

***A STUDY ON IMPACT OF SOURCES & USES OF FUND TO  
PROFITABILITY OF NEPALESE COMMERCIAL BANKS***

***(With Reference To BOK & NCC)***

**A Thesis**

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## **RECOMMENDATION**

This is to certify that the Thesis

Submitted by

**ANIL BAHADUR KHATRI**

Entitled:

***A STUDY ON IMPACT OF SOURCES & USES OF FUND TO  
PROFITABILITY OF NEPALESE COMMERCIAL BANKS***

***(With Reference To BOK & NCC)***

*Has been prepared as approved by this Department in the prescribed format of the  
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# VIVA-VOCE SHEET

We have conducted the viva-voce of the thesis presented

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Entitled:

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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's in Business Studies (M.B.S.)**

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Member (Thesis Supervisor) .....

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## DECLARATION

I, hereby, declare that the work reported in this thesis entitled “*A Study On Impact Of Sources & Uses Of Fund To Profitability Of Nepalese Commercial Banks (With Reference To BOK & NCC)*” submitted to office of the Dean, Faculty of Management, Tribhuvan University, is my original work done for the partial fulfillment of the requirement for the Masters of Business Studies (MBS) under the supervision of Madan Kadel of Nepal Commerce Campus, Minbhawan, Kathmandu.

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Date: - April, 2014

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## **ABBREVIATIONS**

ABBS	Any Branch Banking System
ATM	Automated Teller Machine
B.S	Bikram Sambat
BOK	Bank of Kathmandu
BOKL	Bank of Kathmandu Limited
CAR	Capital Adequacy Ratio
CPI	Consumer Price Index
CV	Coefficient of Variation
FD	Fixed Deposit
FY	Fiscal Year
GDP	Gross Domestic Product
Govt.	Government
LC	Letter of Credit
LTD	Limited
MBA	Masters' of Business Administration
MBS	Masters' of Business Studies
Misc.	Miscellaneous
NCC	Nepal Credit & Commerce Bank
NEPSE	Nepal Stock Exchange
NRB	Nepal Rastra Bank
P.E	Probable Error
PNB	Panjabi National Bank
SCBNL	Standard Chartered Bank Nepal Limited
SD	Standard Deviation
SEBON	Securities Board of Nepal
T. U.	Tribhuwan University

# CHAPTER - I

## INTRODUCTION

### 1.1 Background of the Study

Integrated and steady development of the country is possible only when competitive banking service reaches nooks and corners of the country. Commercial banks occupies quite an important place in the framework of every economy because it provides capital for the development of the industry, trade and business investing the saving collected as deposits. Besides these, commercial bank renders a numerous services to their customer in view of facilitating their economic and social life. All the economic activities of each and every country are greatly influenced by the commercial banking business of that country. Commercial banks, by playing active roles, have changed the economic structure of the world.

An arrangement whereby an individual or organization may place cash for the safekeeping in a bank, discount house or financial institution is known as deposit. Deposit is nothing but it is a type of asset. It is understood that the institution may invest the cash and pay the depositor a specified amount of interest and that the depositor can reclaim the full value of the account according to the agreed upon procedures governing the account. The account holder retains rights to their deposit, although restrictions placed on access depend upon the terms and conditions of the account and the provider. The deposit account would be shown as a liability owed by the bank to its customer. Deposits as the amount deposited in a current, saving or fixed accounts of a bank or financial institution. 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, numbers of withdrawal etc. they are used 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 banks play an important role in influencing the customer to save and open deposit account with it, it is ultimately the customer who decides where s/he should deposit his surplus funds in current deposit account, saving deposit or fixed/time deposit account. 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 account and issue cheques against them to their creditors. Deposits also arise when customers are granted accommodation in the form of loans. 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 (Bhandari, 2003).

Investment is primary factor for economic development of any country. Investment refers to as using present money to get long term benefit. Investment in its broadest sense means the sacrifice of current money for future money. Two different attributes are generally involved time and risk. The sacrifice takes place in the present and is certain. The reward or result of sacrifice comes later and the magnitude is generally uncertain. Time and risk are predominates for investment. Such as Investment in government bonds time is predominates whereas in common stock time and risk both are important.

Investment also refers to the expenditure of funds for capital goods such as factories, farm, equipment, livestock and machinery. Capital goods are used to produce other goods or services. The main source of investment is saving. A distinction is often made between investments and saving. Saving is defined as forgone consumption; investment is restricted to real investment of the sort that increases national output in the future. This definition classified investment as real and financial investments. Real investment generally involves some kind of tangible assets such as land, machinery, or factories. Financial investment

involves contracts written on pieces of paper, such as common stock and bonds.

Profitability is a deviation of the term profit, which explains the ability to make the profit. Profit is primary a measuring rod of a success of a business enterprises. Profit is essential for the survival of the business. It is the difference between revenue generated and expenses occurred over the period of time but the term profit has several different interpretations. It is a basic test of the performance of any business concern. Without profit a firm could not attract the outside capital. Moreover, the owners and creditors would become concerned about the company's future and attempt to recover their funds. Owner creditors and management pay close attention for boosting profit due to the great importance placed on earning the market place. Profitability is a technical term, used to compare performances analysis of different trading systems or different investments within one system. This is computed for each system or investments being compared over the same period long enough to include significant "ups" and "downs". So analysis of the profitability of the business is very essential which can be used to measure the overall efficiency of the business.

Profitability of the business can be analyzed through the financial analysis which refers to the assessment of the viability and stability of the business. Profitability of a company is usually based on the income statement. A properly conducted profitability analysis provides invaluable evidence concerning the earnings potential of a company and the effectiveness of management. While analyzing profitability different profitability ratios are calculated. Profitability ratios provide a definitive evaluation of the overall effectiveness of management based on the returns generated on sales and investment. The most widely used profitability measurements are profit margin on sales, return-on-investment ratios, and earnings per share.

## **1.2 Statement of the Problem**

Banking business in Nepal though seemed developed and mushroomed only in urban areas of the country in recent days, has its own limitations and problems as regards to security, profitability and financial soundness. Currently there are 32 commercial banks under 'A' class financial institutions operating in the country. The inflow of money in the banks in the form of several kinds of deposits is huge but it could not be invested in more profitable, sustainable and riskless projects. In addition, many banks are found centered in the urban areas of the country. Therefore, there is a situation that needy people and small entrepreneurs residing in rural areas are still deprived from institutional credit. However, this study will not go to this vast sector and thus, focus only on the level and quality of deposit, investment and profitability of BOK & NCC as regards to profit earning capacity or status of profitability. Investment is the most important factor from the shareholder's and bank's management point of view. Though several joint venture banks have been established in our country within short period of time, sufficient return can not have been earned and strong, stable and appropriate investment policy has not been followed by the commercial banks. Due to throat-cut competition of financial environment, banks seem to be ready to grant much more loan, advances and other facilities against their client's insufficient deposit. However, subsequent development of commercial banks in quality has not been satisfactory. Majority of the commercial banks is found to be unsatisfactory. The financial loss and managerial responsibilities for their ailing units have to be done by the government. But private banks are running successfully. The joint venture banks are not interested in granting loan to the primary sectors of the economy. Banking is not being easy accessibility of public in remote village area. Private banks have concentrated their operation mainly in town and capital of the country.

In developing countries like Nepal commercial banks have been facing several challenges, some of them are arising from lack of smooth functioning of the

economy, some of them are arising due to confused policy and many of them are arising due to default of the borrower. Liberalization in the economy has produced some degree of opportunities and more than it had created chaos and uncertainty. The liberalization of financial sector demands a new technology of lending to cope with the risky pressures on the profitability of the banks and financial sector institutions. This study has tried to answer the following research questions.

- What is the position of sample banks regarding deposit collection, mobilization, investment and profitability?
- What is the relationship between sources, uses and profitability of sample banks?
- What is the trend and their projection regarding sources and uses of sample banks?
- What are the investment sectors of selected sample banks?
- What is the impact of deposit and investment on profitability?

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

The main objective of the present study is to analyze the Impact of deposit & investment on profitability of BOK & NCC and comparison of such between themselves. The study focuses whether it is backward or forward in investing its fund efficiently in industry average. The specific objectives of the study are given below.

- To evaluate the impact of deposit on profitability of commercial banks.
- To analyze the sector wise investment of commercial banks.
- To analyze the relationship between deposit and investment with profitability.
- To measures the trend and their projection regarding sources and uses of sample banks.

## **1.4 Significance of the Study**

The present study is to find out the deposit, investment and its impact on profitability of the commercial bank in Nepal. Any bank can perform its lending behavior only when it has sufficient amount to lend it. So first, it should be able to collect sufficient amount in the form of deposits from different sectors. 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 as follows.

- 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.
- This study will be helpful to management of the selected commercial bank of Nepal to make effective profit planning strategy for future. This also will be valuable for researcher, students who want to investigate into the investment and profitability of the selected commercial bank of Nepal. It will also be important to the bank, investors and stakeholders concerned.
- The study enlightens the shareholders, depositors, creditors, NRB, Tax office etc. about the financial performance of the bank.
- The financial agencies including stock exchanges and stock traders interested in the performance of the bank as well as the customer, depositor and debtors can identify the better bank to deal with in terms of profitability, safety and liquidity.

## **1.5 Limitations of the Study**

This is simply a partial requirement of MBS program. There are some limitations, which weaken the generalization e.g. inadequate coverage of industries, period taken, reliability of statistical tools used and their variations. The following are the major limitations of the present studies.

- This study is concern only with the deposit, investment and profitability of Sample banks.
- The whole study is based on the secondary data collected from the banks.
- The data published in the annual reports of the respected banks, various journal, periodicals and reports published by central bank and the article, books and news published in the respective subjects shall be taken into consideration. So any mistakes and misrepresentation will affect the outcome of the study. Thus it is assumed that all of data here in are correct and accurate.
- The study covers the analysis of only five years period from fiscal year 2065/066 to 2069/070 and analysis is concerned in some managerial, financial and accounting aspects and it does not cover the whole areas of the subjected banks.
- Some of statistical as well as financial tools of comparison and analysis should be used in the study. Hence, the drawbacks and weakness of those tools may have an adverse effect on the outcome of the study.

## **1.6 Organization of the Study**

The whole study comprised of the five different consecutive parts as mentioned below.

## **Chapter I: Introduction**

This chapter comprises of general background, focus of the study, brief profile of the banks under study, significance of the study, objectives of the study, limitations of the study and organization of the study.

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

This part deals with the reviewing of the various literatures, definitions and concept of investment and profitability. This also consists of the review of the related studies, journals, articles and review of books concerned to investment and profitability.

## **Chapter III: Research Methodology**

This part consists of the research design, total population and sample of the study, nature and sources of the data, data collection procedures and the analytical tools and techniques used in the study.

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

This part constitutes the tabular and graphical representation of the collected data, their interpretation and analysis using various financial as well as statistical tools. Apart from it, summary of the major findings are also presented at the end of the chapter.

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

This chapter contains the summary of the whole study and relevant conclusions were drawn based on the study. A suitable set of recommendations were made at the end of the chapter.

Finally an extensive appendices and bibliography are presented at the end of this study.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

This chapter is concerned with review of literature relevant to the Deposit investment & Profit. The purpose of reviewing of literature is to develop some expertise in one's area, to see what new contribution has made and to receive some ideas for developing a research design. Thus, previous studies cannot be ignored as they provide the foundation of the present study. This chapter highlights the literature that is available in concerned subject as to my knowledge, research work, and relevant study on this topic, review of journals and articles and review of thesis work performed previously.

#### **2.1 Conceptual Framework**

##### **2.1.1 Concept of Deposit**

Deposit is the sum of money lodged with a bank, discount house or other financial institution (Shrestha & Bhandari, 2059). 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). 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.

### **2.1.2 Deposit Collection**

For a commercial bank deposit is the most important source of the liquidity. For a bank's financial strength it is treated as a barometer. In the words of Eugene, A bank's deposits are the amount that it owes to its customers. Deposit is the lifeblood of the commercial bank. Though the constitution the great bulk of bank liabilities, the success of a bank greatly depends upon the extent to which it may attract more and more deposit. The volume of funds that management will use for creating income through loans and investment is determined largely by the bank's policy governing deposits. In other words when the policy is restrictive, the growth of bank is retarded or accelerated with the liberalization in the deposit policy. In banking business, the volume of credit extension much depends upon the deposit base of a bank. The deposit creating powers of commercial banks forces to raise the assets along with the liability side of the balance sheet. In other words, assets give rise to liabilities. Traditionally, the deposit structure of a commercial bank was thought to be determined by the depositors and not by bank management. There are regular changes on this view in the modern banking industry. Thus banks have evolved from relatively passive acceptors of deposits to active bidders for funds.

Deposits are one of the aspects of the bank liabilities that management has been influencing through deliberate action (Baidhya, 1999).

For accounting and analyzing purpose, deposits are categorized mainly in three heading.

#### **2.1.2.1 Current Deposit**

A current deposit is a running account with amounts being paid into and drawn out of the account continuously. These accounts are also called demand deposits or demand liabilities since the banker is under an obligation to pay money in such deposits on demand. The account never becomes time barred, because the limitation does not run until a demand is made by the customer on the bank for the payment of deposit. These accounts are generally opened by business houses, public institutions, corporate bodies and other organization whose banking transactions are numerous and frequent. As these deposits are payable on demand, banker is obliged to keep larger cash reserves than are needed in the case of fixed and savings deposits. This type of account is just a facility offered by the bank to its customers. So such deposit doesn't yield any interest return. The deposit in which an amount is immediately paid at the time of any account holder's demand is called demand deposit (Bhandari, 2003). Its transaction is continual & a very small portion of such deposit can be invested in the productive sector. Though the bank cannot gain significant profit by investing it in new sector, this is one of the facilities given to the customer. Therefore, the bank doesn't give interest on this account. For this study this types of deposit is not suitable.

#### **2.1.2.2 Saving Deposit**

Saving account means, "An account of amounts deposited in a bank for savings purposes." The saving deposit bears the features of both of the current and fixed period's deposits. Saving accounts are mainly meant for non-trading customers who have some potential for saving and who don't have numerous transactions entering their account. While opening the account the minimum

compensating balance differ according to the banks rule. Similarly there is also divergence as to how much amount of money can be withdrawn. But if the customers want to withdraw more money from the bank which is not allowed by it but if s/he gives pre-information to the banks, s/he can withdraw more money. The bank fixes the minimum and maximum amount of withdraw able through a cheque from this deposit. If the bank goes into liquidation, priority is given to the saving deposit than current and fixed deposits while repaying the liabilities.

### **2.1.2.3 Fixed Deposit**

Fixed deposits constitute a very important resource for banks as bank need not keep greater reserve in respect of such deposits. Under the commercial Bank Act 2063, “Fixed account means as account of amounts deposited in a bank for certain period of time.” The customers opening such account deposit their money in the account for a fixed period. Usually, only the person or institution who wants to gain more interest opens such type of account. High interest rate is paid to this deposit as compare to saving deposits. The bank and the customer can take benefit from this deposit. The bank invests this money on the productive sector and gains profit and the customer too can be made his financial transaction stronger by getting more interest from this deposit. The principal amount with interest must be returned to the customer after expiry of fixed time. In England these deposits are repayable subject to a period of notice and hence known as time deposit or time liabilities means that these are withdraw able subject to a period of notice and not on demand (Vasu Devan, 1979). Fixed deposit receipt is not transferable by endorsement and certainly not negotiable. However the debt covered by the fixed deposit receipts can be assigned. Bank generally gives loans up to 90% of the deposit against the security of the deposit. For this bank charge some interest higher than the interest allowed on the deposit.

### 2.1.3 Mobilization of Deposit

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

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

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

- a. **Liquid Funds:-** A bank has kept a volume of amount in liquid funds. The funds have so many responsibilities in banking activities liquid funds has covered following transactions.
  - Cash in hand
  - Balance with NRB

- Balance with domestic bank
  - Call money
- b. **Investment:-** Bank invests its fund in different banking activities and different fields. Many types of fields are shown in market for investment. But banks invest its funds in profitable and safety activities. Bank invests its fund in the following titles.
- Share and debenture
  - Government securities
  - Joint-venture
- c. **Loan and Advances:-** Banks mobilize its funds or deposits by providing different types of loan and advances to customers, by charging fixed interest. Different types of loan and advances are
- To government enterprises
  - To provide enterprises

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

- d. **Fixed Assets:-** Land and buildings are essential for the establishment of bank. Bank's funds are used in buying of furniture, vehicle, computer, and other concerned instrument, which are related to banking activities. Bank cannot take direct gain from these assets, but bank should buy it. A bank has a need of fund to purchase fixed assets for the new branches of the bank.
- e. **Administrative and Miscellaneous Expenses:-** Bank should manage funds for administrative and other miscellaneous expenses. The administrative expenses are as follows.
- Salary of Employee
  - Allowances
  - Pension
  - Advertisement
  - Stationery

- Provident Fund
- Rent
- Income tax
- Donation
- Insurance
- Tour expenses
- Commission

The miscellaneous expenses are

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

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

#### **2.1.4 Need for Deposit Mobilization**

The following are some reasons for why Deposit Mobilization is needed in a developing country like Nepal. Workshop report, “Deposit Mobilization why and how” (NRB Bankers Prakashan, 19) Group “A” states the following points as the need for deposit mobilization.

- 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.

- 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.
- To increase saving is to mobilize deposit. It is because if the production of agricultural and industrial products increases, it gives additional income, which helps to save more, and ultimately it plays a good role in deposit mobilization.
- It is much more important to canalize the collected deposit in the priority sectors of a country. In our developing country we have to promote our business and other sectors by investing the accumulated capital towards productive sectors.
- 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 sector like food grains, gold and silver etc. Though these loans are traditional in nature and are not helpful to increase productively, but it helps to some extent, to mobilize the bank deposit.

Developed country does not feel the need of deposit mobilization for capital formation due to developed capital markets in every sectors but in an under developed country and developing country deposit mobilization plays a great role for the economic development . So far the developments of these sectors concerned, there is needs of more capital. Again instead of the development of a particular sector, the development of every sector should go side by side. Low national income, low per capita income, lack of technical know how, vicious cycle of poverty, lack of irrigation and fertilizer, pressure of population increase, geographical condition etc. are the main problems of economic development of an under developed country like Nepal. 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 Bankers Prakashan, 1984).

### **2.1.5 Advantages of Deposit Mobilization**

- a. **To Support Fiscal and Monetary Policy:** - Fiscal policy of the government and monetary policy of the central bank for economic development of a country can be supported by deposit mobilization. Deposit mobilization helps to channelize idle money in productive sectors. Again, it helps in money supply which saves the country from deflation and helps central bank's objective of monetary policy.
- b. **To promote cottage industries:** - Deposit mobilization is needed to facilitate cottage industries located in rural and urban areas. If the bank utilizes the collected deposit in the same rural or urban sector for the development of cottage industries, it helps to not only promote cottage industries in the area, but also support in the development of the locality as a whole by increasing employment and income of the local people.
- c. **Capital formation:** - Capital plays a vital role for the development of industries. But in an underdeveloped country, where there is always lack of capital to support such industries, capital formation and industrialization is possible through deposit mobilization.
- d. **Circulation of Idle Money:** - Deposit mobilization helps to circulate idle money. The meaning of deposit mobilization is to convert idle saving into active saving. Deposit mobilization helps the depositors habit of saving on one side and it also help to circulate the idle saving in productive sector on the other. This helps to create incentives to the depositors. Again, investment in productive sector helps directly in country's economic development and also increases investors' income.
- e. **Development of banking habit:** - One important side of economic development of a country is to increase banking habit of the people.

