient. Comparing the value of 6PEr with the value of coefficient of correlation (r) the value of 'r' of BOK, NIB, EBL and NIC are smaller than the value of 6PEr . It means the value of r is not significant it means the relationship between the variables is insignificant. Whereas about total commercial banking system, the relationship between the variables is significant.

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

Correlation coefficient between deposit and loan and advance measures the degree of relationship between total deposit and loan and advances. Generally this relation should be positive and high. If the value of (r) i.e. Correlation coefficient is high, it can be generalized that the bank is mobilizing its fund well and vice versa. Deposit is independent variable(x) and loan and advance is dependent variable (y). The main

objective of this analysis is to compare the value of (r) of the sampled banks with total commercial banking system and between themselves too. This analysis further aims to observe whether the sampled banks are mobilizing their deposit and loan & advances in proper way or not.

**Table 4.10**

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

Name of Banks	Base on Evaluation			
	r	r <sup>2</sup>	Per	6Per
BOK	0.990	0.998	0.004	0.002
NIB	0.998	0.996	0.001	0.006
EBL	0.990	0.995	0.001	0.006
NIC	0.975	0.951	0.014	0.088
Total	0.988	0.985	0.005	0.025

*(Sources: Annex)*

Table no. 4.9 shows the degree of correlation between deposit and loan and advance of BOK, NIB, EBL, NIC and total banking system for the study period of four years from fiscal year 2063.064. The degree of correlation as the value of (r) of BOK, NIB, EBL, NIC and total commercial banking system are 0.99, 0.998, 0.990, 0.975 and 0.9883 respectively. It means the degree of correlation between the variables all sample banks and total commercial banking system is highly positive.

The value of ( $r^2$ ) the coefficient of determination of BOK, NIB, EBL, NIC and total commercial banking system are 0.998, 0.996, 0.995, 0.951 and 0.985 respectively. It means 99.8% of the variation in loan and advance of BOK is explained by the deposit, 99.6% of the variation in loan and advance of NIB is explained by the deposit, 99.5% of the variation in loan and advance of EBL is explained by the deposit, 95.1% of the variation in loan and advance of NIC is explained by the deposit and 98.5% of variation in loan and advance of total banking system is explained by the deposit.

Considering the probable error, the value of PEr of BOK, NIB, NIC EBL and total commercial banking system are smaller than the value of correlation coefficient (i.e.  $r$ ), comparing the value of  $6PEr$  with the value of correlation coefficient the value of  $r$  of total commercial banking system, BOK, NIB, NIC and EBL is greater than the value of  $6PEr$  so the relationship between the loan and advance and total deposit of these banks are significant.

### **Analysis of Correlation Coefficient between Total Assets and Profit**

Correlation coefficient between total assets and profit measures the degree of relationship between total assets and profit. Here, total assets are independent variable( $x$ ) and net profit is dependent variable( $y$ ). Generally it is assumed that total assets and the profit are positively correlated, if total assets increases the profit will increase and vice versa. The main purpose of analyzing this is to justify whether the profit is significantly correlated with total assets or not.

**Table 4.11**

#### **Analysis of Correlation Coefficient Between Total Assets and Profit**

Name of Banks	Base on Evaluation			
	$r$	$r^2$	Per	$6PEr$
BOK	-0.99	0.98	0.01	0.06
NIB	-0.96	0.92	0.03	0.18
EBL	-0.99	0.98	0.01	0.06
NIC	-0.95	0.90	0.03	0.18
Total	-0.99	0.98	0.01	0.06

Table 4.10 presents the degree of correlation between total assets and profit of BOK, NIB, EBL, NIC and total commercial banking system. Correlation coefficient (r) for above mentioned banks are -0.99, -0.96, -0.99, -0.95 and -0.99 respectively. It means the total assets and profit of all sample banks and total commercial banking systems are highly negatively correlated.

Coefficient of determination of these variables for BOK, NIB, EBL, NIC and total commercial banking system are 0.98, 0.92, 0.98, 0.90 and 0.98 respectively. It means 98% of variation in profit of BOK is explained by total assets, 92% of the variation in profit of NIB is explained by total assets, 98% of the variation in profit of EBL is explained by total assets, 90% of the variation in profit of NIC is explained by total assets and 98% of the variation in profit of total commercial banking is explained by total assets.

Analyzing the value of probable error of the correlation coefficient the value of (r) of total commercial banking system and all sample banks are lower than the value of PEr so the relationship between the variables are insignificant. Comparing the value of 6PEr with the value of (r), the value of 6PEr of total commercial banking system and sample banks are greater than the value of (r) this figure further specifies the insignificant relationship between the variables.

#### **4.4 Test of Hypothesis**

Test of hypothesis is the process of testing of significance regarding the parameter of the population on the basis of sample drawn from the population. In testing hypothesis, we examine on the basis of statistics computed from the sample drawn, whether the sample drawn belongs to the, parent population with certain specific characteristics or not.

In this topic, an effort has been made to test the significance regarding the parameter of the population on the basis of sample drawn from the population. Generally following steps are followed for the test of hypothesis.

- Formulation of hypothesis
- Null hypothesis.
- Alternative hypothesis
- Computing the test statistics.
- Fixing the level of significance.
- Finding critical region. Deciding two- tailed or one-tailed test.
- Making decision.

