## CHAPTER-I INTRODUCTION

## 1 Background

The evolution of banking can be traced back to the era when the use of metallic coins as the media of exchange of goods and services began. Storage of metallic coins was a serious problem for the common people because of the danger of theft and robbery, so people started leaving gold, silver and metallic coins in the custody of some reputed person - a wealthy merchant or a money changer. The depositor had to go personally to the custodian for the withdrawal of his money. Gradually, the depositors were allowed to transfer claims against the metallic coins. "The custodian used to issue a receipt to the depositor who said in effect - I owe you (IOU) so........ many pounds and the depositor could transfer the receipt to the payee. When these IOUs became popular in payments, the bank note was born. A bank note is simply a bank debit or promise to pay, evidenced by a piece of paper." (Bhuwan Dahal \& Sarita Dahal, 2002) Another method of payment was developed soon. Instead of receiving a piece of paper representing the debit of the banker or custodian the depositor received a deposit card i.e. passbook. Later, making payment by writing an order to banker for payment to some one else through cheque came in practice.

The banking history reveals that the origin of bank is traced to a Latin word "bancus" which means a bench (ibid). European money lenders and money changers used to transact their business at benches. The bench used by the trader in money was the symbol of the business of banking. "Some authorities observed that the World Bank was originally derived from the Germans world and it means a join stock fund. The Germans changed this world into Italian word "banco" when they were the rulers of a major of Italy. The term again changed into "Banck" by the French" (Bhandari, 2003). Afterwards, the British converted this term into bank that had now been universalized
"The first the public banking institution, Bank of Venice was founded in 1157 as a public enterprise. Afterward, the Bank of Barcelona and the Bank of Genoa were incepted in 1401 and1407 respectively" (Vaidya, 2001). The Bank of Venice and the Bank of Genoa continued
to operate until the eighteenth century with the expansion of commercial activities in Northern Europe there sprang up a number of private banking houses in Europe and slowly it spread throughout the world. In Nepal, modern banking starts from the establishment of Nepal Bank Limited.

Though establishment of banking industry is very recent, some crude banking operations were on practice even in the ancient times. In Nepalese chronicle, it was recorded that the new era known
as Nepal sambat and it was introduction by Shakhadhar, a sudra merchant of Kantipur, in 879 or 880 AD. After having paid all the outstanding debts in the country. This shows the basic of money lending practice in ancient Nepal. In the beginning of 8th century, the then king Gunkam Dev had borrowed money to rebuild the Kathmandu valley (Bhandari, 2003). During Malla Regmi, there was an evidence of professional money lenders and bankers. It is further believed that money lending business, particularly for financing the foreign trade with Tibet, became quite popular. However, in the absence of any regulatory measures, the usury moneylenders were known to have changed exorbitant rates of interest and other extra dues on loans advanced.

The establishment of the "Tejarath Adda" played a vital role in the banking system and it used to be operated by government. Its establishment helped the general public to provide credit facilities at a year low rate of 5 percent. The Adda distributed credit facilities to the public especially on the collateral of gold and silver. Several branches were opened in different part of the country. Hence the establishment of Tejarath Adda could be regarded as Pioneer foundation of banking in Nepal. The Adda didn't make any effort to expand its branch to other part of the nation. The institution did not use to accept any deposits from the public. In the absence of saving mobilization, the "Adda" faced financial problems making impossible to carter the credit and service as per the need of the general public throughout the country. Again, several unorganized bankers and indigenous moneylenders continued to flourish as the sole provider of the credit. Their active involvement acted as fence to development of credit institutions. At the same time, the government started trade with India as well as Tibet and the immediate need of modern bank was experienced. It was even strongly supported by the incident of earthquake
occurred in 1934 A.D. Reviewing these situation, the "udyog parisad" was constituted in 1936 A.D. (ibid).

One year after its formation, it formulated the "company Act" in 1937 A.D. In 5th November 1937, Nepal Bank Limited was establishment under the aforesaid Act. It was a landmark in the field of banking and financial sector in Nepal. The major difficulties at that time were to convince and lure general people from pre-dominated unorganized sector i.e., Sahu-Mahajan.