Deposit mobilization helps in this aspect. If there is proper deposit mobilization, people believe on the bank and banking habit of the people develops.

- f. **To check-up misutilization of money:** - Mostly our customs and habits are supported by social and religious beliefs. There is also tendency of copying others and show the superiority in the society by buying unnecessary and luxury items. In such society, deposit mobilization proves itself as a tool to check-up misutilization of money.
- g. **To support government development projects:** - Every underdeveloped country's government needs a huge amount of money for development projects. The deposit collected by commercial banks, can fulfill, to some extent, the need of money to the government for this purpose.
- h. **Co-ordination between different sectors:** - Deposit mobilization helps to collect capital from surplus and capital hoarding sectors. The fund can be invested for the needy sectors i.e. priority sectors. Thus, it helps to fulfill the gap between these two benefited by earning interest in the deposit and the needy sectors by receiving loans and advances. Thus, deposit mobilization helps to keep good co-ordination between different sectors.
- i. **Others:-** Deposit mobilization supports small savers by giving interests, helps to the development of rural economy, protects villagers from being exploited by indigenous bankers, increases investment incentives, provides facilities to the small farmers to purchase tools and fertilizers etc. (Bankers prakashan)

### **2.1.6 Concept of Investment**

Investment is a present sacrifice for the sake of future benefits. Therefore, investment always involves risk. Present decision about selecting the best

alternatives should always take the future risk into consideration. The few alternatives of investment in the past have now expanded into hundreds. Hence, the complexity of investment has also been increasing day by day. To select the best alternative and to construct an efficient portfolio, a wise analysis and decision is required. Before making any decision on investment we must be well informed about the factors, which affect investment. Investment decision related with saving, capital formation, capital market, risk involve with it, return, inflation etc.(Gittman & Jochnk, 1990).

Investment, in its broadest sense, means the sacrifice of current rupees (dollars) and resources to the sake of future rupees (dollars) and resources. In other words, it is a commitment of money and other resources that are expected to generate additional money and resources in the future. Such a commitment takes place in the present and is certain to occur but the reward comes in the future and always remains uncertain. Therefore, every investment entails some degree of risk.

Investments are made in assets. Assets generally are two types: real assets (Land, Building, Factories etc) and financial assets (Stock, Bonds, T-Bills etc). These two types of investment are not competitive but complementary, highly developed institution for financial investment greatly facilitating real investment (Bhattari, 2005).

Country's growth rate is largely depending on investment and commercial banks are key for investing funds in productive works as they deal with money. They collect funds and utilize it in a good Investment, which is not an easy task for them. Therefore an investment of funds may be the question of life and death for the bank. They must have effective and good investment policy to exist in this world of competition.

Bank portfolio (loans and investments) of commercial banks has been influenced by the variable securities rates Investment planning of commercial

banks in Nepal is directly traced to fiscal policy of government and heavy regulatory procedure of NRB. So the investments are not made in professional manner. Investments planning of the commercial banks in are not made in professional manner. Investment planning of the 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 banks should take their investment function with proper business attitude and should perform lending and investment operation efficiently with proper analysis of the projects (Bhalla, 2004).

Total risk of security can be divided into systematic and unsystematic components. Systematic risk is risk that cannot be diversified away for it affects all securities in the market. Unsystematic risk is unique to the particular securities and can be eliminated with efficient diversification. If the assumption of the CAPM or APT factor model holds this risk does not matter to investors. As a result, diversification of assets by a company in an effort to reduce volatility would not be a thing of value.

Inflation is a major concern for investors. But and large, people have come to fear significant inflation, particulars when it is unpredictable. Capital rationing is likely to result in investment because depreciation charges do not reflect replacement cost and firm's taxes grown at a faster rate than inflation. In estimating cash flows one should take account of anticipated inflation. Otherwise a bias arises in using an inflation-adjusted required return and non-inflation-adjusted cash flows and there is a tendency to reject some projects that should be accepted.

From the definition given above, it is clear that an investment means to trade a known rupee amount today for some expected future stream of payments or benefits. A commercial bank must always mobilize its funds and other deposits to profitable, secured and marketable sector so that it earns a handsome amount

of profit as well as it should be secured and can be converted into cash as per the requirement.

The investment process describes how an investor should go about making decisions with regard to what marketable securities to invest in, how extensive the investment should be, and when the investment should be made. A five-step procedure for making these decisions forms the basis of the investment process (Francis, 2003)

- Set investment policy
- Perform security analysis
- Construct a portfolio
- Revise the portfolio
- Evaluate the performance

### **2.1.7 Principle of Sound Investment Policy**

It is universally known fact that the most important problem in banking administration is that of investing its deposits and paid up capital in various forms of earning assets. This is also known as portfolio policy. The bank's portfolio being nothing but an arranged and digested scheme of its assets.

The funds of banks are generally invested either in those assets, which are non-profitable, or those, which are profitable. Non-profitable assets include cash reserve and the dead stock and profitable assets includes call money, investment, advances and loan, cash credits, overdrafts, discounting of bills and acceptances etc. The guiding principle of sound investment is as follows (Van Horne & Wachowicz, 1995).

1. **Safety:-** Safety would be the first guiding principle of a bank, so far as its advances and investment are concerned, because the very existence of a bank depends on the safety of its outstanding, which should never therefore be sacrifice to the profit-earning capacity of its advances. This has led people to believe that a bank will never advance any loan, unless

it is fully secured. Such is no doubt the ideal conception of banking, but as a result of its competition from other banks, every bank has to grant a certain number of loans to its customers against their personal security. In such cases, the bank uses discretion and never lends a sum obviously beyond its customer's resources. Consequently, to maintain a banking concern in sound condition should be above suspicion. Scrupulous care should be taken that the funds lent out are not subject to any risk of being lost.

2. **Liquidity:-** While making advances and investments, the bank must see that the money it is lending is not going to be locked up for a long time, which would make its loans and advances less liquid and more difficult to realize in cases of emergency. A bank can afford to lend funds only for a short period, as its liabilities are either payable on demand or at short notice. If it makes advances for long term there is no likelihood of it being able to recall such loans in time to meet the demands of its depositors.
3. **Diversification of Risk:-** It is also necessary to remember that a prudent bank must avoid investing all its funds in meeting the needs of any one industry or any one group of industries for considerations of self-interest as well as the larger public good. The imprudence on putting one's own eggs into one basket cannot be too often reiterated. Therefore bank should invest their funds in different field than investing in same field or sector.
4. **Return:-** Another important factor that it determines the decision of the bank whether or not to grant loan or to make an Investment will depend upon the answer to the question whether or not it will get a fair return on its investment. A bank always aims at securing maximum profits for its share- holders. The difference between borrowings and lending rate constitutes the gross profit and no bank ordinarily will think of an advance without a satisfaction margin of profit.

5. **Marketability:-** The investments of the bank should be such as can be easily sold and realized in cash readily. Loans given against commercial paper representing goods in transit or against stocks and shares of well-known companies are easily realizable while loans given against immovable property cannot be easily realized. The bank must make sure that the securities, in which he invests his funds, are easily saleable without appreciable loss.
6. **Stability of Price:-** The primary object of a bank in buying securities is not to gain by a possible rise in their prices, which is the aim of a speculating dabbler. Therefore the price of the securities should be liable to wide fluctuations.
7. **Stock Exchange Securities:-** This consists of government securities as well as securities of the joint stock companies. These securities are easily and quickly realizable. As they are quoted on the stock exchanges so their values can be easily ascertained. In case of need, a bank can either sell them or pledge them without any hesitation. But before accepting them, the bankers should see that the shares of the companies are not partly paid, that sufficient margin has been kept and they are negotiable. Speculative shares should not be accepted (Bhalla, 2004).

### 2.1.8 Investment Alternatives

There are various alternatives for investors:

1. Equity Securities	<ul style="list-style-type: none"> <li>• Common Stock</li> <li>• Preferred Stock</li> </ul>	
Short term debt securities	<ul style="list-style-type: none"> <li>• Negotiable certificates of deposit</li> <li>• Commercial paper</li> <li>• Banker's acceptances</li> <li>• Treasury Bills</li> </ul>	
2. Intermediate and Long Term Debt Securities	<ul style="list-style-type: none"> <li>• Government securities</li> </ul>	<ul style="list-style-type: none"> <li>➤ Treasury Notes</li> <li>➤ Treasury Bonds</li> <li>➤ Saving Bonds</li> </ul>
	<ul style="list-style-type: none"> <li>• Agency securities</li> </ul>	

	<ul style="list-style-type: none"> <li>• Municipal Securities</li> </ul>	<ul style="list-style-type: none"> <li>➤ Revenue bonds</li> <li>➤ General obligation bonds</li> </ul>
	<ul style="list-style-type: none"> <li>• Corporate bonds</li> </ul>	
3. Hybrid Securities	<ul style="list-style-type: none"> <li>• Convertible preferred stock</li> <li>• Convertible bonds</li> </ul>	
4. Derivative securities	<ul style="list-style-type: none"> <li>• Options</li> <li>• Community futures</li> <li>• Financial futures</li> <li>• Options in futures</li> <li>• Rights</li> <li>• Warrants</li> </ul>	
5. Real Assets	<ul style="list-style-type: none"> <li>• Precious Metal</li> <li>• Real State</li> <li>• Collectibles</li> </ul>	
6. International Investment	<ul style="list-style-type: none"> <li>• Multinationals Corporations</li> <li>• Foreign stocks traded on all local exchange</li> <li>• American Depository Receipts ( ADRs)</li> </ul>	
7. Other Investment Alternatives	<ul style="list-style-type: none"> <li>• Pension Funds</li> <li>• Mutual funds</li> <li>• Closed –end Companies</li> </ul>	

*Source: Bhalla, 2004*

### **2.1.9 Investment Uncertainty (Risk)**

Every investment involves uncertainties that make future investment returns risky. Some of the sources of uncertainty that contribute to investment risk are as follows (Weston & Brigham, 1995).

1. **Interest Rate Risk:-** It is defined as the potential variability of return caused by changes in the market interest rates. In more general terms, if market interest rates rise, then investment values and market prices will fall, and vice versa. The variability of return is the result of change in interest rate. This interest rate risk affects the prices of bonds, stocks, real estate, gold, puts, calls, future contracts and other investment as well.

2. **Purchasing power Risk:-** It is the variability of return an investor suffers because of inflation. The rate of inflation is measured by using a consumer price index (CPI). The percentage change in the CPI is a widely followed measure of the rate of inflation.
3. **Bull-Bear Market Risk:-** Bull-Bear market risk arises from the variability in market return resulting from alternating bull and bear market forces. When a security index rises fairly consistently from a low point called a trough, for a period of time, this upward trend is called a bull market. The bull market ends when the market index reaches a peak and starts a downward trend. The period during which the market declines to the next trough is called bear market.
4. **Default Risk:-** It is the portion of an investment's total risk that results from changes in the financial integrity of the investment. Default risk is the variability of return that investors experience as a result of changes in the creditworthiness of a firm in which they invest. Investor losses from default risk usually result from security prices falling as the financial integrity of a firm weakens. By the time an actual bankruptcy occurs, the market prices of the troubled firm's securities will already have declined to near zero.
5. **Liquidity Risk:-** It is that portion of an asset's total variability which results from price discounts given or sales commissions paid in order to sell the asset without delay. Perfectly liquid assets are highly marketable and suffer no liquidation costs. Liquid assets are not readily marketable – either price discounts must be given or sales commissions must be paid, or both of these costs must be incurred by the seller. Hence, the more liquid an asset is, the larger the price discounts and/or commissions which must be given up by the seller in order to effect a quick sale.
6. **Callability Risk:-** Some bonds and preferred stocks are issued with a provision that allows the issuer to call them in for repurchase. The

portion of a securities total variability of return that derives from the possibility that the issue may be called is the callability risk. Callability risk command a risk premium that comes the form of a slightly higher average rate of return. This additional return should increase as the risk that the issue will be called increases.

- 7. Convertibility Risk:-** Convertibility risk is that portion of the total variability of return from a convertible bond or a convertible preferred stock that reflects the possibility that the investment may be converted into the issuer's common stock.
- 8. Political Risk:-** The portion of an asset's total variability of return caused by changes in the political environment that affect the asset's market value. Whether the changes that cause political risk are sought by political or by economic interests, the resulting variability of return is called political risk.
- 9. Industry Risk:-** An industry may be viewed as a group of companies that compete with each other in a market of homogenous product. Industry risk is that portion of an investment's total variability of return caused by events that affect the products and firms that make up an industry. The stage of the industry's life cycle, international tariffs and/or quotas on the products produces by an industry, product or industry related taxes; industry wide labour union problems, environmental restrictions, raw material availability, and similar factors interact and affect all the firms in an industry simultaneously. As a result of these commonalities, the process of the securities issued by competing firms tends to rise and fall together.

#### **2.1.10 Profit & Profitability**

Generally profit is defined as the excess of revenue over cost. In other words, profit is the residual income, which is equal to sale proceeds minus costs. Profit is the resources left to the firm for future growth and expansion or reward to

be distributed to the entrepreneurship in the form of dividends etc. In a simple term, profits mean the residual balance of earning expected to be available with the firm that is obtained after deducting entire expenses, costs, charges and provision from total revenue of a period of time.

It is the lifeblood of each type of business. Every business organization should earn profits to survive and grow over the long period of time. Obviously, organization will have no future if it is unable to make reasonable profit from its operation. As a matter of fact, the overall efficiency of an organization is reflected in its profits. Profits to the managements are the test of efficiency and a measurement of control: to the owners, a measure of worth of their investment; to the creditors, the margin of safety to the employees; a source of fringe benefits to the Government, a measure of fixed paying capacity and the basis of legislative action; to customers, a hint to demand for better quality and price cuts; to a bank, less burden some source if finance existence and finally to the country, profit are index of economic progress. Thus, if an organization fails to make profit, capital invested erodes and if this situation prolongs it ultimately cease to exist.

Profit has been universally recognized and accepted as a measure of business efficiency. Thus, the larger the profits, the more efficiency and profitable the business organization is deemed to be. This criterion has the greater advantage that it provides a common standard of measuring the efficiency if different bank. Regarding this, Laxmi Narayan clearly states, "Profit is the simple, convenient and the most popular yardstick of judging the efficiency of private and public business enterprises. Profit helps in judging the overall efficiency and is easy to calculate. Even through profit maximization, unlike private enterprise, is not objective of public enterprises, yet profit services as a well accepted criterion for the judging the overall efficiency of public enterprises too" (Narayan, 1980 : P, 260).

The profit is the ultimate measure of effectiveness. A profitable company is likely to offer not only security of employment but also promotion prospects,

job opportunities and the intense personnel motivation that comes from being associated with success. John Argent observes, “Profit is the barometer of the success of business. It is, indeed, a magic eye that mirrors all aspects of entire business organizations including the quality output.” (Argent, 1968)

The term ‘profitability’ is composed of two words profit and ability. It reflects the capacity of a business organization to earn profit. It is also referred to as earning capacity or earning power of the concern investment. Thus, the term profitability may be taken as the ability to earn profit. According to Howard and Upton, “The word profitability may be defined as the ability of a given investment to earn return on its use (Pradhan, 2004).

It may be mentioned that the term ‘profitability’ is distinguished from the word profit. Profit refers to the absolute quantum of profit whereas profitability alludes to the ability to earn profit. The former is an absolute measure in itself while the latter is a relative one. According to W.M. Harper, the profitability is a relative measure. It indicates the most profitable alternative. The profit, on the other hand is an absolute measure. It indicates the overall amount of profit earned by transaction. As the profitability is the relative measure, it is used to judge the degree of operational efficiency of management. Furthermore, it is essentially employed to measure the relative efficiency of different trading systems or different investments within one system. In the profitability analysis, the profit making ability of an organization is measured in terms of size of investment in it or its sales volume. Such an analysis of profitability reveals how particularly such a position stand as a result of transactions made during the year. It is particularly interesting to the suppliers of funds who can evaluate their investment and take necessary decision thereon.

The state of profitability is a variable thing like the temperature and humidity of a day. The determination of profitability by an accountant or analyst is very much similar to temperature reading and study of humidity by a meteorologist. A meteorologist records the weather on daily basis with an intention to forecast

its future prospects. Likewise, an analysis records yearly profit of a bank with a view to make prediction of the future prospects.

The purpose of profitability measurement is to see whether a bank has effectively used its resources to achieve its profitability objectives. The profitability objectives refer not to the maximum profit the business can produce but to the minimum it must produce. The minimum profit is the profit at the minimum rate required for the desired type of investment in the bank. However, there must not be enough profit to yield the capital in the market rate of return on money, which is already sunk in business, but also to provide additional capital needed to cover the cost of staying in business (Van Horne & Wachowicz, 1995).

#### **2.1.11 Meaning of Profit**

Profit, from Latin means “to make progress”. It is defined in various ways. In economics, profit is the concept of reward of the entrepreneur for risk taking and management. In business operations, it is the gain from manufacturing, merchandising and selling operations after all expenses are met. Since profit is added to net worth, it may be measured by the increase in net worth over that of the previous accounting period. The amount of concern’s profit thus may be determined not only through the profit and loss statement but also by the comparison of the earned surplus or net worth in the balance sheet which, however, is the residue of profits after dividends and any other appropriations and does not reveal details of sources of income and expenses, which are found in profit and loss account. In speculative transactions, profit is the excess of the net selling price over the costs (including all charges) of the security or commodities traded in.

Profit is a motivating factor behind many managerial activities. Much has been written about the role (as opposed to the method of calculation) of profit. Profit plays three roles in the capitalistic society. Profit is the financial reward of risk taking; profit is the financial reward for having monopoly power; profit

is the financial reward for the efficient management. The promise of profit provides a strong incentive to owners and managers to act efficiently. "Profit is essential for every enterprise to survive in the long run as well as to maintain capital adequacy through retained earnings. It is also necessary to accept market for both debts and equity to provide funds for increased assistance to the productive sectors" (Robinson, 1981).

Account and economics are two disciplines in which profit is viewed in different concepts. Pure economic profit is the increase in wealth that an investor has from making an investment, taking into consideration all costs associated with that investment including the opportunity cost of capital. Accounting profit is the difference between retail sales price and the costs of manufacture. A key difficulty in measuring either definition of profit is in defining costs. Accounting profit may be positive even in competitive equilibrium when pure economic profits are zero.

In economics, a firm is said to be making an economic profit when its revenue exceeds the total (opportunity) cost of its inputs. According to Adam Smith (The father of economics), "Profit is the sum remaining after the payment of all wages (wage) in economics includes payments to officers of corporations, to proprietors, to partners and to farmers, as well as to what we today term (labor), and rent on the unimproved value of land, as the return to capital" (Hampton, 1995).

Profit in the accounting sense is the net figure of difference between all types of measurable revenues and all measurable costs. In accounting, profit is expressed only on explicit and measurable accounting terms and on the book value basis. However, in economics, profit is measured in the realizable terms. "Profit in the accounting sense is the excess of revenue receipts over the costs incurred in producing this revenue. This concept of profit is also known as residual concept. But, in economics, both implicit and explicit costs are deducted from total sales revenue in determining profits." (Charles, 1999) As a matter of fact over the years there has been quite an evolution as to what

particular items should be deducted from gross income to arrive at an “accounting” profit. Thus, “accounting” profit is a concept of man-made legislation, of the courts, of the Security of Exchange Commission, of accounting organizations; a concept, which has always been in evolution. “Economic” profit on the other hand, is a concept of a natural law of economics, and like the law of gravitation has remained and will remain unchanged over the ages. However, the profit under discussion is concerned with accounting profit, which in a simple language, is the positive and fruitful difference between two revenues and total expenses over a period of time, Multiple meaning of the word "profits" have always been troublesome. Accountants have made energetic efforts in recent years to discard the word for that purpose and to refer to the conventional concept as business income a natural term at avoids any overlap with economic theory. The most important points of difference between the economists and accountants are as follows (Peter, 2002).