Since, we have population less than 30 we apply (t-test) for testing the hypothesis. Some of the main hypothesis tests which are helpful for making reliable decision regarding the deposit mobilization of sampled banks are done as follows:

#### 4.4.1 Test of Hypothesis on Investment to Total Deposit Ratio

##### Test of Hypothesis on investment of BOK and Total Deposit of Commercial Banking System

**Table 4.12**

**Test of Hypothesis on Investment to Total Deposit Ratio of BOK**

Year	Total			BOK		
	X	$d_1 = (x - \bar{x})$	$d_1^2$	Y	$d_2 = (y - \bar{y})$	$d_2^2$
2062/063	28.21	2.96	8.79	32.18	10.57	111.72
2063/064	27.71	2.46	6.07	24.15	2.54	6.45
2064/065	25.57	0.32	0.10	20.24	-1.37	1.88
2065/066	23.22	-2.03	4.10	15.39	-6.22	38.69
2066/067	21.52	-3.73	13.88	16.09	-5.52	30.47
Total	$\sum X = 126.23$		$\sum d_1^2 = 32.95$	$\sum Y = 75$	-	$\sum d_2^2 = 189.21$

Sources: Annex

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{126.23}{5} = 25.25$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{189.21}{5} = 21.61$$

$$s^2 = \frac{1}{n_1+n_2-2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 32.95 - \frac{0}{5} \right\} + \left\{ 189.21 - \frac{0}{5} \right\} \right]$$

$$= \frac{1}{8} [32.95 + 189.21] = 27.77$$

Hence,

Null Hypothesis (H0):  $\mu_x = \mu_y$  i.e. there is no significant difference between mean ratio of total investment to total deposit of total commercial banking system and BOK.

Alternative Hypothesis (H1):  $\mu_x \neq \mu_y$  (two tailed), i.e. there is significant difference between mean ratio of total investment to total deposit ratio of total commercial banking system and BOK.

Now,

Calculating the value to 't'

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{25.25 - 21.61}{\sqrt{27.77 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{3.64}{\sqrt{27.77 \frac{2}{5}}} = 1.72$$

Therefore  $t = 3.30$

Tabulated value of 't' (two- tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.447.

**Decision**

Since calculated value of  $t'$  is greater than its tabulated value, we accept alternative hypothesis (H1). In other words, there is significant difference between mean ratio of investment to total deposit of total commercial banking system and BOK.

### 4.3.2 Test of Hypothesis on Investment of NIB and Total Deposit of Commercial Banking System

Table 4.13

Test of Hypothesis on Investment to Total Deposit Ratio of NIB

Year	Total			NIB		
	X	$d_1 = (X - \bar{x})$	$d_1^2$	Y	$d_2 = (Y - \bar{y})$	$d_2^2$
2062/06 3	28.21	2.96	8.79	27.60	5.55	30.82
2063/06 4	27.71	2.46	6.07	29.60	7.55	57.03
2064/06 5	25.57	0.32	0.10	19.95	-2.10	4.40
2065/06 6	23.22	-2.03	4.10	15.85	-6.20	38.42
2066/06 7	21.52	-3.73	13.88	17.24	-4.81	23.12
Total	$\sum X = 126.23$		$\sum d_1^2 = 32.9$ 5	$\sum Y = 83$	-	$\sum d_2^2 = 153.7$ 9

(Sources: Annex)

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{126.23}{5} = 25.25$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{83}{5} = 16.6$$

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 32.95 - \frac{0}{5} \right\} + \left\{ 153.79 - \frac{0}{5} \right\} \right]$$

$$= \frac{1}{8} [32.95 + 153.79] = 23.34$$

Hence,

Null Hypothesis (H<sub>0</sub>):  $\mu_x = \mu_y$  i.e. there is significant difference between mean ratio of total investment to total deposit of total commercial banking system and NIB.

Now,

Calculating the value to 't'

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{25.25 - 22.05}{\sqrt{23.34 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{3.20}{\sqrt{23.34 \frac{2}{5}}} = 1.65$$

Therefore t= 1.65

Tabulated value of 't' (two- tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306

### Decision

Since calculated value of 't' is less than its tabulated value, we accept hypothesis (H0).

### 4.3.3 Test of Hypothesis on Investment of EBL and Total Deposit of Commercial Banking System

**Table 4.14**

**Test of Hypothesis on Investment to Total Deposit Ratio of EBL**

Year	Total			EBL		
	X	$d_1 = (X - \bar{x})$	$d_1^2$	Y	$d_2 = (Y - \bar{y})$	$d_2^2$
2062/06 3	28.21	2.96	8.79	30.43	8.36	69.89
2063/06 4	27.71	2.46	6.07	27.41	5.34	28.52
2064/06 5	25.57	0.32	0.10	21.1	-0.97	0.4
2065/06 6	23.22	-2.03	4.10	17.85	-4.22	17.81
2066/06 7	21.52	-3.73	13.88	13.56	-8.51	72.42
Total	$\sum X = 126.23$		$\sum d_1^2 = 32.9$ 5	$\sum Y = 80$	-	$\sum d_2^2 = 189.5$ 7

(Sources: Annex)

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{126.23}{5} = 25.24$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{80}{5} = 16.00$$

$$s^2 = \frac{1}{n_1+n_2-2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 32.95 - \frac{0}{5} \right\} + \left\{ 189.57 - \frac{0}{5} \right\} \right]$$

$$= \frac{1}{8} [32.95 + 189.57] = 27.81$$

Hence,

Null Hypothesis (H0):  $\mu_x = \mu_y$  i.e. there is significant difference between mean ratio of total investment to total deposit of total commercial banking system and EBL.