For the diversified development of the nation, the formulation of fifth year plan was essential and first fifth year plan was started since 1956. To achieve the targets laid on fifth plan, the development of the banking sector was indispensable. In this connection, the systematic development of the sector was possible only after the establishment of center bank. Thus, Nepal Rastra Bank was setup on 26th May, 1956 under NRB Act 2012. Nepal Bank Limited was not spreading their business on rural and priority sector for the balance development of the nation. Thus Rastriya Banijya Bank was established in 1996 under Rastriya Banijya Bank Act 2021, as a fully government owned commercial bank. Later Banijya Bank Act 2020 and Rastriya Banijya Bank Act 2021 was dismissed and BanijyaBank Act 2031 was enacted to keep the existing banks under the same Act. Despitebeing an agricultural country, our farmers were adopting the traditional tools for their purpose. To eliminate those existing problems of the agricultural sector, Agriculture Development Bank was established in 1967. The then customers were not satisfied with the prevailing banking system and were in search of customer oriented bank. The inception of Nepal Arab Bank Ltd. In 1985 gave a ray of hope to sluggish financial sector. Similarly other joint venture banks have been also established.

### 1.1 Justification of the study

Since the deposit of people of the country in commercial banks play a vital role in investing various sectors of the country, as well as these are many cases that banks have not mobilized its deposit in a safe manner. As a result, nonperforming assets has been increasing recently. A deep and through study of it is always necessary and acceptable. Therefore, a study in investment policy of two banks is attempted in this thesis because Nepal Bank Ltd. was established by
government. At first, the government owned the majority of share. Nepal Bangladesh Bank Ltd. is another joint venture bank which is pure public bank.

### 1.2 Statement of problem

Number of commercial banks is increasing in Nepal economy there is highly flow of money in the market but less viable and invertible projects. In the current situation there is mismatch of deposit and invested funds of a new bank is just sharing a cake rather than pumping new capital or new technology, as Nepalese market is almost felt safe guarded few commercial banks are continuously making profit and satisfying their shareholders and returning them adequate profit in current situation commercial banks have a lot of deposits but a very little investment opportunity. They are even discouraging people by offering very low interest rate and minimum thresholds balance. This has decelerated the pace of economy development lake of sound investment policy is another reason for commercial banks not to before utilizing its deposit.

### 1.4 Research question

The present study will make an attempt to analyze investment policy of Nepal Bangladesh Bank Ltd. and Nepal Bank Ltd. special problem related to investment function of the commercial banks in Nepal has been presented briefly as follows.
a. What are the relationship between the deposits collected and loan flowed by those banks exist?
b. What are the trend of deposit and net profit of the sampled banks?
c. How does impact of interest rate on deposit?
d. What are the relationships between interest spread rates and Profitability of selected banks?
e. What are the relationships between total investment and total deposit of two selected banks?
f. What is the priority sector on investment of selected banks?

### 1.5 Objectives of the study

The basic objective of this study is the comparative evaluation of the investment policy adopted by NBL and NBBL. The specific objectives of this study are as follows:
a. To find out the relationship between the deposit collected and loan flowed by those banks exists.
b. To identify the trend of deposit and net profit of the sampled bank.
c. To analysis of impact of interest rate on deposit.
d. To find out relation between interest spread rate and profitability of selected banks.
e. To analyze the relationship between total investment and total deposit.
f. To analyzed the priority sectors on investment of selected banks.

### 1.6 Limitation of the study

Every research has its own limitation. This study will lie under some of the following limitation.
a. The research theory will remain limited only to the investment policy of NBB Ltd. and NB Ltd.
b. Although some primary data are included but the study is mainly based on secondary data collection from the banks.
c. The study wick cover the fiscal year 2061/2062 to 2065/2066 i.e. it will cover the time period of only 5 years analysis approximately.
d. There are many factors that affect investment decision and valuation of the firm. However this study concentrates an only those factors, which are deposit, loan and advances. Investment on securities, total asset, equity capital, net profit and market price per share related to investment.

### 1.7 Organization of study

Study has been organized into 5 chapters. First chapter is the introductory which deals with the background of study, statement of the problem, objective of the study, research questions and limitation of the study.

The 2nd chapter deals with the review of the literatures relating to investment policy. The available literatures are also included.
In the 3rd chapter the study has been described it includes introduction, research design, nature of data, data processing procedure, tools of analysis and definition of key term.
In 4th chapter acquired data presented and analysis through the way of designed methodology. Lastly, the summary of findings, conclusion and recommendation has been in the 5th chapter. A bibliography and appendix have been also included in the last part of the study.