- The inclusiveness of costs i.e. what should be subtracted from revenue to get profit.
- Meaning of depreciation
- The treatment of capital gains and losses
- The price level basis of valuation of assets and liabilities
- Although there may be arguments in favor and against profit generating almost all firms require earning it. Their rate of earning differs from firm to firm and time to time.

#### **2.1.12 Theories of Profit**

Economists have propounded several theories of profits to explain profits of entrepreneurs. Most of the theories are centered on the controversy about the role of the entrepreneur. In the following section some of the fundamental theories of profit have reviewed in brief (Brigham & Gapenski, 1999).

1. **Theory of Risk and Uncertainty Bearing:-** It was F.B. Hawley who first developed the theory of risk bearing and concluded that profit is a reward of the entrepreneurs for bearing risks. But, the theory was picked up by Professor F.H. Knight who divided risk into insurable risk and uncertainties. Thus according to Knight, profit is a reward to the entrepreneur for his non-transferable function of bearing non-insurable risk and uncertainties.
2. **Dynamic Theory of Profit:-** This theory was propounded by J. B. Clark. According to this theory, 'dynamic changes' in the economy are the basic causes of emergence of profits. There is no profit in the static economy as no changes take place. In a dynamic economy there are constant changes in population, capital, methods of production and industrial set up. These changes multiply wants of consumers, which earn profits to the entrepreneur.
3. **Innovation theory of profit:-** Joseph Schumpeter singled out 'innovation' from the dynamic theory of profits and developed economy and innovation in the changing world gives rise to profits. In his views, the entrepreneur plays an important role of introducing innovation in an economy and profits are the rewards for his role as an innovator. The innovation could be changes or techniques that reduces cost of production or increases demand for the product.

### **2.1.13 Need For Profit**

Profit is necessary for the following reasons

1. **Measurement of Performance:-** Profit is only factor to measure the management efficiency, productivity and performance. Profit is the most widely used yardstick to see what really is to be achieved and where the firm is to go in the future.
2. **Premium to cover costs of staying in Business:-** Business environment is full of risks and uncertainties. to grasp the globally changing

technologies, to stay in the market uncertainties, to replace and acquire assets and enhancing business scope etc. require a profit margin.

3. **Ensuring Supply of Future Capital:-** Profit is necessary to plough back in the investments like innovations, business expansion and self-financing. It also attracts investors for further investment.
4. **Return to the investors:-** Shareholders provide equity capital to the business because they expect the entity will provide return to their funds at least equal or above market rate of return. To maintain the shareholders expectation, it is most important that a firm should earn sufficient profit so that it can distribute dividends (Pandey, 1999).

#### **2.1.14 Profitability of Commercial Banks**

Banks today are under great pressure to perform to meet the objectives of their stockholders, employees, depositors, and borrowing customers, while somehow keeping government regulators satisfied that the bank's policies, loans, and investments are sound. The majority of the needs of the stakeholders are related with the profitability of the banks. For example, in case the bank earns profits, the investors get dividends, employees get bonus, government gets benefits in forms of taxes etc. Thus, the foremost objective of the banks is the profit maximization. As other types of business entity, commercial banks are also inspired by the profit (Rose, 1999).

The major source of funds of the bank is the public deposit. Commercial banks invest public deposits on those sectors where they can attain the maximum income or higher rate of return as the bank is liable to pay certain rate of interest to the public in their deposit. Hence the investment or granting of loan and advance by them are highly influenced by profit margin. Generally the profit of commercial bank depends upon the interest rate of the bank, volume of loan provided, time period of loan, and nature of investment in different securities. However, the bank at the same time has to ensure that their investment is safe from default.

Aspiration of profit to commercial banks seem reasonable as the bank has to cover all the expenses as interest to the depositors and other administrative costs, they should make payment in the form of dividend to the shareholders who contributed to build up the banks capital and keep aside for the provision and reserves. For this the bank calculates the cost of fund and likely return, if the spread is enough irrespective of risk involved and absorbs its liquidity obligations, it will go ahead for investment.

A successful bank is one who invests most of its funds in different earning asset standing safely from the problem of liquidity i.e. keeping cash reserve to meet day-to- day requirements of the depositors. After all the commercial bank is simply a business corporation organized for the purpose of maximizing the value of the shareholders wealth invested in the firm at an acceptable level of risk. So bank has to make a crucial decision regarding a mixture of liquidity and profitability cause lower the liquidity higher the profitability and higher the liquidity lower the profitability and both are equally important, banks cannot afford to ignore any of them (Khadka & Singh, 2001).

## **2.2 Review of Journal & Articles**

**Dhungana (1998)**, “*Problem encountered by the Nepalese financial system*”, NRB Samachar, Annual Publication, 2053 B.S., highlighted the major weakness of the banking sector, mainly of RBB and NBL. According to the writer, the financial sector is dominated by banking sector and which in turn, is dominated by two old government owned banks. These two banks constitute the largest component of total deposit of banking system. These two banks suffer from various problems, which results the unsound health of the banking industry of Nepal. The major weaknesses of these banks are.

- Concentration of loan to limited borrowers
- Large number of branches with limited transaction
- Inefficient staff and absence of manpower development and planning
- Poor supervision and follow up after credit disbursement

- Insufficient records and bookkeeping
- No application of modern banking equipments in bank branches
- To improve the productivity and quality of banking sector the authorities have created a new environment given raise to JVBs.

**Kunt and Harry (1999)**, in the journal, World Bank Policy Research Working Paper No. 1900. under the topic “*Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence*”, says that differences in interest margins and bank profitability reflect a variety of determinants: bank characteristics, macroeconomic conditions, explicit and implicit bank taxation, deposit insurance regulation, overall financial structure, and underlying legal and institutional indicators. A larger ratio of bank assets to gross domestic product and a lower market concentration ratio lead to lower margins and profits, controlling for differences in bank activity, leverage, and the macroeconomic environment. Foreign banks have higher margins and profits than domestic banks in developing countries, while the opposite holds in industrial countries. Also, there is evidence that the corporate tax burden is fully passed onto bank customers, while higher reserve requirements are not, especially in developing countries.

In the report and recommendation of the president of Asian Development Bank to the board of directors on a Proposed loan and technical assistance grant to the Nepal for the corporate and financial governance project published in 2000 A.D. clearly discussed on the financial difficulties of State-Owned Financial Institutions. The report states that all state-owned financial intermediaries face financial difficulties, although the extent of the problems is difficult to assess in the absence of reliable financial information. The poor performance can be attributed to deficiencies in governance, lack of commercial orientation and managerial skills, as well as inadequate policies. Financial record keeping and auditing are not of international standards. Internal monitoring, evaluation, and supervision are weak, as is the system of appraisal and follow-up on loans. The problems are most acute for the two government-controlled commercial banks,

RBB and NBL, which dominate the banking system with about 70 percent of total assets. A recent international audit indicates that both banks suffer serious, critical shortfalls in all key areas, and that both are technically insolvent, with negative worth estimated at up to 7 percent of GDP. Although deposits are presumed to be implicitly guaranteed by the Government, a systemic banking or fiscal crisis could emerge if problems remain unaddressed. World Bank assistance in this area has been requested.

**New Business Age (August, 2008)** published a article "*Banks & Profit*", highlights about the increase in reserve and surplus of all the banks with the exception of Nepal SBI, Global and NB Bank. Overall deposits in the banking sector have increased by 25 percent with increase in deposits of all the banks except Lumbini. Government banks such as RBB, NBL and ADB have the highest deposits followed by Nepal Investment Bank Ltd. (NIBL), Himalayan Bank Ltd. (HBL), Nabil Bank and SCBN. NIBL has surpassed the deposit of ADB in the current fiscal year 2007- 08. Deposits in Laxmi, Siddhartha, Global and Citizens Banks have substantially increased by 43 percent, 55 percent, 142 percent and 295 percent respectively. There has been an increase in overall interest income because of overall increase in loans and advances. ADB, RBB, NBL, Nabil, NIBL, and HBL have the highest interest income. Among these banks, NBL has lowest loans and advances but have highest interest income. NBL, RBB, and NB Bank have negative capital adequacy ratio (CAR) but it has improved compared to last year in NBL and RBB while it deteriorated in NB Bank. NPL to total loan ratio of all these banks has reduced. Laxmi, Siddhartha, Everest, Nabil, NIC, and SCBNL have the lowest NPL to total loan ratio while NB Bank, RBB, NCC Bank and Lumbini Bank have the highest ratio.

**Bajracharya (2008)**, in his article, "*Monetary policy and deposit mobilization in Nepal*" concludes that the mobilization of domestic saving is one of the prime objectives of the monetary policy in Nepal and for this purpose commercial banks are the vital active financial intermediary for generating

resources in the form of deposit of the private sector and providing credit to the investors in different sectors of the economy.

**Panta (2010)** in his thesis article, "*A Study of Commercial Banks Deposit and its Utilization*" has made an attempt to highlight the discrepancy between resource collection and resource utilization. He concluded that commercial banks failure in resource utilization is due to their lending confined to short term only. He recommended the commercial banks to give emphasis also on long and medium term lending for better utilization of the deposit.

### **2.3 Review of Previous Research Work**

**Malla (2008)** has conducted thesis entitled, "*Financial Performance of Commercial Bank with Special Reference to Himalayan & NABIL Bank Ltd.*" The main objective of the study is to analyze the liquidity position & the profitability of these two banks.

The following are the major findings of the study.

- The high liquidity ratios are maintained by these banks.
- The measurement of assets management has revealed that the total liability to total assets of HBL has the highest ratio than of NABIL.
- She has also found that considering EPS, performance of HBL is better than NABIL but comparing net profit and shareholders' equity, the performance of NABIL is better.
- She concludes that the overall liquidity ratio of NABIL is better. It has low degree of surviving capacity in the adverse liquidity position caused by interest sensitive deposit.

**Joshi (2009)**, has conducted a study on "*Investment & Deposit of Commercial Bank of Nepal*" a comparative study of SCBNL with NABIL Bank and .

### Her Main Objectives

- To examine the liquidity assets management and profitability position and investment policy of SCBNL in comparison to NABIL and L.
- To analyze the relationship between loan and advance and total investment with other financial variable of SCBNL and compare with NABIL and L.
- To study the various risks in investment of SCBNL in comparison to NABIL and L.

### Her Majors Findings

- SCBNL has higher idle cash and bank balance. It may decrease profit of bank. It is good to invest more on share & debentures as it encourage financial and economic development of the country.
- A commercial bank must mobilize its fund in different sector such as to purchase share & debentures of other financial and non financial companies out of total working fund.
- SCBNL has invested its more of the funds i.e. total investment on total deposit ratio, in comparison to other commercial banks but percentage of investment on share and debenture in very nominal.
- Portfolio condition of a bank should be regularly revised from the time to time. It should always try to maintain the equilibrium in the portfolio condition of the bank. So it can be said “all eggs should not be kept in the same basket”.
- On the basis of above facts, it is seen that SCBNL has invested much of its fund in total outside assets but it has not achieved the desired result.
- The risk taken by SCBNL, from the angle of credit and capital are in an average whereas the consistencies of the same are highly volatile which

may result higher loss. The bank should not test those risks on an experiment basis as seen from the consistency angle.

**Shrestha (2012)**, in her study “*A Comparative Study on Investment Policy of Joint Venture Banks*” has studied primarily of four commercial banks i.e. Himalayan Bank Ltd., Nepal SBI Bank Ltd., and Everest Bank Ltd. & Bank of Kathmandu Ltd. The main objectives of her studies are as follows.

- To compare, analysis & evaluate the investment policy of these four commercial banks.
- To evaluate, liquidity, activity & portfolio ratios of these banks.
- To find out the deposit collection & the effectiveness of fund mobilization.

The Conclusion of the research study is as follows:

- HBL is more successful in mobilizing the fund in proper way in comparison to other three commercial banks.
- All these banks should have to increase the deposit collection, investment in securities shares & debentures.
- All banks should be in rural areas & have to take effective marketing strategy for their promotion.
- New technologies have to be introducing so to develop new banking system.

## **2.4 Research Gap**

Research gap refers to the gap between previous research and this research. Many research studies have been conducted by the different students, experts and researcher about deposit and investment. There have been fund numerous research studies on financial companies and public enterprises regarding deposit mobilization and investment. Some studies are related to case study of

two company and some others are comparative in nature. But the study on ‘an impact of deposit and investment to profitability of BOK & NCC has not been made yet.’.

The financial and statistical tools used by most of the researchers were ratio analysis, test of hypothesis and regression analysis. This study includes different tools like ratio analysis, correlation analysis and co-efficient of variation, probable error, trend analysis as specific tools. Thus the research study made on “A Study An Impact of Deposit & Investment to Profitability of BOK & NCC " will be an effort to analyze on detail about deposit collection, investment and their impact on profitability of the BOK & NCC in present situation with the help of various related financial as well as statistical tools and techniques. The study can be beneficial to all the concerned parties and people as well.

## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

Research methodology is the systematic way of solving research problems. Research methodology refers to the overall research process, which a researcher conducts during his/her study, if all the procedures from theoretical foundation to the collection and analysis of data. As most of the data are quantitative, the research is based on the scientific models. It is composed of both parts of technical aspect and logical aspect. On the basis of historical data, research is systematic and organizational effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well thought out activities of gathering, recording and analyzing and interpreting the data with the purpose of finding answer to the problem. Hence, the entire process by which we attempt to solve the problem is called research.

#### **3.1 Research Design**

To achieve the objective of this study, descriptive and analytical research design has been used. A descriptive study is one in which information is collected without changing; the environment (i.e., nothing is manipulated). A descriptive research design refers to the process of describing what current conditions or attitudes exist at the moment and the analytical surveys describe and explain why certain situations exist. Mostly, secondary data has been used for analysis but the discussion and interview with the concerned persons is used for analysis. So, the present study emphasis on descriptive and analytical research.

#### **3.2 Population and Sample**

Under the study of deposit, investment & Profitability, the total numbers of commercial banks including domestic and joint venture banks operating in the Nepal are the population. At present there are thirty-one licensed commercial banks are running in Nepal. All thirty-one licensed Nepalese commercial banks

has been considered as the total population out of them this study is concerned with two commercial bank taken from this population on judgmental sampling basis i.e. BOK & NCC bank for the study purpose.

- Bank of Kathmandu
- Nepal Credit & Commerce Bank

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

The data used in this report is secondary type, which have been taken mainly from the published data and financial statements of the sampled banks. These include annual reports for the last five years and report of each year. Besides these, the following sources of data are also be considered.

- NRB reports
- Various publications dealing in the subject matter of the study
- Various articles published in Newspapers

### **3.4 Data Collection Techniques**

It indicates the sources of data and how they collected. In this study data are collected through published sources. They were collected from the correspondent offices and their respective websites. The annual reports of BOK & NCC, NRB publications, the data regarding the profile of sample banks and other related documents were collected from internet websites. Unpublished master's thesis, books, research papers, articles, journals have been collected through different library of Tribhuvan university, and NRB Magazines and newspapers were from concerned authorities.

### **3.5 Data Analysis Techniques**

The data collected is classified and tabulated in order to make it easily understandable. The data is classified in chronological order, i.e., on the basis of time intervals. After classification, the data is tabulated, i.e., arranging the data in column and rows systematically.

### 3.5.1 Diagrammatic Presentation of Data

Various diagrams are used to present the data more clearly. The diagrams used in this study are as follows.

- Bar Diagram
- Trend Diagram

### 3.5.2 Analytical Tools

Various tools are used in this thesis. Menly statistical tools and financial tools are used , these tools are as follows.

#### 3.5.2.1 Statistical Tools

Statistical tools are used to analyzed the relationship between two or more variables and to find how these variables are related.In this study, following statistical tools are used.

##### a. Arithmetic Mean or Average

The mean or average value is a single value within the range of the data that is used to represent all the values in the series.Since an average is somewhere within the range of the data, it is also called a measure of central value. It is calculated by;

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N}$$

Where,

$$\bar{X} = \text{Arithmetic Mean}$$

$$\sum X = \text{Sum of values of all items, and,}$$

$$N = \text{Number of items}$$

##### b. Standdrd Deviation

The standard deviation is the measure that is most often used to describe variability in data distributions.It can be thought of as a rough measure of the

average amount by which observations deviate on either side of the mean. Denoted by Greek letter's (read as sigma), standard deviation is extremely useful for judging the representatives of the mean. Standard deviation is calculated as;

$$\text{Standard deviation}(\sigma) = \sqrt{\frac{\sum(X-\bar{x})^2}{N}}$$

Where,

$\sigma$	=	Standard deviation
$\sum(X - \bar{x})^2$	=	Sum of squares of the deviations measured from arithmetic average.
N	=	Number of items

### c. Coefficient of Correlation

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between to sets of figures. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the tudy. The result of coefficient of correlation is always lie between +1 and -1. The formula for the calculation of coefficient of correlation between X and Y is given below.

$$r = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

Where,

r	=	Correlation coefficient
$\sum x_1$	=	$\sum (X_1 - \bar{X}_1)$
$\sum x_2$	=	$\sum (X_2 - \bar{X}_2)$

Under this topic, Karl Pearson's correlation coefficient is used to measure the degree of relationship between the following variables.

**d. Coefficient of Determination ( $r^2$ )**

The coefficient of determination is a measure of the degree of linear association or correlation between two variables one of which happens to be independent and other being dependent variable. In other words coefficient of determination measures the percentage total variation independent variables explained by independent variables. Zero to one is the ranging measurement of this coefficient of multiple determinations. If  $R^2$  is equal to 0.75, which indicates that the independent variables used in, regression model explained 75% of the total variation in the dependent variable. If the regression line is a perfect estimator  $R^2$  will be equal to +1, when there is no correlation the value of  $R^2$  is zero.

**e. Probable Error of Coefficient. of Correlation**

The probable error is a measure of as certainty the reliability of the value of a Pearson's coeff. Of correlation. If the probable error is added to and subtract from the coeff. of correlation, it would gives two such limits within which we can reasonably accept the value of coeff. of correlation to vary. The formulae for finding out the probable error of the Karl Pearson's coeff. of correlation is:

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

Where,

P.E( r) = probable error of coeff. of correlation.

r = Coefficient of correlation.

n = No. of pairs observation.

If  $r < 6 P.E(r)$ , the value of 'r' is not significant no matter how high r value.i.e. there is no evidence of correlation between the variables.

If  $r > 6 P.E(r)$ , the value of  $r$  is significant, i.e. correlation is significant.

#### **f. Trend Analysis**

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly. The future trend is forecasted by using the following formula.

$$Y = a + bx$$

where,

Y = the dependent variable

a = Y intercept

b = the slope or the rate of change of Y per unit change in x

x = the independent variable

#### **3.5.2.2 Financial Tools**

Financial analysis is the process of identifying the financial strengths and weaknesses of the organization by properly establishing relationships between the items of the balance sheet and the profit and loss account.