Now,

Calculating the value to 't'

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{25.54 - 22.07}{\sqrt{27.81 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{3.81}{\sqrt{27.81 \times \frac{2}{5}}} = 1.51$$

Therefore  $t = 1.51$

Tabulated value of 't' (two-tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306

### Decision

Since calculated value of 't' is less than its tabulated value, we accept hypothesis (H0).

### 4.3.4 Test of Hypothesis on Investment of NIC and Total Deposit of Commercial Banking System

**Table 4.14**

**Test of Hypothesis on Investment to Total Deposit Ratio of NIC**

Year	Total			NIC		
	X	$d_1 = (x - \bar{x})$	$d_1^2$	Y	$d_2 = (y - \bar{y})$	$d_2^2$
2062/06 3	28.21	2.96	8.79	28.29	5.84	34.10
2063/06 4	27.71	2.46	6.07	15.89	-6.56	43.03
2064/06 5	25.57	0.32	0.10	17.67	-4.87	22.84
2065/06 6	23.22	-2.03	4.10	19.42	-3.03	8.18
2066/06 7	21.52	-3.73	13.88	30.98	-8.53	72.76
Total	$\sum X = 126.23$		$\sum d_1^2 = 32.95$	$\sum Y = 112.25$	-	$\sum d_2^2 = 181.93$

(Sources: Annex)

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{126.23}{5} = 25.24$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{112.25}{5} = 22.45$$

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 32.95 - \frac{0}{5} \right\} + \left\{ 181.93 - \frac{0}{5} \right\} \right]$$

$$= \frac{1}{8} [32.95 + 181.93] = 26.87$$

Hence,

Null Hypothesis (H<sub>0</sub>):  $\mu_x = \mu_y$ , i.e. there is significant difference between mean ratio of total investment to total deposit of total commercial banking system and EBL.

Now,

Calculating the value to 't'

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{25.54 - 22.45}{\sqrt{26.87 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{2.79}{\sqrt{26.87 \frac{2}{5}}} = 1.35$$

Therefore t = 1.35

Tabulated value of 't' (two-tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306.

### Decision

Since calculated value of 't' is less than its tabulated value, we accept hypothesis (H0).

### 4.3.5 Test of Hypothesis on Loan and Advance to Deposit Ratio

#### Test of Hypothesis on Loan and Advance of BOK to Deposit Ratio of Commercial Banking System

**Table 4.15**

**Test of Hypothesis on Loan and Advance to Total Deposit Ratio of BOK**

Year	Total			BOK		
	X	$d_1 = (X - \bar{x})$	$d_1^2$	Y	$d_2 = (Y - \bar{y})$	$d_2^2$
2062/063	60.71	-8.16	66.58	69.23	-8.51	
2063/064	68.69	-0.18	4.93	75.87	-1.84	15.99
2064/065	71.09	2.22	0.03	78.71	0.97	1.34
2065/066	70.64	1.77	0.07	81.00	3.26	1.27
2066/067	73.22	4.35	5.34	83.90	6.16	16.23
Total	$\sum X = 344.35$		$\sum d_1^2 = 76.95$	$\sum Y = 388.71$	-	$\sum d_2^2 = 125.31$

(Sources: Annex)

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{344.35}{5} = 68.87 \qquad \text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{388.71}{5} = 77.74$$

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 76.95 - \frac{0}{4} \right\} + \left\{ 125.31 - \frac{0}{4} \right\} \right]$$

$$= \frac{1}{8} [76.95 + 125.31] = 25.28$$

Hence,

Null Hypothesis (H0):  $\mu_x = \mu_y$ , i.e. there is no significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and BOK.

Alternative Hypothesis (H1):  $\mu_x \neq \mu_y$  (two tailed), i.e. there is significant difference between mean ratio of loan and advance to total deposit ratio of total commercial banking system and BOK.

Now,

Calculating the value to 't' :

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{68.87 - 77.74}{\sqrt{25.28 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{-8.87}{2.0116} = -4.409$$

Therefore  $t = 4.409$

Tabulated value of 't' (two- tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306.

### Decision

Since calculated value of 't' is greater than its tabulated value, we accept alternative hypothesis (H1). In other words, there is significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and BOK.