## CHAPTER-II

## REVIEW OF LITERATURE

### 2.1 Introduction

This chapter deals with the literature relevant to the study. This study is done on the basis of available information from libraries, document collection centers and other information managing bureaus. So every possible effort has been made to grasp knowledge and information. Reviewing and studying process has helped to take adequate feedback to broaden the information basis and inputs to this study.

To include this study various relevant literatures have been consulted such as Books, Journals/Article, Publications, Annual reports related to concerned organization review of relevant dissertation/thesis.

## - Conceptual Framework

- Review of Research Work


### 2.2 Conceptual Framework

### 2.2.1 Concept of Banking

Banks are among the most important financial institution in the economy and essential business in thousand of local towns and cities. Bank is an institute which accepts deposit from the public and in turn advances loans by creating credits. Therefore, it should be differentiated from other financial institutions as they cannot create credit through they accept deposit.
"A bank is a business organization that receives and holds deposits of funds from others make loan or extends credits and transfer funds by written orders of depositors" Encyclopedia (1984). "The world book", New York, America Grolier Incorporate vol. 3.
"A bank's business is basically to buying and selling credit, credit instruments are its stock in trade. Also on the basis of its own credit bank money transferred by credit instruments". Klise, E.S (1972), Money and banking, South Western public co.
"Banks are precursor and creators of expansion of economic activity and not merely money lenders but also influential advisers and efficient associates and collaborate with industrialists in the elaboration and adoption of programs or rationalization with the conquest of national markets", orzingher, R(1967). Banks of the world (Eng. Tr,D.S Ault) Macmillan .

### 2.2.2 Banking Risks

Dowrei, (1950) Normally, Banks confront different kinds of risks, which are categorized as follows:

Credit risk: Credit risk arises whenever another party enters into an obligation to make payment or deliver value to the bank. This type of risk is mostly associated with the lending.

Liquidity Risk: Liquidity risk arises when bank itself fail to meet its obligation. The bank required to make payments to the different parties at different times, when they fall due to other parties, which is the liquidity risk.

Yield Risk: It is the risk that bank's assets may generate less income then expense generated by its liabilities.

Operational Risk: The risk is failure in the banks procedures or controls, whether from external or as a result of error or fraud within the institution is the operational risk.

Market Risk: The risk of loss resulting from movements in the market price of financial instruction in which the bank has a position is the market risk. Such instruments include bonds, equities, foreign exchange and associated derivative products.

OwnershiplManagement Risk: The risk that shareholders, directors or senior management be unfit for their respective positions or dishonest.

### 2.2.3 Concept of Commercial Bank

Commercial banks are those banks which perform all kinds of banking functions as accepting deposits, advancing loans, credit creation and agency functions. They provide short-term loan, medium-term loan and long-term loans to trade and industry. They also operate off balance sheet functions such as issuing guarantee, bonds, letter of credit etc. (Vaidya, 2004)

The commercial banks are those banks that pool together the saving of the community and arrange for their productive use. The supply the financial needs of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice.

Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant loans in the form of cash credits and overdrafts. A part from financing, they also render services like collection of bills and cheques, safe keeping of valuables, financial advising, etc to their customers.

Commercial banks are an entity, which accept deposits and makes short term loans enterprises, regardless of the scope of its other services. American Institution of Banking (1972)

Commercial banks are major financial institutions, which occupy quite an important place in the frame work of every company. Commercial banks render 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. Thus, commercial banks have become the heart of financial system.

Commercial bank deal with people's money. They have to find ways of keeping their assets liquid so that they could meet the demand of their customers. In their anxiety to make profit the banks can't afford to lock up their funds in assets that are not early realizable. The deposit's confidence could be second only if the bank is Asia to meet the demand for cash promptly and
fully. The banks have to keep adequate cash for this purpose. Cash in an idle asset and hence the banker has to distribute his assets in such a way that the can have adequate profits without sacrificing liquidity.