#### **c. Net Profit Margin**

The ratio signifies the effectiveness of expenses management and cost control and gives the direction to the management for service pricing policies. It means how much of total revenue has been declared as net profit after all the charges are over up. The higher ratio means the management has been able to control its operational costs and maintain efficiency.

$$\text{Net Profit Margin} = \frac{\text{Net Profit After Tax}}{\text{Total Operating Income}}$$

#### **d. Return on Loans & Advances**

This ratio shows the return on loans and advances during the year. Higher ratio of net income to loans & advance is better.

$$\text{Return on Loans \& Advances} = \frac{\text{Net Profit After Tax}}{\text{Loans \& Advance}}$$

#### **e. Net Profit to Investment**

Net profit to investment ratio shows the proportion of profit in the total investment. It measures the earning efficiency of firm from the investment in different sectors.

$$\text{Net Profit to Investment Ratio} = \frac{\text{Net Profit After Tax}}{\text{Investment}}$$

#### **f. Net Profit to Deposit Ratio**

Deposits are the liabilities of banks. Net profit to deposit ratio is the proportion of net profit in total deposit.

$$\text{Net Profit to Deposit Ratio} = \frac{\text{Net Profit After Tax}}{\text{Deposit}}$$

## **CHAPTER - IV**

### **PRESENTATION & ANALYSIS OF DATA**

To find the answer of research problem, the collected data are necessary to present and analyze by processing. This chapter will present the data on table & figure. The main objective of the study is to present data and analyze them with the helps of various financial and statistical tools. This chapter consists of analysis and presentation of empirical data. The important variables are very sensitive and taken into consideration, so this chapter will present the analysis of components of deposit, investment and profitability. The major ratio for the study is profitability ratio. The variables of the ratio indicated above are also tried to study in details.

#### **4.1 Deposit Position**

Deposits are the main sources of resources to meet growing demands of financial existence. The existence of commercial banks basically depends upon the mobilization of deposits. It is important that commercial bank's deposit policy is the essential policy for its existence. The growth of bank depends primarily upon the growth of its deposit. The commercial banks may function well when they have enough deposit. Higher the volume of deposit, higher will be the volume of lending and investment which again creates higher volume of profit

**Table: 4.1**

**Deposit Position of BOK**

**(Rs. In Millions)**

Year (B.S)	Current Deposit	Saving Deposit	Fixed Deposit	Margin Deposit	Call Deposit	Others Deposit
2065/066	2492.35	11883.86	6446.18	221.44	2780.65	151.83
2066/067	4859.95	14782.33	7949.98	291.98	6294.00	44.7
2067/068	4173.32	13360.03	10440.28	375.93	8412.8	169.94
2068/069	4741.38	13039.11	15061.94	410.03	7550.04	275.58
2069/070	6098.25	17269.29	13007.48	451.74	12952.16	227.18

Source: Annual Reports of BOK from 2065/066 to 2069/070

**Figure: 4.1**

**Deposits of BOK**

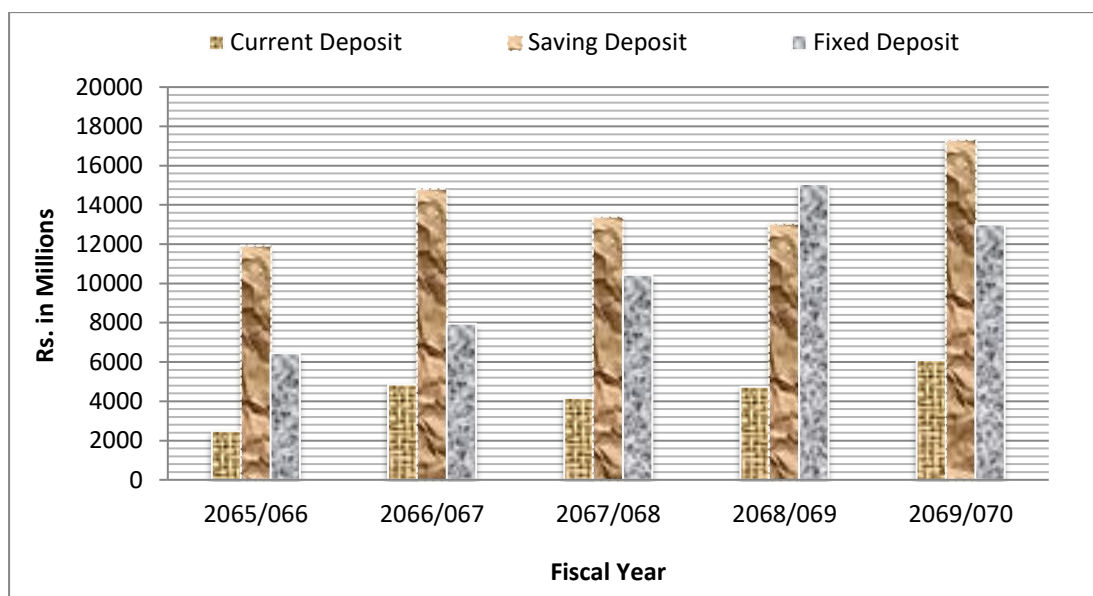


Table 4.1 and figure 4.1 shows the types of deposit and their amount during the study period. BOK has collect deposit from the different types of deposit they are saving deposit, current deposit, fixed deposit, call deposit, margin deposit and others deposit Position of BOK. Current deposits are increasing trend each fiscal year than previous year except the fiscal year 2067/068. The highest amount of current deposit is Rs. 6098.25 million in the fiscal year 2069/070 and that of lowest is Rs. 2492.35 million in the fiscal year 2065/066. Saving deposits are increasing each fiscal year than previous year except the fiscal year 2067/068 & 2068/069 the highest amount of saving deposit is Rs. 17269.27

million in the fiscal year 2069/070 and that of lowest is Rs. 11883.86 million in the fiscal year 2065/066. Fixed deposit are also increasing each fiscal year than previous year except the fiscal year 2069/070 the highest amount of fixed deposit is Rs. 15061.94 million in the fiscal year 2068/069 and that of lowest is Rs. 6446.18 million is the fiscal year 2065/066. Margin deposits and call deposits are increasing trend during the study period and others deposits are fluctuating trend. Among the different types of deposits, the saving deposit has the highest amount in each fiscal year and other deposit has the lowest amount during the study period.

**Table: 4.2**

**Deposit Position of NCC**

**(Rs. In Millions)**

<b>Year (B.S)</b>	<b>Current Deposit</b>	<b>Saving Deposit</b>	<b>Fixed Deposit</b>	<b>Margin Deposit</b>	<b>Call Deposit</b>
<b>2065/066</b>	4784.22	17972.44	6423.87	645.19	2017.07
<b>2066/067</b>	3218.22	20061.05	6377.13	666.14	4359.77
<b>2067/068</b>	3745.62	16294.68	11328.64	946.87	5295.38
<b>2068/069</b>	3694.35	15994.56	13507.37	1219.36	6505.08
<b>2069/070</b>	4584.23	21915.27	11866.78	971.29	8393.41

*Source: Annual Reports of NCC from 2065/066 to 2069/070*

**Figure: 4.2**

**Deposits of NCC**

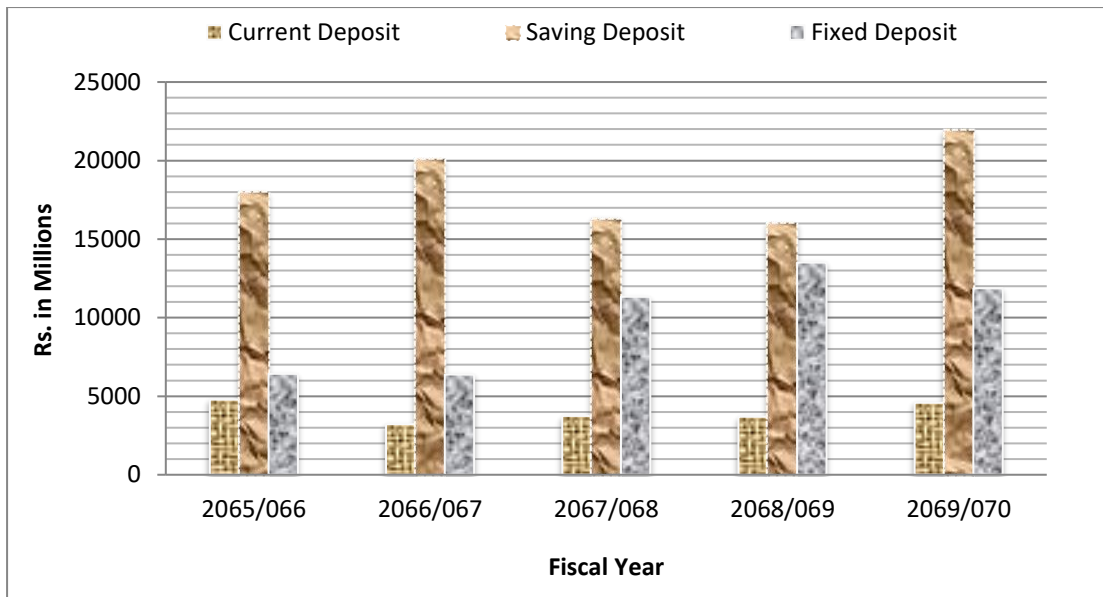


Table 4.2 and figure 4.2 shows the types of deposit and their amount for the fiscal year 2065/066 to 2069/070. NCC has collect deposit from the different types of deposit they are saving deposit, current deposit, fixed deposit, call deposit and margin deposit. Current deposits are fluctuating trend each fiscal year than previous year the highest amount of current deposit is Rs. 4784.22 million in the fiscal year 2065/066 and that of lowest is Rs. 3218.22 million in the fiscal year 2066/067. Saving deposits are increasing each fiscal year than previous year except the fiscal year 2067/068 & 2068/069 the highest amount of saving deposit is Rs. 21915.27 million in the fiscal year 2069/070 and that of lowest is Rs. 15994.56 million in the fiscal year 2068/069. Fixed deposit are fluctuating each fiscal year than previous year the highest amount of fixed deposit is Rs. 13507.35 million in the fiscal year 2068/069 and that of lowest is Rs. 6377.13 million is the fiscal year 2066/067. Margin deposits and call deposits are increasing trend during the study period. Among the different types of deposits, the saving deposit has the highest amount in each fiscal year and margin deposit has the lowest amount during the study period.

**Table: 4.3**  
**Comparative Total Deposit**

(Rs. In Millions)

Fiscal Year	BOK		NCC		
	Total Deposit	% Changes	Total Deposit	% Changes	
2065/066	23976.29	-	31842.79	-	
2066/067	33322.95	38.98	34682.3	8.92	
2067/068	36932.31	10.83	37611.2	8.44	
2068/069	41127.91	11.36	40920.63	8.80	
2069/070	50006.1	21.59	47730.99	16.64	
<b>Average</b>		<b>20.69</b>	<b>Average</b>		<b>10.70</b>
<b>SD</b>		<b>13.16</b>	<b>SD</b>		<b>3.97</b>
<b>CV</b>		<b>63.61</b>	<b>CV</b>		<b>37.06</b>

Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070

Figure: 4.3

### Total Deposit of BOK & NCC

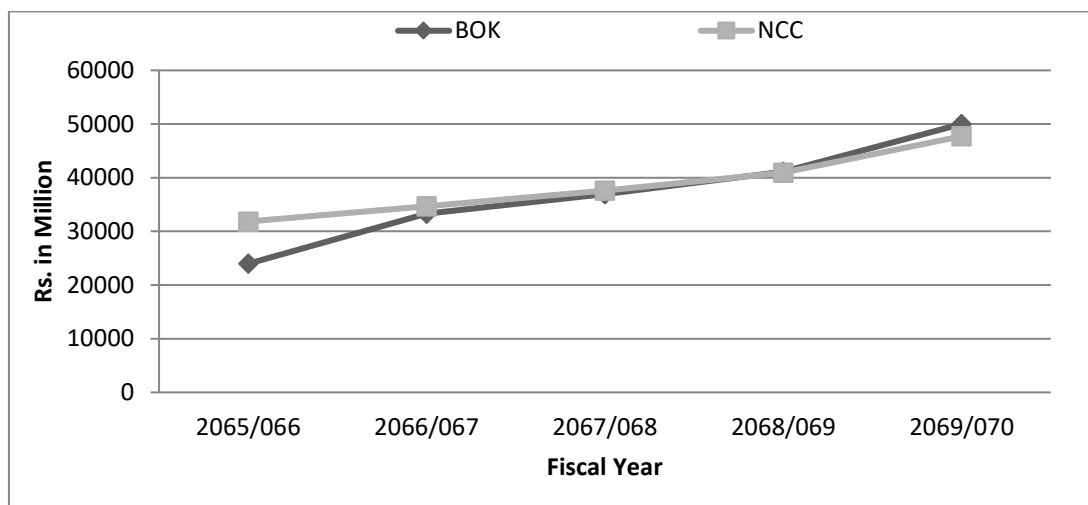


Table 4.3 & Figure 4.3 shows that the total deposit of BOK & NCC in the fiscal year 2064/65 is Rs. 23976.29 & Rs. 31842.79 million respectively, during the next five-year the total deposit of BOK & NCC is in increasing trend. In the fiscal year 2069/070, the total deposit of BOK & NCC is Rs. 50006.1 & 47730.99 million respectively. The percentage changes of deposit is positive of both banks it means the deposit is increasing each fiscal year than previous year but the percentage changes rate of BOK is higher than NCC.

An average increasing rate of deposit of BOK has 20.69% and NCC has 10.70%, standard deviation has 13.16% & 3.97 % and CV has 63.61% & 37.06% of BOK & NCC respectively. It shows the increasing rate of deposit of BOK is higher than NCC but the consistency of increasing rate of NCC is higher than BOK.

## **4.2 Investment position**

Investment usually means the sacrifice of the current money for future money. The sacrifice takes place in the present and the reward comes later, if at all, and the magnitude is generally uncertain. However, Shrestha (2002) describes investment as utilization of saving for something that is expected to produce profit or benefits. Investment is employment of funds to achieve added income or growth in value. It involves the commitment of resources put off from current consumption with hope of capitalizing some benefits in future. It includes both real asset and financial asset .Real asset investment denotes the tangible assets like building, land, machinery, factory and the like. On the other hand, financial asset investment indicates papers representing an indirect claim to real asset held by someone else. .Nevertheless, real asset is less liquid than financial asset.

“Investment is the current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time funds are committed, for the expected rate of inflation and also for uncertainty involved in the future flow of the funds ”(Frank & Reilly, 1972: 299)

The above definitions describe that an investment is the allocation and mobilization of funds for a certain time period to acquire some extra benefit or extra attachment with mobilized fund.

**Table: 4.4****Investment Pattern of BOK****(Rs. In Millions)**

Sector	2065/066	2066/067	2067/068	2068/069	2069/070
Nepal Govt. T-bills	3237.98	3371.43	2745.28	4745.49	3119.59
Nepal Govt. Saving Bonds	-	-	-	-	-
Nepal Govt. Other Securities	1583.63	1774.62	1609.07	2399.52	2949.28
Local licensed Institutions	-	-	261.8	177.87	-
Foreign Banks	138.4	702.00	291.72	313.06	1685.57
Corporate Share	16.22	17.12	17.12	24.65	25.85
Corporate Debentures & Bonds	84.93	84.93	84.93	84.93	84.93
<b>Total Investment</b>	<b>5061.16</b>	<b>5950.08</b>	<b>5009.91</b>	<b>7745.53</b>	<b>7865.23</b>
Less: Provisions	1.6	1.6	1.6	1.6	1.6
<b>Net Investments</b>	<b>5059.56</b>	<b>5948.48</b>	<b>5008.31</b>	<b>7863.63</b>	<b>7743.93</b>

*Source: Annual Reports of BOK from 2065/066 to 2069/070*

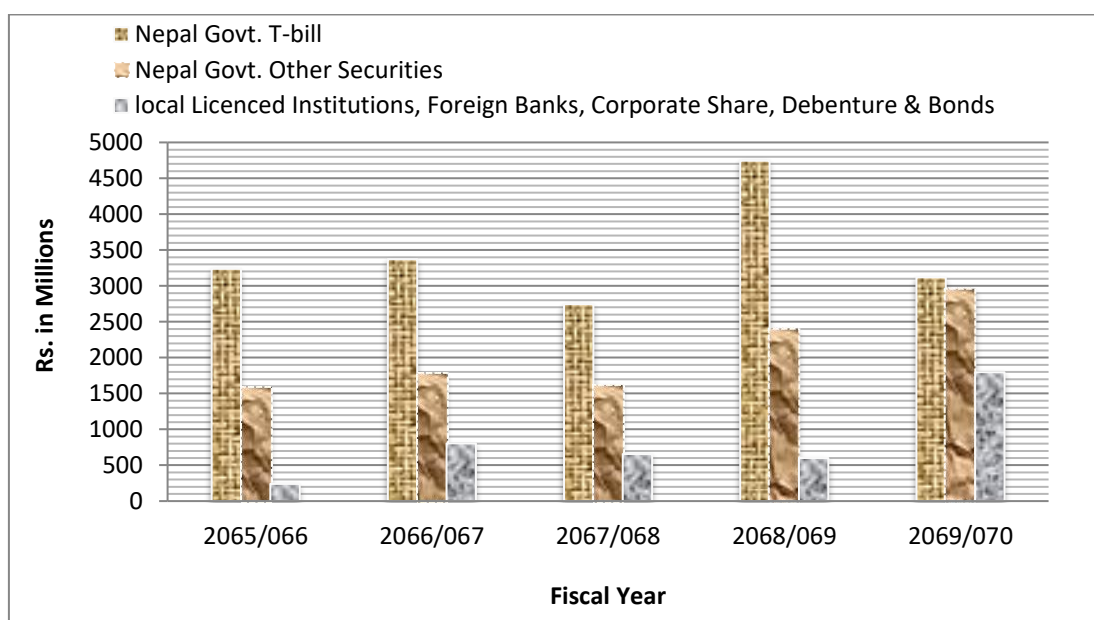
**Figure: 4.4****Investment Sources of BOK**

Table 4.4 & figure 4.4 shows the investment pattern of BOK, the major sector of investment are Nepal Govt. T-bills, Nepal Govt. Other Securities, Local licensed Institutions, Foreign Banks, Corporate Share, and Corporate

Debentures & Bonds. The BOK invest the high amount in the Nepal govt. treasury bills in each year, it is risk free assets for investment. The investment trend in treasure bills is in fluctuating during the study period, the highest amount of investment is Rs. 4745.49 million and that of lowest is Rs. 2745.28 million in the fiscal year 2068/069 & 2067/068 respectively.

The second highest investment sector of BOK is Nepal Govt. Other Securities, the highest amount invested by BOK in Nepal Govt. Other Securities is Rs. 2949.28 million and that of lowest is Rs. 1583.63 million in the fiscal year 2069/070 and 2065/066 respectively. The trend of investment in Nepal Government Other Securities is in increasing each year than previous year during the study period except the fiscal year 2067/068.

The third investment sector is Foreign Banks, the highest amount invested by BOK in Foreign Banks is Rs. 1685.57 million and that of lowest is Rs. 138.4 million in the fiscal year 2069/070 and 2065/066 respectively. The trend of investment in Foreign Banks is in increasing each year than previous year during the study period except the fiscal year 2067/068.

Investment in the corporate share is in increasing trend during the study period and the investment in Local licensed Institutions is only for the fiscal year 2067/068 & 2068/069. Investment in Corporate Debentures & Bonds is equal to Rs. 84.93 million over the study period. The total investment of BOK is in increasing trend over the study period except the year 2067/068.