### 4.3.6 Test of Hypothesis on Loan and Advance of NIB to Deposit Ratio of Commercial Banking System

**Table 4.16**

**Test of Hypothesis on Loan and Advance to Total Deposit Ratio of NIB**

Year	Total			NIB		
	X	$d_1 = (X - \bar{x})$	$d_1^2$	Y	$d_2 = (Y - \bar{y})$	$d_2^2$
2062/063	60.71	-8.16	66.59	71.04	-4.21	17.72
2063/064	68.69	-0.16	0.03	67.50	-7.75	60.06
2064/065	71.09	2.22	4.93	78.36	3.11	9.67
2065/066	70.64	1.77	3.13	77.61	2.36	5.57

2066/067	73.20	4.35	18.92	81.74	6.49	42.12
Total	$\sum X = 344.33$		$\sum b_1^2 = 93.60$	$\sum Y = 376.25$	-	$\sum b_2^2 = 135.15$

(Sources: Annex)

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{344.33}{5} = 68.87$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{376.25}{5} = 75.25$$

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 93.60 - \frac{0}{4} \right\} + \left\{ 135.15 - \frac{0}{4} \right\} \right]$$

$$= \frac{1}{8} [93.60 + 135.15] = 28.59$$

Hence,

Null Hypothesis (H0):  $\mu_x = \mu_y$ , i.e. there is no significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and NIB.

Alternative Hypothesis (H1):  $\mu_x \neq \mu_y$  (two tailed), i.e. there is significant difference between mean ratio of loan and advance to total deposit ratio of total commercial banking system and NIB.

Now,

Calculating the value to 't' :

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{68.87 - 75.25}{\sqrt{28.59 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{-6.38}{\sqrt{28.59 \cdot \frac{2}{5}}} = -2.98$$

Therefore  $t = 2.5$

Tabulated value of 't' (two- tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306.

## Decision

Since calculated value of 't' is greater than its tabulated value, we accept alternative hypothesis( H1). In other words, there is significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and NIB.

### 4.3.7 Test of Hypothesis on Loan and advance of NIC to Deposit Ration of Commercial Banking System

Table 4.17

Test of Hypothesis on Loan and Advance to Total Deposit Ratio of NIC

Year	Total			NIC		
	X	$d_1 = (X - \bar{x})$	$d_1^2$	Y	$d_2 = (Y - \bar{y})$	$d_2^2$
2062/063	60.71	-8.16	66.59	75.93	-7.74	59.94
2063/064	68.69	-0.18	0.03	88.81	5.14	26.40
2064/065	71.09	2.22	4.93	86.09	2.42	5.84
2065/066	70.64	1.77	3.13	87.80	4.13	17.04
2066/067	73.22	4.35	18.92	79.72	-3.93	15.44
Total	$\sum X = 344.3$ 5		$\sum d_1^2 = 93.6$ 0	$\sum Y = 418.3$ 6	-	$\sum d_2^2 = 124.6$ 7

Sources: Annex

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{344.35}{5} = 68.87$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{418.36}{5} = 83.71$$

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 93.60 - \frac{0}{5} \right\} + \left\{ 124.67 - \frac{0}{5} \right\} \right]$$

$$= \frac{1}{8} [93.60 + 124.67] = 27.28$$

Hence,

Null Hypothesis (H0):  $\mu_x = \mu_y$ , i.e. there is no significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and NIC.

Alternative Hypothesis (H1):  $\mu_x \neq \mu_y$  (two tailed), i.e. there is significant difference between mean ratio of loan and advance to total deposit ratio of total commercial banking system and NIC.

Now,

Calculating the value to 't' :

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

$$= \frac{68.87 - 83.71}{\sqrt{27.28 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{-14.84}{\sqrt{27.28 \times \frac{2}{5}}} = -7.103$$

Therefore  $t = 7.103$

Tabulated value of 't' (two- tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306.

### Decision

Since calculated value of 't' is greater than its tabulated value, we accept alternative hypothesis( H1). In other words, there is significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and NIC.

### 4.3.8 Test of Hypothesis on Loan and Advance of EBL to Deposit Ration of Commercial Banking System

**Table 4.18**

**Test of Hypothesis on Loan and Advance to Total Deposit Ratio of EBL**

Year	Total			EBL		
	X	$d_1 = (X - \bar{x})$	$d_1^2$	Y	$d_2 = (Y - \bar{y})$	$d_2^2$
2062/063	60.71	-8.18	66.91	71.01	-3.45	1.90
2063/064	68.69	-0.18	0.03	75.13	0.67	0.45
2064/065	71.09	2.24	5.01	76.49	2.03	4.12
2065/066	70.64	1.77	3.13	73.43	-1.03	1.06
2066/067	73.22	4.35	18.92	76.24	1.78	3.17
Total	$\sum X = 344.35$		$\sum d_1^2 = 93.6$	$\sum Y = 372.3$	-	$\sum d_2^2 = 20.7$

(Sources: Annex)

$$\text{Mean } \bar{x} = \frac{\sum X}{N} = \frac{344.35}{5} = 68.87$$

$$\text{Mean } \bar{y} = \frac{\sum Y}{N} = \frac{372.3}{5} = 74.46$$

$$s^2 = \frac{1}{n_1 + n_2 - 2} \left[ \left\{ \sum d_1^2 - \frac{(\sum d_1)^2}{n_1} \right\} + \left\{ \sum d_2^2 - \frac{(\sum d_2)^2}{n_2} \right\} \right]$$

$$s^2 = \frac{1}{5+5-2} \left[ \left\{ 93.6 - \frac{0}{5} \right\} + \left\{ 20.7 - \frac{0}{5} \right\} \right]$$

$$= \frac{1}{8} [93.6 + 20.7] = 14.28$$

Hence,

Null Hypothesis (H0):  $\mu_x = \mu_y$ , i.e. there is no significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and EBL.