**Table: 4.5****Investment Pattern of NCC****(Rs. In Millions)**

<b>Sector</b>	<b>2065/066</b>	<b>2066/067</b>	<b>2067/068</b>	<b>2068/069</b>	<b>2069/070</b>
Nepal Govt. T-bills	7166.53	3907.34	3455.03	4725.58	6402.96
Nepal Govt. Saving Bonds	305.13	304.96	1010.34	-	-
Nepal Govt. Other Securities	-	-	-	1681.78	2759.26
Local licensed Institutions	-	-	197.31	479.42	88.2
Foreign Banks	5778.95	4404.51	3703.35	1497.34	692.37
Corporate Share	89.56	93.88	78.88	90.00	90.00
Corporate Debentures & Bonds	-	-	-	-	-
<b>Total Investment</b>	<b>13340</b>	<b>8710.69</b>	<b>8444.9</b>	<b>8771.15</b>	<b>10032.79</b>
Less: Provisions	-	-	-	1.21	1.21
<b>Net Investments</b>	<b>13340</b>	<b>8710.69</b>	<b>8444.9</b>	<b>8769.94</b>	<b>10031.58</b>

*Source: Annual Reports of NCC from 2065/066 to 2069/070*

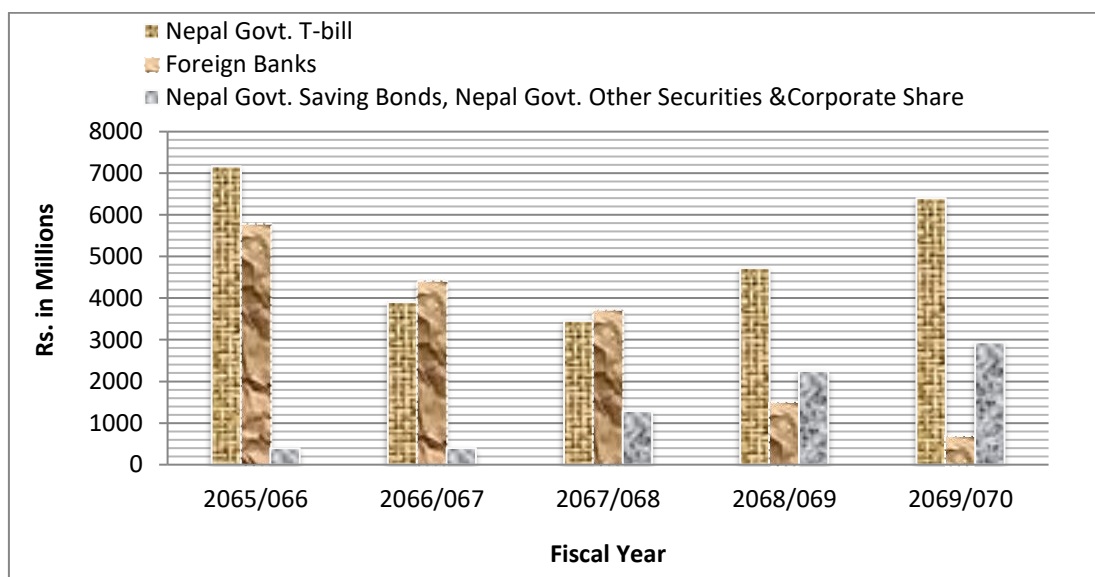
**Figure: 4.5****Investment Sources of NCC**

Table 4.5 & figure 4.5 shows the investment pattern of NCC, the major sector of investment are Nepal Govt. T-bills, Foreign Banks, Corporate Share, Local licensed Institutions, and Nepal Govt. Saving Bonds. The NCC invest the high amount in the Nepal govt. treasury bills in each year, it is risk free assets for

investment. The investment trend in treasure bills is in increasing each year than previous year except the fiscal year 2066/067, the highest amount of investment is Rs. 7166.53 million and that of lowest is Rs. 3907.34 million in the fiscal year 2065/066 & 2066/067 respectively.

The second highest investment sector of NCC is Foreign Banks, the highest amount invested by NCC in Foreign Banks is Rs. 5778.95 million and that of lowest is Rs. 692.37 million in the fiscal year 2065/066 and 2069/070 respectively. The trend of investment in Foreign Banks is in decreasing each year than previous year during the study period.

The third investment sector is corporate share, the highest amount invested by NCC in corporate Share is Rs. 90 million and that of lowest is Rs. 78.88 million in the fiscal year 2069/070 and 2067/068 respectively. The trend of investment in Corporate Share is in fluctuating each year than previous year during the study period.

Investment in Nepal Govt. Other Securities is Rs. 1681.78 & Rs. 2759.26 million in the fiscal year 2068/069 and 2069/070. The bank has no investment in corporate debenture and bonds during the study period. The total investment of NCC is in decreasing trend up to the fiscal year 2067/068 after that it is increases.

**Table: 4.6**  
**Comparative Net Investment**

**(Rs. In Millions)**

Fiscal Year	BOK		NCC	
	Net Investment	% Changes	Net Investment	% Changes
2065/066	5059.56	-	13340.18	-
2066/067	5948.48	17.57	8710.69	-34.70
2067/068	5008.31	-15.81	8444.91	-3.05
2068/069	7863.63	57.01	8769.94	3.85
2069/070	7743.93	-1.52	10031.58	14.39
<b>Average</b>		<b>14.31</b>	<b>Average</b>	
<b>SD</b>		<b>31.58</b>	<b>SD</b>	
<b>CV</b>		<b>220.62</b>	<b>CV</b>	

*Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070*

**Figure: 4.6**

**Trend of Net Investment of BOK & NCC**

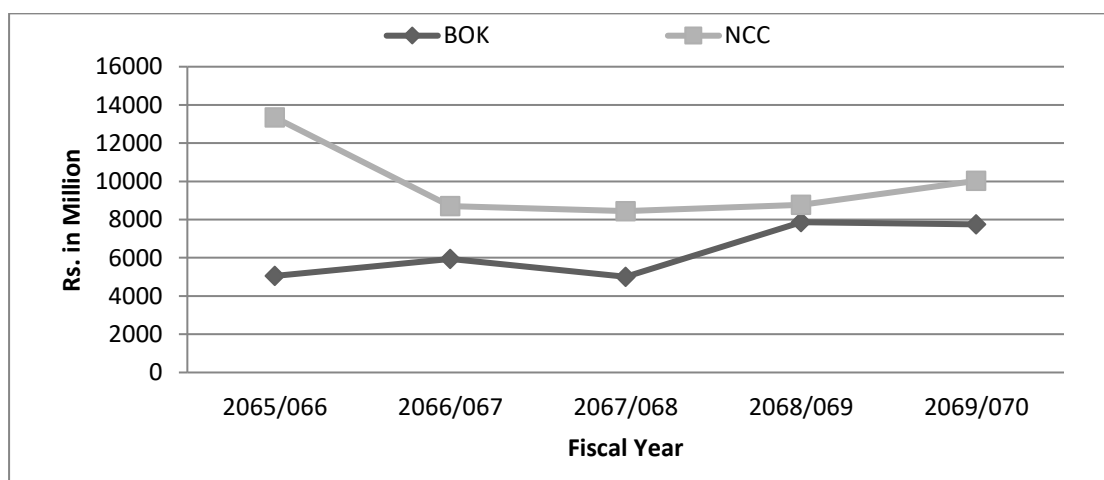


Table 4.6 & Figure 4.6 shows that the net investment of BOK & NCC in the fiscal year 2064/65 is Rs. 5059.56 & Rs. 13340.18 million respectively, during the next five-year the net investment of BOK & NCC is in fluctuating trend. In the fiscal year 2069/070, the net investment of BOK & NCC is Rs. 7743.93 & 10031.58 million respectively. The percentage changes of net investment of BOK are positive of 17.57% & 57.01% in the fiscal year 2066/067 & 2068/069 respectively and negative of 15.81% & 1.52% in the fiscal year 2067/068 &

2069/070 respectively. Similarly, the percentage changes of net investment of NCC are positive of 3.85% & 14.39% in the fiscal year 2068/069 & 2069/070 respectively and negative of 34.70% & 3.05% in the fiscal year 2066/067 & 2067/068 respectively.

An average increasing rate of deposit of BOK has 14.31% and NCC has decreasing rate of 4.88%, standard deviation has 31.58% & 21.14% and CV has 220.62% & 433.11% of BOK & NCC respectively during the study period. The net investment of NCC is higher than the net investment of BOK in each fiscal year.

### **4.3 Profitability position**

Profitability is a deviation of the term profit, which explains the ability to make the profit. Profit is primary a measuring rod of a success of a business enterprises. Profit is essential for the survival of the business. It is the difference between revenue generated and expenses occurred over the period of time but the term profit has several different interpretations. It is a basic test of the performance of any business concern. Without profit a firm could not attract the outside capital. Moreover, the owners and creditors would become concerned about the company's future and attempt to recover their funds. Owner creditors and management pay close attention for boosting profit due to the great importance placed on earning the market place. Profitability is a technical term, used to compare performances analysis of different trading systems or different investments within one system. This is computed for each system or investments being compared over the same period long enough to include significant "ups" and "downs". So analysis of the profitability of the business is very essential which can be used to measure the overall efficiency of the business.

Profitability of the business can be analyzed through the financial analysis which refers to the assessment of the viability and stability of the business. Profitability of a company is usually based on the income statement. A

properly conducted profitability analysis provides invaluable evidence concerning the earnings potential of a company and the effectiveness of management. While analyzing profitability different profitability ratios are calculated. Profitability ratios provide a definitive evaluation of the overall effectiveness of management based on the returns generated on sales and investment. The most widely used profitability measurements are profit margin on sales, return-on-investment ratios, and earnings per share.

**Table: 4.7**  
**Comparative Profit Earned by BOK & NCC**

Fiscal Year	BOK		NCC	
	Net Profit	Total Income	Net Profit	Total Income
2065/066	451.22	1209.89	635.87	1597.5
2066/067	638.73	1544.97	752.83	1988.05
2067/068	831.77	1927.98	508.8	2157.96
2068/069	931.3	2192.94	893.12	2586.74
2069/070	1090.56	2609.74	958.64	2911.21
<b>Average</b>	788.72	1897.10	749.85	2248.29
<b>SD</b>	249.85	546.03	183.86	513.18
<b>CV</b>	31.68	28.78	24.52	22.83

*Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070*

**Figure: 4.7**  
**Trend of Total Income of BOK & NCC**

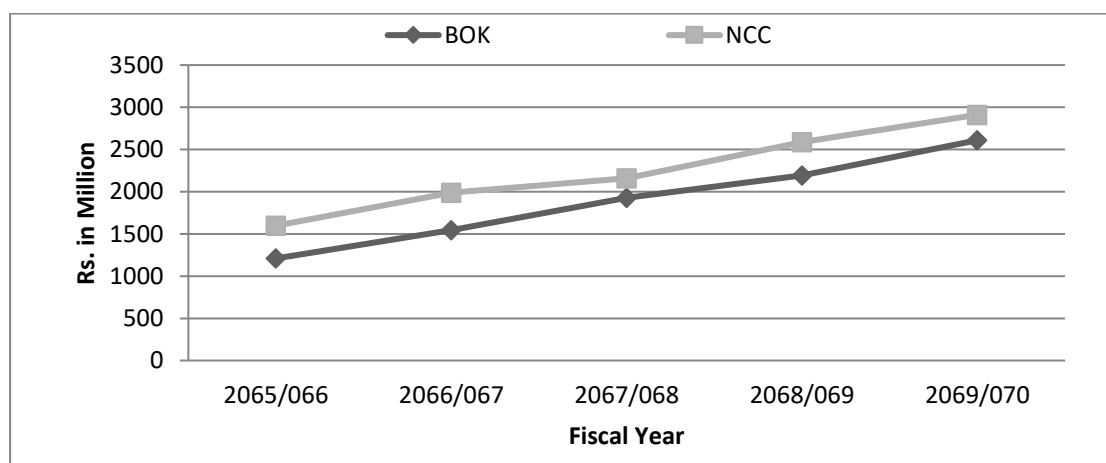


Table 4.7 shows that the total income and net profit of BOK & NCC. The total income of BOK is in increasing trend during the study period and the total income of NCC is increasing in each fiscal year. The highest values of total income of BOK & NCC are Rs. 2609.74 & Rs. 2911.21 million in the fiscal year 2069/070 and that of lowest is Rs. 1209.89 & Rs. 1597.5 million in the fiscal year 2065/066 respectively. The total income of NCC is higher than BOK in each fiscal year during the study period.

An average total income of BOK is Rs.1897.10 and NCC is Rs.2248.29, standard deviation is Rs. 546.03 & Rs. 513.18 and CV 28.78% & 22.83% of BOK & NCC respectively during the study period. It shows that the total income of BOK is more variable than NCC.

**Figure: 4.8**

**Trend of Net Profit of BOK & NCC**

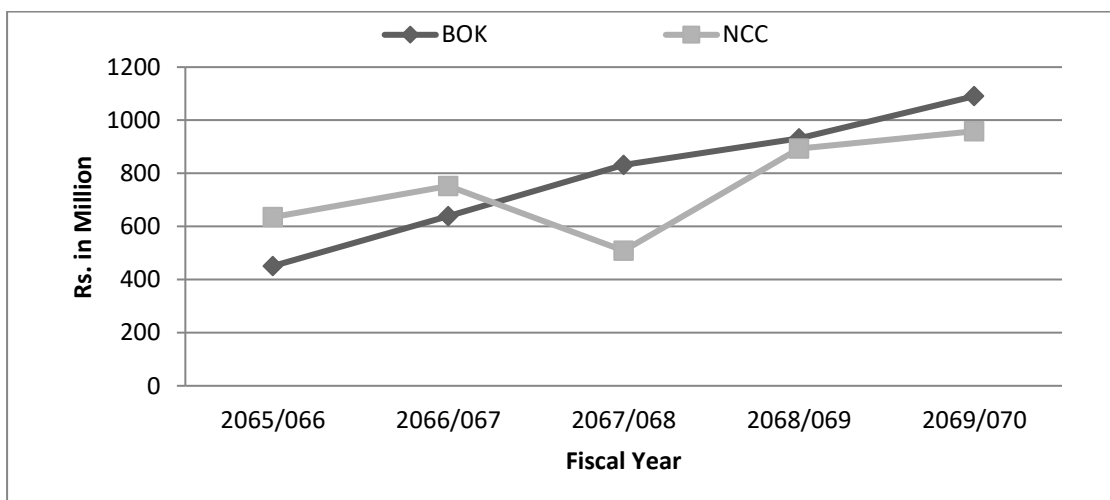


Table 4.7 & figure 4.8 shows that the net profit of BOK & NCC. The net profit of BOK is in increasing trend during the study period and the net profit of NCC is increasing in each fiscal year than previous year except the fiscal year 2067/068. The highest values of net profit of BOK & NCC are Rs. 1090.56 & Rs. 958.66 million in the fiscal year 2069/070 and that of lowest is Rs. 451.22 & Rs. 508.8 million in the fiscal year 2065/066 & 2067/068 respectively.

An average net profit of BOK is Rs.788.72 and NCC is Rs.774.85 million, standard deviation is Rs. 249.85 & Rs. 183.86 and CV has 31.68% & 24.52%

of BOK & NCC respectively during the study period. It shows that the net profit of BOK is more variable than NCC.

#### 4.4 Net Profit to Investment

Profit is a primary measure of a success of a business enterprises. Profit is essential for the survival of the business. Investment refers to as using present money to get long term benefit. Investment in its broadest sense means the sacrifice of current money for future money. Net profit to investment ratio shows the proportion of profit in the total investment. It measures the earning efficiency of firm from the investment in different sectors.

**Table: 4.8**

#### Net Profit to Net Investment Ratio

(Rs. In Millions)

Year (B.S)	BOK			NCC		
	Net Profit	Investment	Ratio %	Net Profit	Investment	Ratio %
2065/066	451.22	5059.56	8.92	635.87	13340.18	4.77
2066/067	638.73	5948.48	10.74	752.83	8710.69	8.64
2067/068	831.77	5008.31	16.61	508.80	8444.91	6.02
2068/069	931.30	7743.93	12.03	893.12	8769.94	10.18
2069/070	1090.56	7863.63	13.87	958.64	10031.58	9.56
<b>Average</b>			12.43	<b>Average</b>		7.83
<b>SD</b>			2.95	<b>SD</b>		2.34
<b>CV</b>			23.75	<b>CV</b>		29.81

Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070

**Figure: 4.9**

**Trend of Net Profit to Investment Ratio of BOK & NCC**

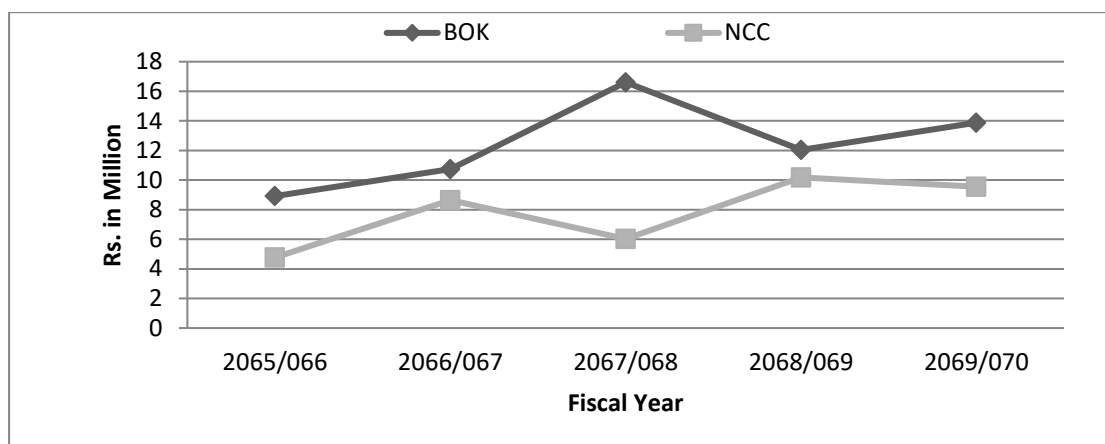


Table 4.8 & figure 4.9 shows that the net profit to investment ratios of BOK & NCC. The net profit to investment ratio of BOK is in fluctuating each year during the study period and the net profit to investment ratio of NCC is in also fluctuating in each fiscal year than previous year. The highest values of net profit to investment ratio of BOK & NCC are 16.61% & 10.18% in the fiscal year 2067/068 & 2068/069 respectively and that of lowest is 8.92% & Rs. 4.77% in the fiscal year 2065/066. The net profit to investment ratio of BOK is higher than NCC in each fiscal year during the study period.

An average net profit to investment ratio of BOK is 12.43% and NCC is 9.83%, standard deviation is 2.95% & 2.34% and CV has 23.75% & 29.81% of BOK & NCC respectively during the study period. It shows that the net profit to investment ratio of NCC is more variable than BOK.

#### **4.5 Net Profit to Deposit Ratio**

Deposits as the amount deposited in a current, saving or fixed accounts of a bank or financial institution. The deposits are subject to withdrawals by means of cheque on a short notice by customers. Deposits are the liabilities of banks. Net profit to deposit ratio is the percentages of net profit in total deposit.