Alternative Hypothesis (H1):  $\mu_x \neq \mu_y$  (two tailed), i.e. there is significant difference between mean ratio of loan and advance to total deposit ratio of total commercial banking system and EBL.

Now,

Calculating the value to 't' :

$$t = \frac{\bar{x} - \bar{y}}{\sqrt{s^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \\ = \frac{68.87 - 74.46}{\sqrt{14.28 \left( \frac{1}{5} + \frac{1}{5} \right)}} = \frac{-5.59}{\sqrt{14.28 \frac{2}{5}}} = -3.701$$

Therefore  $t = 3.701$

Tabulated value of 't' (two- tailed test) for  $(n_1 + n_2 - 2)$  (i.e. 8) degree of freedom, At 5% level of significance is 2.306

### **Decision**

Since calculated value of 't' is greater than its tabulated value, we accept alternative hypothesis( H1). In other words, there is significant difference between mean ratio of loan and advance to total deposit of total commercial banking system and EBL.

### **4.4 Statistical Analysis**

This unit aims to analyze the factors related to the topic of the study by using statistical tools such as ratio analysis, co-efficient of correlation, and test of hypothesis between different variables. Such types of statistical analysis assist the researcher to get to the decision.

#### 4.4.1 Analysis of Coefficient of Correlations

The coefficient of correlation defines the degree of relationship between or among two or more variables. Here we study the degree of relationship between two variables one of them is independent variable and another is dependent variable. The Karl Pearson's method popularly known as Pearson's co-efficient of co-relation is mostly used for calculating the coefficient of correlation in practice. The Pearson's co-efficient of co-relation is denoted by "r" which shows the relationship between two variables. It helps to determine whether

- A positive or negative relationship exists.
- The relationship is significant or insignificant.
- Establish cause and effect relation if any.

Correlation analysis among various statistical tools is preferred in this study to identify then relationship between variables, and measure the significance of the relationship. For the purpose of decision making interpretations are based on the following terms:

When,  $r = 1$ , there is perfect positive correlation.

When,  $r = -1$ , there is perfect negative correlation

When,  $r = 0$ , there is no correlation

When,  $r$  lies between 0.7 and 0.99 (-0.7 and 0.-.099), there is a high degree of positive or (negative) correlation.

When " $r$ " lies between 0.35 and 0.67 (-0.35 and -0.67) there is moderate degree of correlation.

When " $r$ " is less than 0.35(-0.35) there is low degree of correlation.

### **Probable error (P.E.) of correlation**

The probable error of the correlation of coefficient is applicable for the measurement of reliability of the computed value of the correlation coefficient 'r'. The probable error is calculated by:

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

For decision making purpose following points will be considered:

- a. If  $r < \text{P.E.}$  the value of 'r' is not significant no matter how high r value is. It means there is no evidence of correlation between the variables.
- b. If  $r > 6 \text{ P.E.}$  the value of 'r' is significant i.e. correlation is significant.
- c. If  $\text{P.E.} < r < 6 \text{ P.E.}$ , then we cannot make any decision.

### **Decision**

Since calculated value of 't' is smaller than its tabulated value, we accept null hypothesis( $H_0$ ).

In other words, there is no significant difference between mean ratio of loan and advance to total deposit of BOK, NIB, EBL and NIC.

### **4.5 Major Findings**

In this research, data have been basically obtained, by the secondary sources. The analysis is made with the help of Financial and statistical tools. In the financial tools, ratio analysis has been used for the analysis of the financial activities of commercial banks, especially total commercial banking system, BOK, NIB, EBL and NIC.

Considering the statistical analysis as the easy path for meeting the objective some statistical tools have been used for the analysis. In statistical tools, ratio analysis, correlation coefficient, and t-statistic have been used. This unit focuses on the major

findings, which are derived from the analysis of the data related to the total commercial banking system, BOK, NIB, EBL and NIC. This study has been made on the basis of the related data for five years from fiscal year 2062/063 to 2066/067. The major finding of the financial analysis and statistical analysis are presented below.

### **Ratio Analysis**

Ratios analysis shows the performance level of the commercial banks like liquidity situation, growth of return, growth of deposit as well as loan. Liquidity ratio shows the liquidity position of the bank. From higher liquidity position we can predict that the bank returns the deposit of customer in any time and vice versa. In the above table no. 4.1 NIB have a better average liquidity position as compare to other bank where as NIC have lowest liquidity position. Monitoring body of commercial bank, NRB has also given the important for the liquidity ration so the body has provided the guidelines to maintain the 5.5% cash balance in NRB to commercial bank which called CRR.

Loan and advances to deposit ratio is called Credit deposit ratio (CD ratio). As NRB directives commercial bank has to maintain CD ration not more than 80% of total deposit. On our analysis NIC had highest average CD rations and EBL had lowest CD ratio. From above analysis we can decided that all sample bank had maintained the required CD ratio.

### **Growth Analysis**

The smooth growth of the performance show the perfect efficiency but this cannot be found in real practice in general life. In this study the growth of both sampled banks and total commercial banking system are analyzed and compared with each other.

Growth of deposit is one of the indicators showing the performance efficiency of commercial banks. Analyzing the growth of total deposit ratio total commercial banking system and BOK has fluctuating ratios during the study period. On fiscal year 2064/065 BOK had achieved 27.81% increment which is highest achievement in the sample year. . In case of NIB bank had achieved highest increment in all the sample year as compare to

other sample bank and highest increment in the fiscal year 2064/065 compare to the sample year.

Loan and advance is the most important element for investing the funds of commercial banks. Analyzing the growth ratios of loan and advance, the ratios of both sampled banks and total commercial banking system are in falling trend. The statistics of all sample bank as well as total banking system shows that the increment rate of deposit was decrease on the fiscal year 2066/067. The reason for falling growth in all commercial banks may be of the application of the policy of financial restructuring, liquidity crunch in the country.

Another reason for falling growth may be the political instability and unfavorable environment for the trade and industry. Though the ratios of sampled banks are falling and the sampled banks have smaller average growth rate than the average growth rate of total commercial banking system. On the statistic it is cleared that the NIC had the lowest increment rate in the fiscal year 2066/067 where as total market growth rate was decreased more than 100% on the fiscal year 2066/067

Investment is another sector where the banks mobilize their funds. Increasing investment is the signal of economic recovery of the nation and financial efficiency of the commercial banks. Analyzing the growth of investment, the ratios of all sampled banks and total commercial banking system are fluctuating during the study period. The ratios of BOK are positive in the fiscal year 2064/065 and 2066/067 and negative increment on the fiscal year 2063/064 and 2065/066. NIB had positive increment on the all sample year, EBL had negative increment on the fiscal year 2066/067 and positive on the remaining period, NIC had negative on the fiscal year 2063/064 and positive on remaining period and total banking system is positive in all sample period. So it can be generalized that the private sector commercial banks are more successful in making investment in comparison to the government owned commercial banks.

Profit making is one of the most important objectives of commercial banks. If the bank is successful in making smooth growth in profit by passes of time the bank can be considered as managerially successful bank and that can easily sustain in long term. Analyzing the growth of return, all sampled banks have the fluctuating growth during the study period. Comparing to other sample banks NIB has highest mean growth of return during the period. NIB had highest return on the fiscal year 2064/065 and lowest growth of return on the fiscal year 2065/066. Banking system, BOK and EBL had decreasing growth on the fiscal year 2066/067 which cleared the fiscal year 2066/067 was not good for the commercial banking system in the point of return.

### **Coefficient of Correlation**

Analyzing the correlation coefficient between deposit and total investment all sampled bank has positive relationship between these variables. Considering the probable error, the coefficient of correlation (i.e.  $r$ ) of banking system is smaller than the value of  $6PEr$  (i.e.  $-0.77 < 0.84$ ). It means the relationship is not significant. On the other hand the value of coefficient of correlation (I.e.  $r$ ) of BOK, NIB, NIC and EBL is greater than the value of  $6PEr$  (i.e.  $0.99 > 0.04$ ). It means the relationship between the variables is significant.

In the analysis of correlation coefficient between deposit and loan and advance, total commercial banking system BOK, NIB, NIC and EBL have the positive relationship. Considering the probable error, the value of  $PEr$  of BOK, NIB, NIC EBL and total commercial banking system are smaller than the value of correlation coefficient (i.e.  $r$ ), comparing the value of  $6PEr$  with the value of correlation coefficient the value of  $r$  of total commercial banking system, BOK, NIB, NIC and EBL is greater than the value of  $6PEr$  so the relationship between the loan and advance and total deposit of these banks are significant

Analyzing the correlation coefficient between total assets and profit, of BOK, NIB, EBL, NIC and total commercial banking system correlation coefficient (r) for above mentioned banks are -0.99, -0.96, -0.99, -0.95 and -0.99 respectively. It means the total assets and profit of all sample banks and total commercial banking systems are highly negatively correlated. While comparing the value of coefficient of correlation (i.e. r) with the value six times probable error (6PEr) of banking system and all sampled bank, the value of coefficient of correlation is greater than the value of (6PEr) (i.e.  $-0.75 > 0.9$ ).so the relationship between the variables of banking system and all sampled bank is not significant.

### **Test of Hypothesis**

For the test of hypothesis t-test is selected because the total number of population (i.e. total number of commercial banks operating within Nepalese economy) is smaller than thirty (i.e.  $17 < 30$ ). Analyzing the hypothesis test result of investment to total deposit ratio of total commercial banking system with BOK, NIB, EBL and NIC test have yield the result of acceptance of alternative hypothesis. It means the ratios of all sampled banks are significantly different from the ratio of total commercial banking system.

In the analysis of test result of loan and advance to total deposit ratio of total commercial banking system with BOK, NIB, EBL and NIC, all test have yield the result of acceptance of alternative hypothesis (H1) It means there is significant difference between the mean ratio of total commercial banking system and the mean ratio of BOK, NIB, EBL and NIC.