**Table: 4.9**  
**Net Profit to Total Deposit Ratio**

Year (B.S)	BOK			NCC		
	Net Profit	Deposit	Ratio %	Net Profit	Deposit	Ratio %
2065/066	451.22	23976.29	1.88	635.87	31842.79	2.00
2066/067	638.73	33322.95	1.92	752.83	34682.3	2.17
2067/068	831.77	36932.31	2.25	508.8	37611.2	1.35
2068/069	931.3	41127.91	2.26	893.12	40920.63	2.18
2069/070	1090.56	50006.1	2.18	958.64	47730.99	2.01
<b>Average</b>			2.10	<b>Average</b>		1.94
<b>SD</b>			0.19	<b>SD</b>		0.34
<b>CV</b>			8.84	<b>CV</b>		17.55

*Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070*

**Figure: 4.10**

**Trend of Net Profit to Deposit Ratio of BOK & NCC**

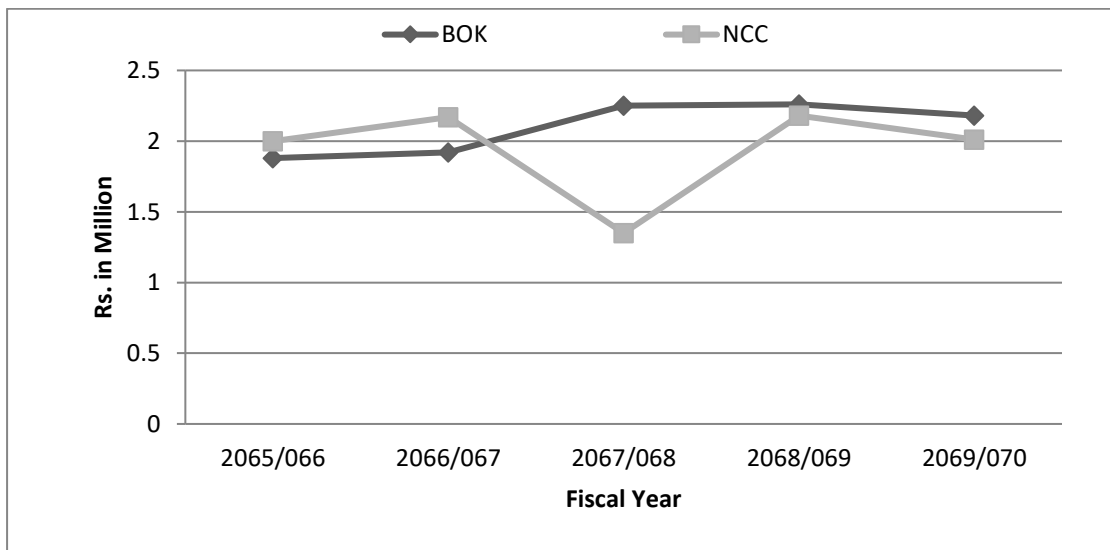


Table 4.9 & figure 4.10 shows that the net profit to deposit ratios of BOK & NCC. The net profit to deposit ratio of BOK is in increasing each year than previous year during the study period except the fiscal year 2069/070 and the net profit to deposit ratio of NCC is in also fluctuating in each fiscal year than previous year. The highest values of net profit to deposit ratio of BOK & NCC

are 2.26% & 2.18% in the fiscal year 2068/069 respectively and that of lowest are 1.88% & Rs. 1.35% in the fiscal year 2065/066 & 2067/068 respectively.

An average net profit to deposit ratio of BOK is 2.18% and NCC is 2.01%, standard deviation is 0.91% & 0.34% and CV has 8.84% & 17.55% of BOK & NCC respectively during the study period. It shows that the net profit to deposit ratio of NCC is more variable than BOK.

#### 4.6 Net Profit Margin

Net profit margin indicates margin of compensation left to the owners for providing their capital, after all expenses have been met. It helps in determining the efficiency with which the affairs of the business are being managed. A net profit margin would enable the firm to withstand adverse economic conditions and low margin will have opposite implications.

**Table: 4.10**

#### Net Profit Margin Ratio

(Rs. In Millions)

Year (B.S)	BOK			NCC		
	Net Profit	Income	Ratio %	Net Profit	Income	Ratio %
2065/066	451.22	1209.89	37.29	635.87	1597.50	39.80
2066/067	638.73	1544.97	41.34	752.83	1988.05	37.87
2067/068	831.77	1927.98	43.14	508.8	2157.96	23.58
2068/069	931.3	2192.94	42.47	893.12	2586.74	34.53
2069/070	1090.56	2609.74	41.79	958.64	2911.21	32.93
Average			41.21	Average		33.74
SD			2.29	SD		6.29
CV			5.56	CV		18.65

Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070

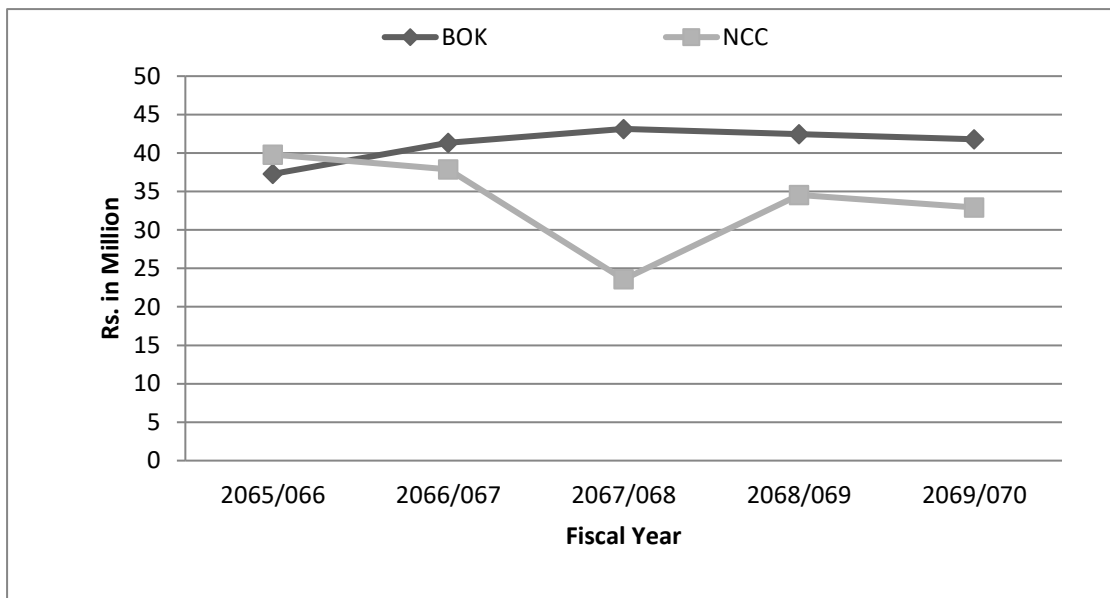
Table 4.10 & figure 4.11 shows that the net profit margin ratios of BOK & NCC. The net profit margin ratio of BOK is in increasing up to the fiscal year 2067/068 after that it is decreasing than previous year and the net profit margin ratio of NCC is in increasing up to 2067/068 after that it is fluctuating in each

fiscal year than previous year. The highest values of net profit margin ratio of BOK & NCC are 43.14% & 34.53% in the fiscal year 2067/068 & 2068/069 respectively and that of lowest are 37.29% & Rs. 23.58% in the fiscal year 2065/066 & 2067/068 respectively.

An average net profit margin ratio of BOK is 41.21% and NCC is 33.74%, standard deviation is 2.29% & 6.29% and CV has 5.56% & 18.65% of BOK & NCC respectively during the study period. It shows that the net profit margin ratio of NCC is more variable than BOK.

**Figure: 4.11**

**Trend of Net Profit Margin Ratio of BOK & NCC**



## 4.7 Return on Loan & Advance Ratio

**Table: 4.11**

### Return on Loan & Advance Ratios

(Rs. In Millions)

Year (B.S)	BOK			NCC			
	Net Profit	Loan & Advance	Ratio %	Net Profit	Loan & Advance	Ratio %	
2065/066	451.22	18339.08	2.46	635.87	19497.52	3.26	
2066/067	638.73	23884.67	2.67	752.83	24793.15	3.04	
2067/068	831.77	27556.36	3.02	508.8	27980.63	1.82	
2068/069	931.3	31057.69	3.00	893.12	31566.98	2.83	
2069/070	1090.56	35910.97	3.04	958.64	34965.43	2.74	
<b>Average</b>			2.84	<b>Average</b>			2.74
<b>SD</b>			0.26	<b>SD</b>			0.55
<b>CV</b>			9.11	<b>CV</b>			20.15

Source: Annual Reports of BOK & NCC from 2065/066 to 2069/070

**Figure: 4.12**

### Trend of Return on Loan & Advance Ratios of BOK & NCC

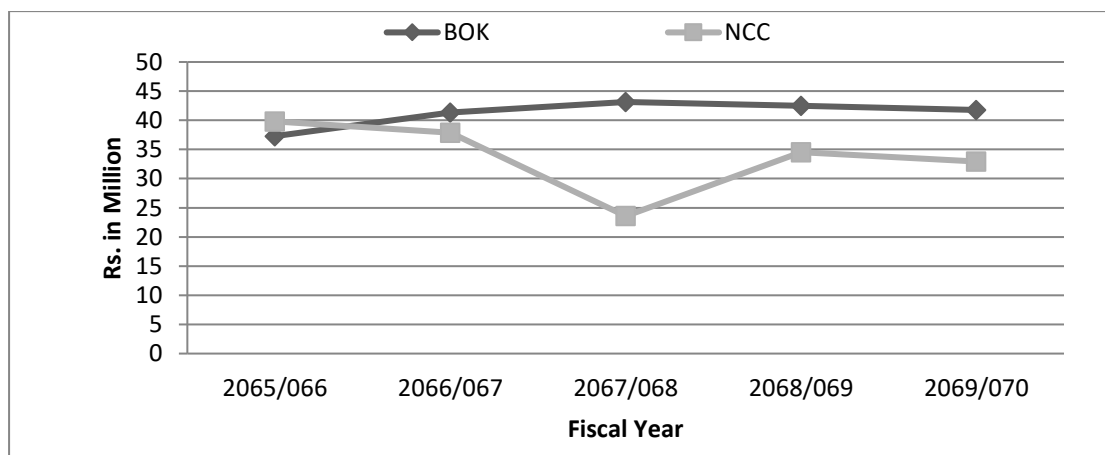


Table 4.11 & figure 4.12 shows that the return on loan & advance ratio of BOK & NCC. The return on loan & advance ratio of BOK is in increasing trend during the study period and the return on loan & advance ratio of NCC is in fluctuating in each fiscal year than previous year. The highest values of return on loan & advance ratio of BOK & NCC are 3.04% & 3.26% in the fiscal year

2069/070 & 2065/066 respectively and that of lowest are 2.46% & 1.82% in the fiscal year 2065/066 & 2067/068 respectively.

An average return on loan & advance ratio of BOK is 2.84% and NCC is 2.74%, standard deviation is 0.26% & 0.55% and CV has 9.11% & 20.15% of BOK & NCC respectively during the study period. It shows that the return on loan & advance ratio of NCC is more variable than BOK.

## 4.8 Correlation Analysis

### 4.8.1 Correlation Between Total Investment & Net Profit

Correlation coefficient between total Investment and net profit measures the degree of relationship between total Investment and net profit. For the analysis of coefficient correlation, investment is an independent variable ( $X_3$ ) while net profit is dependent variable ( $X_1$ ).

**Table: 4.12**

#### **Correlation Coefficient Between Investment & Net Profit**

Evaluation Criteria						
Name	r	r <sup>2</sup>	P.E	6 P.E	Remarks	Relationship
BOK	0.7808	0.6096	0.1178	0.7066	Significant	Moderate Degree of Positive Correlation
NCC	-0.1195	0.0143	0.4408	2.6449	Insignificant	Low Degree of Negative Correlation

*Source: Appendix II & V*

Table 4.12 describes the relationship between investment and net profit during the period of study. The coefficient of correlation (r) between investment and net profit of BOK & NCC are 0.7808 & -0.1195 respectively. This figure shows the high degree of positive association between investment & net profit of BOK and low degree of negative correlation between investment & net profit of NCC. It means investment and net profit of BOK move towards same

direction and investment and net profit of NCC move towards opposite direction.

The coefficient of determination ( $r^2$ ) of BOK & NCC are 0.6096 & 0.0143, it shows that 60.96% & 1.43% of the variation in the dependent variable (i.e. net profit) has been explained by the independent variable (i.e. total investment).

The value of P.E of BOK is 0.1178 and 6P.E is 0.7066, which shows the correlation coefficient ( $r$ ) is greater than six times of probable error (6.P.E). Therefore, true value of 'r' is significant. It reveals that there is significant relationship between the investment and net profit. It shows that by increasing the investment, the amount of net profit can be increased. Similarly, the value of P.E of NCC is 0.0048 and 6P.E is 2.6449, which shows the correlation coefficient ( $r$ ) is less than six times of probable error (6.P.E). Therefore, true value of 'r' is insignificant. It reveals that there is insignificant relationship between the investment and net profit.

#### 4.8.2 Correlation Between Deposit & Net Profit

Correlation coefficient between total deposit and net profit measures the degree of relationship between total Deposit and net profit. For the analysis of coefficient correlation, Deposit is an independent variable ( $X_2$ ) while net profit is dependent variable ( $X_1$ ).

**Table: 4.13**

#### **Correlation Coefficient Between Deposit & Net Profit**

<b>Evaluation Criteria</b>						
Name	r	$r^2$	P.E	6 P.E	Remarks	Relationship
BOK	0.9850	0.9701	0.009	0.0541	Significant	High Degree of Positive Correlation
NCC	0.7167	0.5137	0.1467	0.8801	Insignificant	Moderate Degree of Positive Correlation

*Source: Appendix I & IV*

Table 4.13 describes the relationship between deposit and net profit during the period of study. The coefficient of correlation ( $r$ ) between deposit and net profit of BOK & NCC are 0.9850 & 0.7167 respectively. This figure shows the high degree of positive association between investment & net profit of BOK and moderate degree of positive correlation between deposit & net profit of NCC. It means deposit and net profit of BOK & NCC move towards same direction.

The coefficient of determination ( $r^2$ ) of BOK & NCC are 0.9701 & 0.5137, it shows that 97.01% & 51.37% of the variation in the dependent variable (i.e. net profit) has been explained by the independent variable (i.e. total deposit).

The value of P.E of BOK is 0.009 and 6P.E is 0.0541, which shows the correlation coefficient ( $r$ ) is greater than six times of probable error (6.P.E). Therefore, true value of 'r' is significant. It reveals that there is significant relationship between the deposit and net profit. Similarly, the value of P.E of NCC is 0.1467 and 6P.E is 0.8801, which shows the correlation coefficient ( $r$ ) is less than six times of probable error (6.P.E). Therefore, true value of 'r' is insignificant. It reveals that there is insignificant relationship between the deposit and net profit.

### **4.8.3 Correlation Between Deposit & Investment**

Correlation coefficient between total deposit and investment measures the degree of relationship between total Deposit and investment. For the analysis of coefficient correlation, Deposit is an independent variable ( $X_2$ ) while investment is dependent variable ( $X_3$ ).

**Table: 4.14**

**Correlation Coefficient Between Deposit & Investment**

Evaluation Criteria						
Name	r	r <sup>2</sup>	P.E	6 P.E	Remarks	Relationship
BOK	0.8135	0.6618	0.1020	0.6121	Significant	High Degree of Positive Correlation
NCC	-0.3708	0.1375	0.2602	1.561	Insignificant	Low Degree of Negative Correlation

*Source: Appendix III & VI*

Table 4.14 describes the relationship between deposit and investment during the period of study. The coefficient of correlation (r) between deposit and investment of BOK & NCC are 0.8135 & -0.3708 respectively. This figure shows the high degree of positive association between deposit & investment of BOK and low degree of negative correlation between deposit & investment of NCC. It means deposit and investment of BOK move towards same direction and NCC move towards opposite direction.

The coefficient of determination (r<sup>2</sup>) of BOK & NCC are 0.6618 & 0.1375, it shows that 66.18% & 13.75% of the variation in the dependent variable (i.e. investment) has been explained by the independent variable (i.e. total deposit).

The value of P.E of BOK is 0.1020 and 6P.E is 0.6121, which shows the correlation coefficient (r) is greater than six times of probable error (6.P.E). Therefore, true value of 'r' is significant. It reveals that there is significant relationship between the deposit and investment. Similarly, the value of P.E of NCC is 0.2602 and 6P.E is 1.568, which shows the correlation coefficient (r) is less than six times of probable error (6.P.E). Therefore, true value of 'r' is insignificant. It reveals that there is insignificant relationship between the deposit and net investment.

#### 4.8.4 Multiple Correlations Between Total Deposit, Total Investment & Net Profit

Correlation coefficient between total deposit, total investment and net profit measures the degree of relationship between total deposit, total investment & net profit. For the analysis of coefficient correlation, deposit and investment are independent variable while profit is dependent variable.

**Table: 4.15**

**Multiple Correlation Coefficients Between Deposit, Investment & Net Profit**

Evaluation Criteria						
Name	r	r <sup>2</sup>	P.E	6 P.E	Remarks	Relationship
BOK	0.9854	0.9710	0.0087	0.0525	Significant	High Degree of Positive Correlation
NCC	0.7339	0.5386	0.1392	0.8352	Insignificant	Moderate Degree of Positive Correlation

*Source: Appendix VII & VIII*

Table 4.15 describes the relationship between deposit, investment & net profit during the period of study. The coefficient of correlation (r) between deposit, investment & net profit of BOK & NCC are 0.9854 & 0.7339 respectively. This figure shows the high degree of positive association between deposit, investment & net profit of BOK and moderate of negative correlation between deposit, investment & net profit of NCC. It means deposit, investment & net profit of BOK & NCC move towards same direction.

The coefficient of determination (r<sup>2</sup>) of BOK & NCC are 0.9710 & 0.5386, it shows that 97.10% & 53.86% of the variation in the dependent variable (i.e. net profit) has been explained by the independent variable (i.e. investment & deposit).

The value of P.E of BOK is 0.0087 and 6P.E is 0.0525, which shows the correlation coefficient (r) is greater than six times of probable error (6.P.E).

Therefore, true value of 'r' is significant. It reveals that there is significant relationship between the deposit, investment & net profit. Similarly, the value of P.E of NCC is 0.1392 and 6P.E is 0.8352, which shows the correlation coefficient (r) is less than six times of probable error (6.P.E). Therefore, true value of 'r' is insignificant. It reveals that there is insignificant relationship between the deposit investment & net profit.

#### **4.9 Trend Analysis**

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly.

Under this topic, trend analysis of Deposit & Net Profit is studied during the period. The objective of this topic is to forecast the NPA for the next five years. The projections are based on the following assumptions.

- The bank will run in the present style.
- Nepal Rastra Bank and the Government of Nepal will not make any amendments in the guidelines for the operation of commercial banks.
- Other all the things also remain constant.

The following table describes the trend values of deposit & net profit of sampled banks for next five years.

**Table: 4.16**

**Trend Value of Deposit of Sample Banks**

**Rs. In million**

<b>Fiscal Year</b>	<b>BOK</b>	<b>NCC</b>
2070/71	55030.69	49961.99
2071/72	61017.15	53763.46
2072/73	67003.61	57564.93
2073/74	72990.07	61366.4
2074/75	78976.53	65167.87
Mean (a)	37071.31	38557.58
Intercept (b)	5986.46	3801.47
Trend Line (Y)	$Y = 37071.31 + 5986.46X$	$Y = 38557.58 + 3801.47X$

Source: Appendix IX, X & XI

**Figure: 4.13**

**Trend Line of Deposits of Sample Banks**

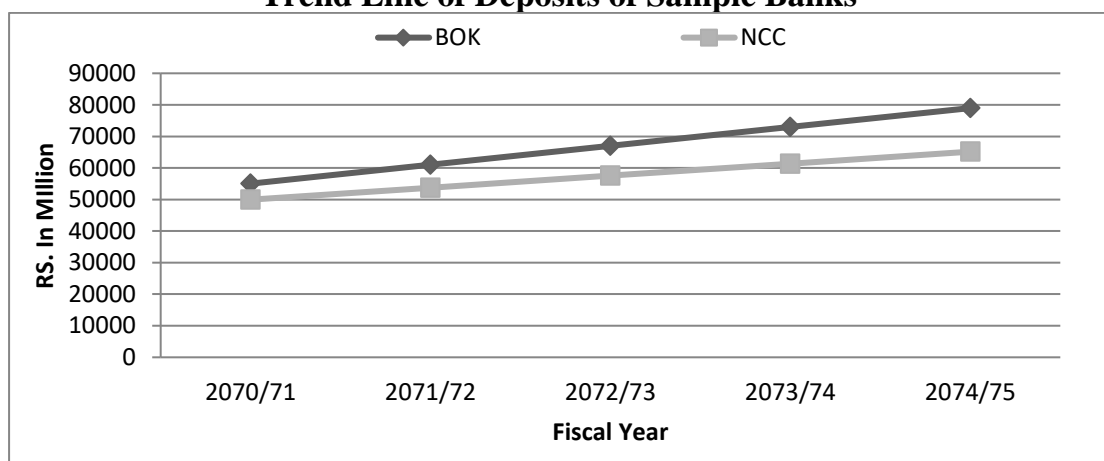


Table 4.16 and figure 4.13 show the increasing trend of deposit of both banks. Since, the calculated values of ‘b’ are positive, it is found that the bank’s deposit is increasing with time. It shows that the deposit of BOK is increasing by Rs. 5986.46 million and NCC is Rs. 3801.47 millions every year. Based on this calculation, it can be forecasted that the deposit of BOK will be Rs. 55030.69 million in the year 2070/71 and it will be Rs. 78976.53 million in the year 2074/075. Similarly, the deposit of NCC will be Rs. 49961.99 million in the year 2070/71 and it will be Rs. 65167.87 million in the year 2074/075

**Table: 4.17****Trend Value of Investment of Sample Banks****Rs. In million**

<b>Fiscal Year</b>	<b>BOK</b>	<b>NCC</b>
2070/71	8510.04	7892.09
2071/72	9238.43	7236.3
2072/73	9966.82	6580.51
2073/74	10695.21	5924.72
2074/75	11423.6	5268.93
Mean (a)	6324.78	9859.46
Intercept (b)	728.39	-655.79
Trend Line (Y)	$Y = 6324.78 + 728.39X$	$Y = 9859.46 - 655.79X$

Source: Appendix IX, X & XII

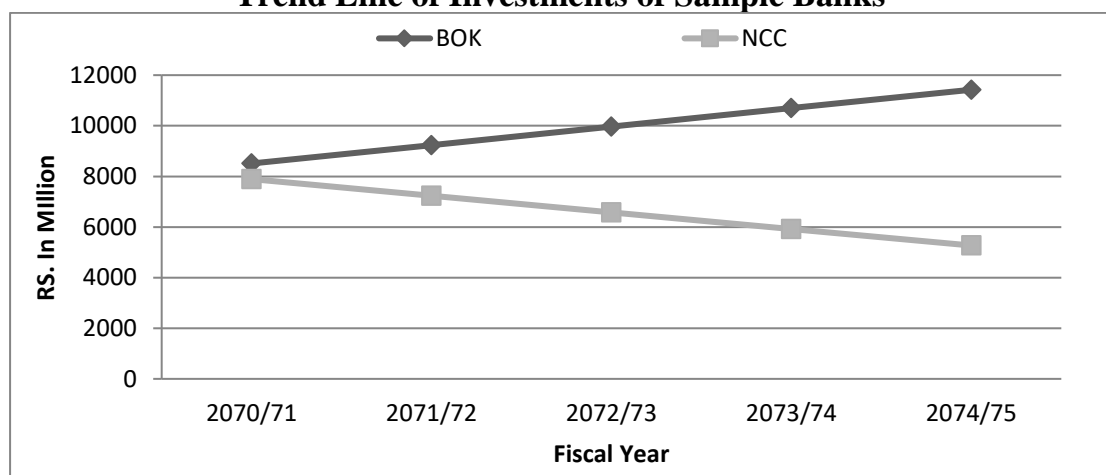
**Figure: 4.14****Trend Line of Investments of Sample Banks**

Table 4.17 and figure 4.14 shows the increasing trend of Investments of BOK and decreasing trend of NCC. The calculated value of 'b' is negative of NCC which shows the bank's Investment is decreasing with time. It shows that the Investment of BOK is increasing by Rs. 728.39 million and NCC is decreasing by Rs. 655.79 millions every year. Based on this calculation, it can be forecasted that the Investment of BOK will be Rs. 8510.04 million in the year 2070/71 and it will be Rs. 11423.6 million in the year 2074/075. Similarly, the investment of NCC will be Rs. 7892.09 million in the year 2070/71 and it will be Rs. 5268.93 million in the year 2074/075.

**Table: 4.18**

**Trend Value of Net Profit of Sample Banks**

**Rs. In million**

<b>Fiscal Year</b>	<b>BOK</b>	<b>NCC</b>
2070/71	1260.08	985.59
2071/72	1417.2	1064.17
2072/73	1574.32	1142.75
2073/74	1731.44	1221.33
2074/75	1888.56	1299.91
Mean (a)	788.72	749.85
Intercept (b)	157.12	78.58
Trend Line (Y)	$Y = 788.72 + 157.12X$	$Y = 749.85 + 78.58X$

*Source: Appendix IX, X & XIII*

**Figure: 4.15**

**Trend Line of Net Profits of Sample Banks**

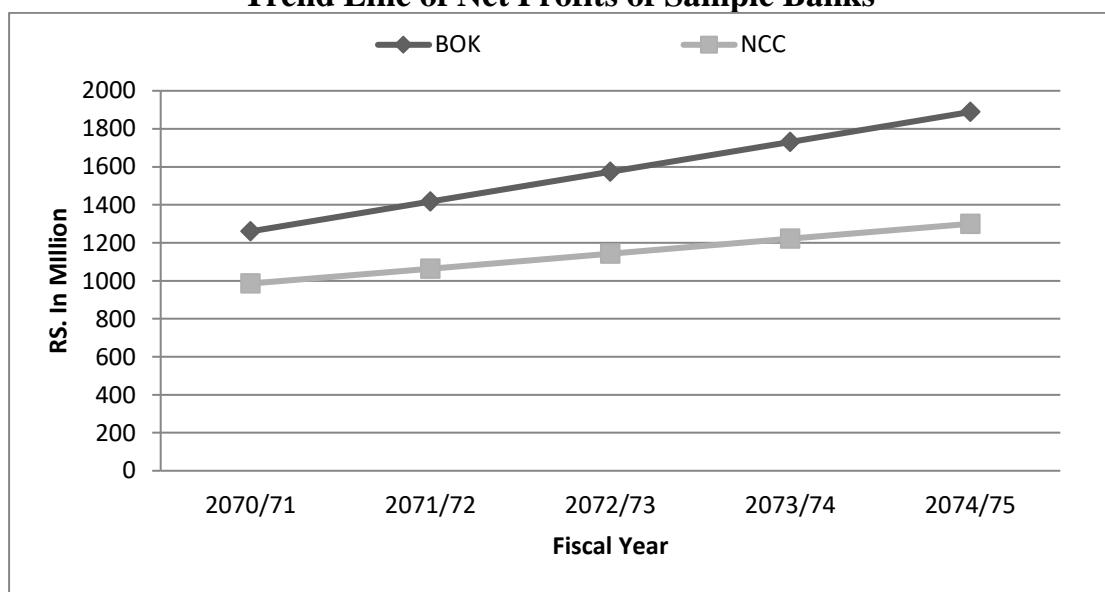


Table 4.18 and figure 4.15 show the increasing trend of NPAT of both banks. Since, the calculated values of 'b' are positive, it is found that the bank's NPAT is increasing with time. It shows that the NPAT of BOK is increasing by Rs. 157.12 million and NCC is Rs. 78.58 millions every year. Based on this calculation, it can be forecasted that the NPAT of BOK will be Rs. 1260.08 million in the year 2070/71 and it will be Rs. 1888.56 million in the year

2074/075. Similarly, the NPAT of NCC will be Rs. 985.59 million in the year 2070/71 and it will be Rs. 1299.91 million in the year 2074/075.

#### **4.10 Major Findings**

- An average increasing rate of deposit of BOK has 20.69% and NCC has 10.70%, standard deviation has 13.16% & 3.97 % and CV has 63.61% & 37.06% of BOK & NCC respectively. The increasing rate of deposit of BOK is higher than NCC but the consistency of increasing rate of NCC is higher than BOK.
- The net investment of NCC is higher than the net investment of BOK in each fiscal year. The average increasing rate of investment of BOK has 14.31% and NCC has decreasing rate of 4.88%, standard deviation has 31.58% & 21.14% and CV has 220.62% & 433.11% of BOK & NCC respectively during the study period.
- Total income of BOK is more variable than NCC. An average total income of BOK is Rs.1897.10 and NCC is Rs.2248.29, standard deviation is Rs. 546.03 & Rs. 513.18 and CV 28.78% & 22.83% of BOK & NCC respectively during the study period.
- The average net profit of BOK is Rs.788.72 and NCC is Rs.774.85 million, standard deviation is Rs. 249.85 & Rs. 183.86 and CV has 31.68% & 24.52% of BOK & NCC respectively during the study period. The net profit of BOK is more variable than NCC.
- An average net profit to investment ratio of BOK is 12.43% and NCC is 9.83%, standard deviation is 2.95% & 2.34% and CV has 23.75% & 29.81% of BOK & NCC respectively during the study period. The net profit to investment ratio of NCC is more variable than BOK.
- Net profit to deposit ratio of NCC is more variable than BOK. An average net profit to deposit ratio of BOK is 2.18% and NCC is 2.01%,

standard deviation is 0.91% & 0.34% and CV has 8.84% & 17.55% of BOK & NCC respectively during the study period.

- The average net profit margin ratio of BOK is 41.21% and NCC is 33.74%, standard deviation is 2.29% & 6.29% and CV has 5.56% & 18.65% of BOK & NCC respectively during the study period. The net profit margin ratio of NCC is more variable than BOK.
- An average return on loan & advance ratio of BOK is 2.84% and NCC is 2.74%, standard deviation is 0.26% & 0.55% and CV has 9.11% & 20.15% of BOK & NCC respectively during the study period. The return on loan & advance ratio of NCC is more variable than BOK.
- The coefficient of correlation (r) between investment and net profit of BOK & NCC are 0.7808 & -0.1195 respectively. There is significant relationship between the investment and net profit of BOK and insignificant relationship between the investment and net profit of NCC.
- The coefficient of correlation (r) between deposit and net profit of BOK & NCC are 0.9850 & 0.7167 respectively. There is significant relationship between the deposit and net profit of BOK and insignificant relationship between the deposit and net profit of NCC.
- The coefficient of correlation (r) between deposit and investment of BOK & NCC are 0.8135 & -0.3708 respectively. There is significant relationship between the deposit and investment of BOK and there is insignificant relationship between the deposit and investment of NCC.
- The coefficient of correlation (r) between deposit, investment & net profit of BOK & NCC are 0.9854 & 0.7339 respectively. There is significant relationship between the deposit, investment & net profit of BOK and insignificant relationship between the deposit investment & net profit of NCC.

- From the trend analysis, it is found that the bank's deposit is increasing with time. It shows that the deposit of BOK is increasing by Rs. 5986.46 million and NCC is Rs. 3801.47 millions every year.
- Trend analysis shows that the Investment of BOK is increasing by Rs. 728.39 million and NCC is decreasing by Rs. 655.79 millions every year.
- From the trend analysis, it is found the bank's NPAT is increasing with time. It shows that the NPAT of BOK is increasing by Rs. 157.12 million and NCC is Rs. 78.58 millions every year.

## **CHAPTER – V**

### **SUMMARY, CONCLUSION & RECOMMENDATIONS**

In this chapter, summary and conclusion of the research as well as recommendations are presented separately. After summarizing and concluding the research, recommendations are suggested for the effective utilization of fund to generate high profit. The researcher has tried to give suggestions and recommendations to the sample banks based on this research.

#### **5.1 Summary**

The economic development of every country is always measured by its economic indicators. Therefore, every country has given emphasis on the development of its economy. Nowadays the financial institutions are viewed as catalyst in the process of the economic growth. The mobilization of domestic resources is one of the key factors in the economic development of a country. Banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector, which deals with the process of channeling the available resources in the needed sector. It is the intermediary between the deficit and surplus of financial resources. Financial institutions like banks are necessary to collect scattered savings and put them into productive channels. In the absence of such institutions it is possible that the saving will not be safely and profitably utilized within the country.

Banks today are under great pressure to meet the objectives of their stockholders, employees, depositors, and borrowing customers, while somehow keeping government regulators satisfied that the bank's policies, loans, and investments are sound. The majority of the needs of the stakeholders are related with the investment and profitability of the banks. Thus, the foremost objective of the banks is the profit maximization. As other types of business entity, commercial banks are also inspired by the profit. In this age of great

competition, only the profitable banks can sustain for a long time. Financial policies of any concern are directly or indirectly influenced by its investment and profitability. Thus, it is a base for a bank's survival, growth and expansion.

Deposit, Investment and Profitability analysis is one of the key tools for financial decision and assist in making plan before using sophisticated forecasting and budgeting procedure. The value of this approach is the quantitative relation, which can be used to diagnose strengths and weakness in a bank performance. Such analysis is considerable things for the bank's common stock holders, investors, bondholders and others. The objective of the study is to find out and analyze the impact of deposit & investment on profitability Position of BOK & NCC.

To fulfill the objectives, the whole study comprised of the five different consecutive parts as mentioned. The first chapter comprises of general background, focus of the study, brief profile of the banks under study, significance of the study, objectives of the study, limitations of the study and organization of the study. In the second chapter, reviewing of the various literatures, definitions and concept of investment and profitability are included. This also consists of the review of the related studies, journals, articles and review of books concerned to investment and profitability. The third part consists of the research design, total population and sample of the study, nature and sources of the data, data collection procedures and the analytical tools and techniques used in the study. The fourth part constitutes the tabular and graphical representation of the collected data, their interpretation and analysis using various financial as well as statistical tools. Apart from it, summary of the major findings are also presented at the end of the chapter. The last chapter contains the summary of the whole study and relevant conclusions are drawn based on the study. A suitable set of recommendations are made at the end of the chapter.

## 5.2 Conclusion

It can be concluded from the observance and analysis of above data the BOK & NCC should move as per the direction given by the central bank. Bank should have optimum policy to collect the deposit in various accounts. Deposit is the major organ of commercial banks to live in the industry. Higher the deposit higher will be the chance of the mobilization of working fund and profit there to. Bank should invest in different sector very carefully, while advancing loan because loan is the blood of commercial banks for survival. If commercial banks do not apply sound investment policy it will be in great trouble in future to collect it in time. Hence the possibility of bankruptcy there too. Bank should invest their fund in various portfolios after the deep study of the project to be safe from being bankruptcy. If banks concentrate the investment in few organizations, there is high chance of default risk. Diversifications are indeed need to all the business houses but it has seen immense importance to commercial banks. Diversification of investment is very much important to commercial bank than other business houses because banks use the money to other people for the benefit of its own. And lastly is can be said that banks are important for the nation. It helps in the capital formation to the nations, which is the most important element for the economic growth of the country.

Profit is lifeblood of each type of business. Every business organization should earn profits to survive and grow over the long period of time. Obviously, organization will have no future if it is unable to make reasonable profit from its operation. As a matter of fact, the overall efficiency of an organization is reflected in its profits. Profits to the managements are the test of efficiency and a measurement of control: to the owners, a measure of worth of their investment; to the creditors, the margin of safety to the employees; a source of fringe benefits to the Government, a measure of fixed paying capacity and the basis of legislative action; to customers, a hint to demand for better quality and price cuts; to a bank, less burden some source if finance

existence and finally to the country, profit are index of economic progress. Thus, if an organization fails to make profit, capital invested erodes and if this situation prolongs it ultimately cease to exist.

### **5.3 Recommendations**

Suggestions are the output of the whole study. It helps to take corrective action in the activities in future. Different analyses are done to arrive at this step. On the basis of above analysis and findings of the study following suggestions and recommendations may be referred to overcome weakness, inefficiency to deposit, investment and profitability and for corrective action for the concern authorities and other researchers.

- In the light of growth competition in the banking sectors, the business of the banks should be customer oriented. It should focus not only towards big clients but also towards small clients. They should treat every client equally. They should bring different schemes to focus the customers like, increase interest rate, bank credit policies, bank loan insurance policies, evening counters, social responsibilities etc.
- The bank should initiate a good step for maintaining the increasing trend of deposit collection as well as mobilization of it. The bank should launch several customer-oriented programs to raise the deposits in satisfied rate. For this purpose, the foremost step to be take is the bank can increase the interest rate on deposit and further it can launch several latest technologies in the banking field like Credit Cards, e-banking etc.
- The Bank should find out new areas/sectors for investing collected deposits from which it can generate maximum profit. In context of present scenario of the country, health and education can be considered as the best sector for investment, which are more secure and can generate a reasonable profit.

- Majority of commercial banks have been found to be profit oriented ignoring their social responsibility, which is not a proper strategy to sustain in long run. So, all the banks are suggested to render their serves even in the rural areas providing special loans to the deprived and priority sectors, which might further intensify the goodwill of the banks in future.
- Ethics of staff impresses the customers and create interest to improve the performance of the company. Hence, full co-peration from staff must be obtained. Customers satisfactions are affected by the services provided by the bank, which will effect the collection of deposits. The bank should also provide the training programmed to the employees for the professional development.
- The banks have to create the conductive environment for the revival of sick investment and has to analyze the necessity of Mobilizing additional resource to revive the overall banking sector.
- Further studies can be conducted by using others organization as sample, by using other sophisticated tools and techniques, by using other aspects as well.