Finally with the analysis of these hypothesis tests it is found that the sampled banks have no significant difference between them, but these both banks are significantly different from other banks of total commercial banking system in the view point of deposit mobilization.

# **CHAPTER – V**

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Summary**

Mobilization as well as canalization of saving in the productive sector is important for the economic development of the country without inflationary pressure in the economy. No doubt commercial banks play a crucial role for the economic development by formulation of capital, which is key variable in the economic development of the country. Scattered recourses hold no meaning unless and until they mobilized and utilized efficiently in some productive sectors. Commercial banks contribute to the process of capital formation by converting dispersed saving into meaningful capital investment in order to aid industry, trade, commerce and agriculture for the economic development of a nation. It should not be forgotten that a country could hardly achieve its growth of economic development without a strong capital base. Commercial banks play a vital role in performing such base for financial and economic development by way of deposit mobilization. It is quite true that a strong financial institution is of great need in the developing country like Nepal. Because all the economic conditions are based on the financial institution and the development of a country depend upon the active participation of the banks in the different activities in the economy.

Deposits are the obligation of the commercial banks. So, commercial banks must allocate the funds in different loans and advances and investments. In this study data of four years from 2063/064 to 2066/067 have been considered for the targeted analysis. Analyzing the liquidity position of the banks, all banks have satisfactory level of liquidity but has the larger portion of deposit as well as loan among the sample bank. Among the sample bank NIB had the highest increment on the profit. Generalizing the findings of the study it can be observed that private sector commercial banks are strong in liquidity management. In assets management ratios all sample bank had the CD ratio around the 80% in all sample period which show all sample commercial bank had maintained the liquidity prescribed

by the NRB. Comparing these all ratios analysis of sampled four banks it is found that NIB is strongest than BOK, NIC and EBL. In the analysis of profitability ratios all sampled banks have the increasing profit in each year but the NIB had the highest rate of increasing compare to other. Comparing to other year fiscal year 2064/065 is the boom period for the commercial bank from the point of profit but in fiscal year 2066/067 all sample bank had the decreasing growth rate in the profit so can be concluded that the year was not suitable due to the liquidity crunch and instability in politic Finally, in conclusion, it can be concluded that the deposit mobilization position of all commercial banks are better.

## **5.2 Conclusion**

Banks are the very necessary elements of the economy of a country. The word banks generally denote the commercial banks. The commercial bank helps in the formation of capital that is the most important for the economic growth of the country. The commercial banks, in Nepal are doing well but they are not giving satisfactory result due to some, internal and external factors. The deposits and its investment in productive sector by commercial banks are not stable and these are going thoroughly by the time passes on. A deposit is indeed the major organ of commercial banks. Higher the deposit higher will be the capacity of investment and higher will be the chance of mobilization of fund and make the satisfactory profit for the long term sustainability of an organization. Banks should be careful while granting loan because loan is the blood of commercial banks for survival. If commercial bank does not adopt the sound investment policy, it will be in greater trouble in future in the collection of loan amount. Banks should invest its funds in various portfolios after the profound study of the project. It keeps the bank far from the problem of default of payment that certainly keeps the bank safe from the bankruptcy. Diversification of investment is very much important for banks because a bank uses the money of people for the benefit of the depositors and the benefit of its own. From the analysis made in last chapter it is found that total BOK, NIB, EBL NIC and banking system are able to mobilize average 80%, 76%, 75% and 86% of their deposits to the loan and advance . This figure show the stronger position of BOK than NIB, EBL

and NIC in deposit mobilization but comparing the return increment NIB has return than other sample bank. It means all sampled banks are efficient in deposit mobilization. The analysis of growth of deposit, loan and advance return BOK is weakest among all. Various analysis yield different results but summarizing the results it can be generalized that there is no more difference between the deposit mobilizations of among the commercial banks. But decreasing in growth trend of deposit, return and loan and advance signed that instability in politic are effecting to the commercial banking system and other side increasing in financial system in mushroom style also increasing the risk and challenge in collecting in deposit.

### **5.3 Recommendations**

Deposits are like the oxygen for commercial banks, without which commercial banks cannot operate and do business. The number of commercial banks has risen sharply these days with more than 2 dozens commercial banks number of finance companies, development banks and other financial institution operating in the market, commercial banks faces the acute completion in terms of deposit collection. Similarly collecting deposit is not sufficient mobilizing them in the small competitive market and earning ample amount of return is another challenge. On the basis of analysis and findings of the study, following suggestions and recommendations can be outlined:

- Commercial banks should increase the rate of interest offered in deposit to attract more customers because newly established banks and other financial institution are offering more interest rate.
- Commercial should seek newer alternative of investment besides traditional ones to move away from the limited market. Investing in hydro projects could be an alternative.
- Commercial banks should review their loans and investment strategy and policy to increase the amount of deposit mobilization. Similarly commercial banks should come up with newer products to compete in the cut throat competition and to stand the challenged rising from new up coming bank.
- Commercial Banks should conduct a market research on a periodic basis to identify

and attract the potential borrowers by using various promotional tools.

- Nepal Rastra Bank being the central bank should increase the supervisory and regulatory role towards commercial banks and financial banks so that mis-management and can be identified and rectified in time which in turn makes the general public secured about their money.
- Commercial banks should not provide excess credit facility to a single borrower and the banking norms and practices should not be neglected in the pressure of competition.
- The commercial banks should increase their branch networks outside the valley also as at present most of the commercial banks are concentrated inside the valley only. Branches should be extended to gain excess larger number of people in the village which is also justified by the amount of inward remittance whose beneficiary are mostly the people of the villages.

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**Website**

[www.nepalsharemarket.com](http://www.nepalsharemarket.com)

[www.nrb.org.com.np](http://www.nrb.org.com.np)

**Correlation coefficient between Deposit & Investment**

Let x be deposit & y be investment respectively

Nepal Industrial and Commerce Bank Limited				$X_1 = (X - \bar{X})$	$Y_1 = (Y - \bar{Y})$	$X^2$	$Y^2$
YEAR	X	Y					
2062.63	8765.95	15729		24,799.12	15,994.81	23,114.68	
2063.64	10068.23	29924.33		(2,625.18)	2,279.95	6,891,591.03	
2064.65	13084.68	32040.67		391.27	4,396.29	153,089.08	1
2065.66	15579.3	27835.85		2,885.89	191.47	8,328,338.00	
2066.67	15968.91	32692.05		3,275.50	5,047.67	10,728,874.05	2
N= 5	$\sum X =$ 63467.07	$\sum Y =$ 138221.9				$\sum x^2 =$ 26125006.85	$\sum y^2 =$ 101

Mean  $\bar{x}$  =  $\frac{\sum X}{N}$

=  $\frac{63467.07}{5}$

= 12,693.41

Mean  $\bar{y}$  =  $\frac{\sum Y}{N}$

=  $\frac{138221.9}{5}$

= 27,644.38

Correlation Coeff. (r) =  $\frac{\sum xy}{\sqrt{\sum x^2} \sqrt{\sum y^2}}$

=  $\frac{12870482.42}{\sqrt{26125006.85} \sqrt{10071431.18}}$

=  $\frac{-12870482.42}{36167892.98}$

= -0.3559

P.Er =  $\frac{\sum(1-r^2)}{\sqrt{N}}$

= 0.6745

$\sum(1-r^2)$

$$= \frac{0.6745 \times -0.3559}{5}$$

$$= \mathbf{0.2634}$$

Coefficient of Determination(  
 $r^2$ )

$$= \frac{(-0.3559)^2}{0.2634}$$

$$= \mathbf{0.12663}$$

6 PE.r

Correlation coefficient between Deposit & Loan and Advance  
 Let x be deposit & y be investment respectively

Nepal Industrial & Commercial Bank

YEAR	X	Y	$X_1 = (X - \bar{X})$	$Y_1 = (Y - \bar{Y})$	$X^2$	$Y^2$
2062.63	8765.95	6655.96	(3,927.46)	(3,998.72)	15,424,973.47	15,989,793.63
2063.64	10068.23	8941.39	(2,625.18)	(1,713.29)	6,891,591.03	2,935,376.33
2064.65	13084.68	11264.67	391.27	609.99	153,089.08	372,082.92
2065.66	15579.3	13679.39	2,885.89	3,024.71	8,328,338.00	9,148,846.39
2066.67	15968.91	12732.01	3,275.50	2,077.33	10,728,874.05	4,315,283.31
N= 5	$\sum X =$ 63467.07	$\sum Y =$ 53273.42			$\sum X^2 =$ 41526865.64	$\sum Y^2 =$ 32761382.58

Mean  $\bar{x} = \frac{\sum X}{N} = \frac{63467.07}{5} = \mathbf{12,693.41}$

Mean  $\bar{y} = \frac{\sum Y}{N} = \frac{53273.42}{5} = \mathbf{10,654.68}$

Correlation Coeff. (r) =  $\frac{\sum XY}{\sqrt{\sum X^2} \sqrt{\sum Y^2}}$

$$= \frac{35974453.04}{\sqrt{41526865.64} \sqrt{32761382.58}}$$

$$\begin{aligned}
 &= \frac{35974453.04}{36884651.72} \\
 &= \mathbf{0.9753} \\
 \text{P.Er} &= 0.6745 \frac{\sum(1-r^2)}{\sqrt{N}} \\
 &= 0.6745 \frac{\sum(1-0.9753^2)}{\sqrt{5}} \\
 &= \mathbf{0.0147}
 \end{aligned}$$

$$\begin{aligned}
 \text{Coefficient of Determination}(r^2) &= (0.9753)^2 \\
 &= \mathbf{0.95126}
 \end{aligned}$$

6 PE.r = 6 ×

65

Profit	2061.062	2062.063	2063.064	2064.65	2065.066	
Name of Bank	13,953.00	20,244.00	26,238.69	36,149.68	46,173.49	5,0
BOK	15,267.00	23,214.00	35,053.64	69,673.15	90,061.90	12,
NIB	16,820.00	23,729.00	29,640.90	45,121.86	63,873.20	8,3
EBL	11,376.00	9,658.70	15,847.50	24,305.80	31,742.40	4,5
NIC	<b>57416</b>	<b>76845.7</b>	<b>106780.73</b>	<b>175250.49</b>	<b>231850.99</b>	
Total						