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## Appendix I

### Calculation for Mean value & Correlation between Net Profit & Deposit of BOK

Year	Net Profit (X <sub>1</sub> )	Deposit (X <sub>2</sub> )	x <sub>1</sub> =X <sub>1</sub> - $\bar{X}_1$	x <sub>2</sub> =X <sub>2</sub> - $\bar{X}_2$	x <sub>1</sub> . x <sub>2</sub>	x <sub>1</sub> <sup>2</sup>	x <sub>2</sub> <sup>2</sup>
2064/065	451.22	23976.29	-337.50	-13096.82	4420125.04	113903.55	171526746.50
2065/066	638.73	33322.95	-149.99	-3750.16	562471.80	22495.80	14063715.03
2066/067	831.77	36932.31	43.05	-140.80	-6062.09	1853.65	19825.20
2067/068	931.30	41127.91	142.58	4054.80	578149.32	20330.20	16441386.82
2068/069	1090.56	50006.1	301.84	12932.99	3903744.83	91109.80	167262178.61
<b>N<sub>1</sub> = 5</b>	<b>∑ X<sub>1</sub> =</b>	<b>∑ X<sub>2</sub> =</b>	<b>0.00</b>	<b>0.00</b>	<b>∑ x<sub>1</sub>.x<sub>2</sub> =</b>	<b>∑ x<sub>1</sub><sup>2</sup>=</b>	<b>∑ x<sub>2</sub><sup>2</sup></b>
<b>N<sub>2</sub> = 5</b>	<b>3943.58</b>	<b>185356.56</b>			<b>9458428.89</b>	<b>249692.99</b>	<b>369313852.16</b>

For Net Profit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{3943.58}{5} = 788.72$$

For Deposit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{185356.56}{5} = 37073.11$$

Correlation between Net Profit & Deposit,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{9458428.89}{\sqrt{249692.99 \times 369313852.16}} = 0.9850$$

$$r^2 = 0.9850^2 = 0.9701$$

For Probable Error,

$$\text{PE} = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1-0.9701}{\sqrt{5}}$$

$$= 0.009 \text{ or, } 0.09\%$$

$$6PE = 6 \times 0.09 = 0.0541$$

## Appendix II

### Calculation for Mean value & Correlation between Net Profit & Investment of BOK

Year	Net Profit (X <sub>1</sub> )	Investment (X <sub>3</sub> )	x <sub>1</sub> =X <sub>1</sub> - $\bar{X}_1$	x <sub>2</sub> =X <sub>3</sub> - $\bar{X}_3$	x <sub>1</sub> · x <sub>2</sub>	x <sub>1</sub> <sup>2</sup>	x <sub>2</sub> <sup>2</sup>
2064/065	451.22	5059.56	-337.50	-1265.22	427007.36	113903.55	1600786.71
2065/066	638.73	5948.48	-149.99	-376.30	56440.03	22495.80	141603.20
2066/067	831.77	5008.31	43.05	-1316.47	-56679.39	1853.65	1733098.53
2067/068	931.30	7743.93	142.58	1419.15	202347.80	20330.20	2013981.05
2068/069	1090.56	7863.63	301.84	1538.85	464492.04	91109.80	2368053.17
<b>N<sub>1</sub> = 5</b>	<b>∑ X<sub>1</sub> =</b>	<b>∑ X<sub>2</sub> =</b>	<b>0.00</b>	<b>0.00</b>	<b>∑ x<sub>1</sub>·x<sub>2</sub> =</b>	<b>∑ x<sub>1</sub><sup>2</sup>=</b>	<b>∑ x<sub>2</sub><sup>2</sup></b>
<b>N<sub>2</sub> = 5</b>	<b>3943.58</b>	<b>31623.91</b>			<b>9458428.89</b>	<b>249692.99</b>	<b>7857522.64</b>

For Net Profit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{3943.58}{5} = 788.72$$

For Investment,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{31623.91}{5} = 6324.78$$

Correlation between Net Profit & Investment,

$$\begin{aligned} (r_{13}) &= \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}} \\ &= \frac{1093607.84}{\sqrt{249692.99 \times 7857522.64}} = 0.7808 \end{aligned}$$

$$r^2 = 0.7808^2 = 0.6096$$

For Probable Error,

$$PE = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1-0.6096}{\sqrt{5}}$$

$$= 0.1178 \text{ or, } 11.78\%$$

$$6PE = 6 \times 0.1178 = 0.7066$$

### Appendix III

#### Calculation for Mean value & Correlation between Deposit & Investment of BOK

Year	Deposit ( $X_2$ )	Investment ( $X_3$ )	$x_1 = X_1 - \bar{X}_1$	$x_2 = X_3 - \bar{X}_3$	$x_1 \cdot x_2$	$x_1^2$	$x_2^2$
2064/065	23976.29	5059.56	-13096.82	-1265.22	16570387.32	171526746.50	1600786.71
2065/066	33322.95	5948.48	-3750.16	-376.30	1411193.46	14063715.03	141603.20
2066/067	36932.31	5008.31	-140.80	-1316.47	185361.89	19825.20	1733098.53
2067/068	41127.91	7743.93	4054.80	1419.15	5754358.47	16441386.82	2013981.05
2068/069	50006.1	7863.63	12932.99	1538.85	19901902.72	167262178.61	2368053.17
$N_1 = 5$ $N_2 = 5$	$\sum X_1 =$ <b>185363.56</b>	$\sum X_2 =$ <b>31623.91</b>	<b>0.00</b>	<b>0.00</b>	$\sum x_1 \cdot x_2 =$ <b>43823203.87</b>	$\sum x_1^2 =$ <b>369313852.16</b>	$\sum x_2^2 =$ <b>7857522.64</b>

For Deposit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{185363.56}{5} = 37073.22$$

For Investment,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{31623.91}{5} = 6324.78$$

Correlation between Deposit & Investment,

$$(r_{13}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{43823203.87}{\sqrt{369313852.16 \times 7857522.64}} = 0.8135$$

$$r^2 = 0.8135^2 = 0.6618$$

For Probable Error,

$$PE = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1-0.6618}{\sqrt{5}}$$

$$= 0.1020 \text{ or, } 10.20\%$$

$$6PE = 6 \times 0.1020 = 0.6121$$

#### Appendix IV

##### Calculation for Mean value & Correlation between Net Profit & Deposit of NCC

Year	Net Profit (X <sub>1</sub> )	Deposit (X <sub>2</sub> )	x <sub>1</sub> =X <sub>1</sub> - $\bar{X}_1$	x <sub>2</sub> =X <sub>2</sub> - $\bar{X}_2$	x <sub>1</sub> . x <sub>2</sub>	x <sub>1</sub> <sup>2</sup>	x <sub>2</sub> <sup>2</sup>
2064/065	635.87	31842.79	-113.98	-6714.79	765365.42	12991.90	45088431.60
2065/066	752.83	34682.3	2.98	-3875.28	-11540.59	8.87	15017810.58
2066/067	508.8	37611.2	-241.05	-946.38	228127.27	58106.07	895638.89
2067/068	893.12	40920.63	143.27	2363.05	338549.16	20525.72	5583995.85
2068/069	958.64	47730.99	208.79	9173.41	1915297.51	43592.43	84151414.33
<b>N<sub>1</sub> = 5</b>	<b>∑ X<sub>1</sub> =</b>	<b>∑ X<sub>2</sub> =</b>	<b>0.00</b>	<b>0.00</b>	<b>∑ x<sub>1</sub>.x<sub>2</sub> =</b>	<b>∑ x<sub>1</sub><sup>2</sup>=</b>	<b>∑ x<sub>2</sub><sup>2</sup></b>
<b>N<sub>2</sub> = 5</b>	<b>3749.26</b>	<b>192787.91</b>			<b>3235798.79</b>	<b>135224.98</b>	<b>150737291.26</b>

For Net Profit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{3749.26}{5} = 749.85$$

For Deposit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{192787.91}{5} = 38557.58$$

Correlation between Net Profit & Deposit,

$$\begin{aligned} (r_{12}) &= \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}} \\ &= \frac{3235798.78}{\sqrt{135224.98 \times 150737291.26}} = 0.7167 \\ r^2 &= 0.7167^2 = 0.5137 \end{aligned}$$

For Probable Error,

$$\begin{aligned} \text{PE} &= 0.6745 \times \frac{1-r^2}{\sqrt{N}} \\ &= 0.6745 \times \frac{1-0.5137}{\sqrt{5}} \\ &= 0.1467 \text{ or, } 14.67\% \\ 6\text{PE} &= 6 \times 0.1467 = 0.8801 \end{aligned}$$

### Appendix V

#### Calculation for Mean value & Correlation between Net Profit & Investment of NCC

Year	Net Profit (X <sub>1</sub> )	Investment (X <sub>3</sub> )	x <sub>1</sub> =X <sub>1</sub> - $\bar{X}_1$	x <sub>2</sub> =X <sub>3</sub> - X <sub>3</sub>	x <sub>1</sub> . x <sub>2</sub>	x <sub>1</sub> <sup>2</sup>	x <sub>2</sub> <sup>2</sup>
------	---------------------------------	---------------------------------	----------------------------------------------	-------------------------------------------------	---------------------------------	-----------------------------	-----------------------------

2064/065	635.87	13340.18	-113.98	3480.72	-396739.43	12991.90	12115411.72
2065/066	752.83	8710.69	2.98	-1148.77	-3421.04	8.87	1319672.51
2066/067	508.8	8444.91	-241.05	-1414.55	340980.11	58106.07	2000951.70
2067/068	893.12	8769.94	143.27	-1089.52	-156093.35	20525.72	1187053.83
2068/069	958.64	10031.58	208.79	172.12	35936.59	43592.43	29625.29
<b>N<sub>1</sub> = 5</b>	<b>∑ X<sub>1</sub> =</b>	<b>∑ X<sub>2</sub> =</b>	<b>0.00</b>	<b>0.00</b>	<b>∑ x<sub>1</sub>·x<sub>2</sub> =</b>	<b>∑ x<sub>1</sub><sup>2</sup>=</b>	<b>∑ x<sub>2</sub><sup>2</sup></b>
<b>N<sub>2</sub> = 5</b>	<b>3749.26</b>	<b>49297.30</b>			<b>-179337.12</b>	<b>135224.98</b>	<b>16652715.06</b>

For Net Profit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{3749.26}{5} = 749.85$$

For Investment,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{49297.30}{5} = 9859.46$$

Correlation between Net Profit & Investment,

$$(r_{13}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{-179337.12}{\sqrt{135224.98 \times 16652715.06}} = -0.1195$$

$$r^2 = -0.1195^2 = 0.0143$$

For Probable Error,

$$\text{PE} = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1-0.0143}{\sqrt{5}}$$

$$= 0.4408 \text{ or, } 44.08\%$$

$$6\text{PE} = 6 \times 0.4408 = 2.6449$$

## Appendix VI

### Calculation for Mean value & Correlation between Deposit & Investment of NCC

Year	Deposit (X <sub>2</sub> )	Investment (X <sub>3</sub> )	x <sub>1</sub> =X <sub>1</sub> - $\bar{X}_1$	x <sub>2</sub> =X <sub>3</sub> - $\bar{X}_3$	x <sub>1</sub> · x <sub>2</sub>	x <sub>1</sub> <sup>2</sup>	x <sub>2</sub> <sup>2</sup>
2064/065	31842.79	13340.18	-6714.79	3480.72	23372310.81	45088431.60	12115411.72
2065/066	34682.3	8710.69	-3875.28	-1148.77	4451807.70	15017810.58	1319672.51
2066/067	37611.2	8444.91	-946.38	-1414.55	1338704.66	895638.89	2000951.70
2067/068	40920.63	8769.94	2363.05	-1089.52	-2574588.06	5583995.85	1187053.83
2068/069	47730.99	10031.58	9173.41	172.12	1578926.98	84151414.33	29625.29
<b>N<sub>1</sub> = 5</b>	<b>∑ X<sub>1</sub> =</b>	<b>∑ X<sub>2</sub> =</b>	<b>0.00</b>	<b>0.00</b>	<b>∑ x<sub>1</sub>·x<sub>2</sub> = -</b>	<b>∑ x<sub>1</sub><sup>2</sup>=</b>	<b>∑ x<sub>2</sub><sup>2</sup></b>
<b>N<sub>2</sub> = 5</b>	<b>192787.91</b>	<b>49297.30</b>			<b>18577459.52</b>	<b>150737291.26</b>	<b>16652715.06</b>

For Deposit,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{192787.91}{5} = 38557.58$$

For Investment,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{49297.30}{5} = 9859.46$$

Correlation between Deposit & Investment,

$$(r_{13}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{18577459.52}{\sqrt{150737291.26 \times 16652715.06}} = -0.3708$$

$$r^2 = -0.3708^2 = 0.1375$$

For Probable Error,

$$PE = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1-0.1375}{\sqrt{5}}$$

$$= 0.2602 \text{ or, } 26.02\%$$

$$6PE = 6 \times 0.2602 = 1.561$$

## Appendix VII

### Multiple Correlations between Total Deposit, Total Investment & Net Profit of BOK

$$X_{1.23} = \sqrt{\frac{r_{12}^2 + r_{13}^2 - 2r_{12} r_{23} r_{13}}{1 - r_{23}^2}}$$

$$= \sqrt{\frac{0.9701 + 0.6096 - 2 \times 0.9850 \times 0.8135 \times 0.7808}{1 - 0.6618}}$$

$$= \sqrt{\frac{0.3284}{0.3382}} = 0.9854$$

$$r^2 = 0.9854^2 = 0.9710$$

For Probable Error,

$$PE = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1-0.9710}{\sqrt{5}}$$

$$= 0.0087 \text{ or, } 0.08\%$$

$$6PE = 6 \times 0.0087 = 0.0525$$

### Appendix VIII

#### Multiple Correlations between Total Deposit, Total Investment & Net Profit of NCC

$$X_{1.23} = \sqrt{\frac{r_{12}^2 + r_{13}^2 - 2r_{12} r_{23} r_{13}}{1 - r_{23}^2}}$$

$$= \sqrt{\frac{0.5137 + 0.0143 - 2 \times 0.7167 \times (-0.3708) \times (-0.1195)}{1 - 0.1375}}$$

$$= \sqrt{\frac{0.4645}{0.8625}} = 0.7339$$

$$r^2 = 0.7339^2 = 0.5386$$

For Probable Error,

$$PE = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - 0.5386}{\sqrt{5}}$$

$$= 0.1392 \text{ or, } 13.92\%$$

$$6PE = 6 \times 0.1392 = 0.8352$$

### Appendix IX

#### Calculation of Trend Value of Deposit, Investment & Net Profit of BOK

Fiscal Year	t	X=t-3	x <sup>2</sup>	Deposit		Investment		Net Profit	
				Y <sub>1</sub>	XY <sub>1</sub>	Y <sub>2</sub>	XY <sub>2</sub>	Y <sub>3</sub>	XY <sub>3</sub>
2064/065	1	-2	4	23976.29	-	5059.56	-	451.22	-
2065/066	2	-1	1	33322.95	-	5948.48	-	638.73	-
2066/067	3	0	0	36932.31	0	5008.31	0	831.77	0
2067/068	4	1	1	41127.91	41127.91	7863.63	7863.63	931.3	931.3
2068/069	5	2	4	50006.1	100012.2	7743.93	15487.86	1090.56	2181.12
<b>Total</b>	<b>N=5</b>	<b>10</b>	<b>10</b>	185365.56	59864.58	31623.91	7283.89	3943.58	1571.25

Calculation of intercept of 'y' when t = 0

$$a_1 = \frac{Y_1}{N_1} = \frac{185356.56}{5} = 37071.31$$

$$a_2 = \frac{Y_2}{N_2} = \frac{31623.91}{5} = 6324.78$$

$$a_3 = \frac{Y_3}{N_3} = \frac{3943.58}{5} = 788.72$$

### Calculation of Slope of Trend Line

$$b_1 = \frac{XY_1}{x^2} = \frac{59864.58}{10} = 5986.46$$

$$b_2 = \frac{XY_2}{x^2} = \frac{7283.89}{10} = 728.39$$

$$b_3 = \frac{XY_3}{N_3} = \frac{1571.25}{10} = 157.12$$

Therefore the trend line equations are:

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

$$Y_3 = a_3 + b_3$$

### Appendix X

#### Calculation of Trend Value of Deposit, Investment & Net Profit of NCC

Fiscal Year	t	X=t-3	x <sup>2</sup>	Deposit		Investment		Net Profit	
				Y <sub>1</sub>	XY <sub>1</sub>	Y <sub>2</sub>	XY <sub>2</sub>	Y <sub>3</sub>	XY <sub>3</sub>
2064/065	1	-2	4	31842.79	- 63685.5 8	13340.1 8	- 26680.3 6	635.87	- 1271.74
2065/066	2	-1	1	34682.3	- 34682.3	8710.69	- 8710.69	752.83	-752.83
2066/067	3	0	0	37611.2	0	8444.91	0	508.8	0
2067/068	4	1	1	40920.63	40920.6 3	8769.94	8769.94	893.12	893.12
2068/069	5	2	4	47730.99	95461.9 8	10031.5 8	20063.1 6	958.64	1917.28

<b>Total</b>	<b>N=5</b>	<b>10</b>	192787.9 1	38014.7 3	49297.3 0	- 6557.95	3749.26	785.83
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**Calculation of intercept of 'y' when t = 0**

$$a_1 = \frac{Y_1}{N_1} = \frac{192787.91}{5} = 38557.58$$

$$a_2 = \frac{Y_2}{N_2} = \frac{49297.3}{5} = 9859.46$$

$$a_3 = \frac{Y_3}{N_3} = \frac{3749.26}{5} = 749.85$$

**Calculation of Slope of Trend Line**

$$b_1 = \frac{XY_1}{x^2} = \frac{38014.73}{10} = 3801.47$$

$$b_2 = \frac{XY_2}{x^2} = \frac{-6557.95}{10} = -655.79$$

$$b_3 = \frac{XY_3}{N_3} = \frac{785.83}{10} = 78.58$$

**Therefore the trend line equations are:**

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

$$Y_3 = a_3 + b_3$$

### **Appendix XI**

#### **Calculation of Trend Value of Deposit of Sample Banks**

<b>Fiscal Year</b>	<b>t</b>	<b>X=t-3</b>	<b>BOK</b> $Y_1 = 37071.31 + 5986.46X$	<b>NCC</b> $Y_1 = 38557.58 + 3801.47X$
2069/7 0	6	3	$37071.31 + 5986.46 \times 3 = 55030.69$	$38557.58 + 3801.47 \times 3 = 49961.99$
2070/7	7	4	$37071.31 + 5986.46 \times 4 = 61017.15$	$38557.58 + 3801.47 \times 4 = 53763.46$

1				
2071/7 2	8	5	$37071.31+5986.46 \times 5=67003.61$	$38557.58+3801.47 \times 5=57564.93$
2072/7 3	9	6	$37071.31+5986.46 \times 6=72990.07$	$38557.58+3801.47 \times 6=61366.4$
2073/7 4	10	7	$37071.31+5986.46 \times 7=78976.53$	$38557.58+3801.47 \times 7=65167.87$

### Appendix XII

#### Calculation of Trend Value of Investment of Sample Banks

Fiscal Year	t	X=t-3	BOK $Y_2 = 6324.78+728.39X$	NCC $Y_2 = 9859.46-655.79X$
2069/7 0	6	3	$6324.78+728.39 \times 3=8510.04$	$9859.46-655.79 \times 3=7892.09$
2070/7 1	7	4	$6324.78+728.39 \times 4=9238.43$	$9859.46-655.79 \times 4=7236.3$
2071/7 2	8	5	$6324.78+728.39 \times 5=9966.82$	$9859.46-655.79 \times 5=6580.51$
2072/7 3	9	6	$6324.78+728.39 \times 6=10695.21$	$9859.46-655.79 \times 6=5924.72$
2073/7 4	10	7	$6324.78+728.39 \times 7=11423.6$	$9859.46-655.79 \times 7=5268.93$

### Appendix XIII

#### Calculation of Trend Value of Net Profit of Sample Banks

Fiscal Year	t	X=t-3	BOK $Y_3 = 788.72+157.12X$	NCC $Y_3 = 749.85+78.58X$
2069/7 0	6	3	$788.72+157.12 \times 3=1260.08$	$749.85+78.58 \times 3=985.59$
2070/7 1	7	4	$788.72+157.12 \times 4=1417.2$	$749.85+78.58 \times 4=1064.17$
2071/7 2	8	5	$788.72+157.12 \times 5=1574.32$	$749.85+78.58 \times 5=1142.75$

2072/7 3	9	6	$788.72+157.12\times 6=1731.44$	$749.85+78.58\times 6=1221.33$
2073/7 4	10	7	$788.72+157.12\times 7=1888.56$	$749.85+78.58\times 7=1299.91$