Commercial banks must mobilize its deposits and marketable sector. Then only it can earn more profit as well as it should be second and be converted into cash when ever needed. But commercial have to pay due consideration while formulating investment plan regarding loan and investment. Investment plan is one fact of the over all spectrum of policies that guide banks investment operations. A healthy development of any bank depends heavily upon its investment plan. A sound and viable investment plan assets both borrowers and lenders, which helps to increase the volume and quality of deposits, loan and investment. Commercial bank should be careful while reforming the credit creation function. The bank should never invest its funds in those securities, which are subject to too much depreciation and fluctuation because a little difference may cause a great loss. It must not invest its fund into speculative businessman who may be bankrupt at once and who many earn millions in a minute. Emphasizing upon this H.D. cross stated, "The investment plan should be carefully analyzed." (Cross H. D.963)

Commercial banks must follow the rules and regulations as well as different directions issued by the central bank, ministry of finance, ministry of low and other regulatory bodies while mobilizing its funds. So the bank should invest its funds in legal securities only. Diana in her research paper "Banking institutions in developing markets" states that, investment policy should incorporate several elements such as regulatory environment, the availability of funds, the reflection of risk, loan portfolio balance and term structure of the liabilities. Thus commercial banks should incorporate several elements while making investment plan. The loan provided by commercial bank is guided by several principles such as length of time, their purpose, profitability, safety etc. These fundamental principles of commercial bank's investment are fully considered while making investment decisions. Diana (1994).

### 2.2.4 Functions of Commercial Banks

There are many functions of commercial banks. The following are the main functions performed by the commercial banks: Luitel (2059)

## i. Accepting Deposits

Commercial banks accept deposits in three forms namely current, saving and fixed deposits.
a. Current deposit:- Current deposit is also known as demand deposit. Under this, any amount may be deposited in this account. The bank does not pay any interest on such deposits.
b. Saving deposit:- Saving deposit is one of the deposits collected from small depositors and low-income depositors.
c. Fixed deposit :- Fixed deposit is the one in which a customer is required to keep a fixed amount with bank for a specific period, generally by those who do not need money for a stipulated period.

## ii. Advancing Loan

Direct loans and advances are given to all types of persons against the personal security of the borrowers of against the security of movable of immovable properties.

## iii. Agency Services

Commercial bank undertakes the payment of subscriptions, insurance premium, rent, income tax etc. It collect cheques, bills, dividends, interest, pensions etc. on behalf of the customers.

## iv. Credit Creation

Credit creation is very important function of the commercial banks. They accept deposits and advances loans, it opens and account to draw the money by cheque according to his needs.

## v. Other Functions

- To facilitate in financial policy formulation by gathering and providing trading and monetary transaction related information.
- To provide advice to customers, entrepreneurs, and businessmen on economic matter.
- To create credit on the specific basis and expand credit.
- To issue credit card, debit card, master card, visa card etc.


### 2.2.5 Concept of Investment

Investment is concerned with the management of an investors wealth which are the sum of current income and the present value of all future income funds to be invested come from assets already owned, borrowed money and saving or forgone consumption by forgoing today and investing the saving, investors expects to enhance there future consumption possibilities i.e., they are invested to increase wealth. In pure financial sense the subsequent use of the term investment will be in the prevalent financial sense of the placing of money in the hands of others for their use, in return for a proper instrument entitling the holders to fixed income payments or the participation in expected profit. Whereas am economist view, investment as a productive process by means of which additions are made to capital equipment. For our purpose in the study of the financial institutions the investment and investment problem will revolve around the concept of managing the surplus financial assets in such a way which will lead to the wealth maximization and providing a significant further source of income. Limbu (2008) Sharp and Gorden (1999), defined Investment in this way, "Investment, in its broadest sense, means the sacrifice of current dollars for future dollars. Two different attributes are generally involved time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all and the magnitude is generally uncertain. In some cases the element of time predominates (for example govt. bond). In other cases risk is the dominant attribute (for example call option on common stock). In yet both time and risk are important."

Cheney \& Moses (1991), said that "The investment objective is to increase systematically the individual wealth, defined as asset minus liabilities. The higher the level of desired wealth the higher must be received. An investor seeking higher return must be willing to face higher level of risk."

Charles P. Jones (1991) has defined that" Investment as the commitment of funds to one or more assets that will be held over some future time period. Investment is concerned with the management of an investor's wealth, which is the sum of current income and present value of all income."

### 2.2.6 Features of lending and sound investment policy:

The income and profit of the bank depends upon its lending procedure lending policy and investment of its fund in different securities. The greater the credit created by the bank the higher will be the profitability. A sound lending and investment policy is not only prerequisite for bank's profitability, but also crucially significant for the promotion of commercial savings of a backward country like Nepal.

Some necessities for sound lending and investment policies which most of the banks must consider can be explained as under: Thapa (2009)
a) Safety and security:

The bank should accept that type of securities, which are commercial, durable, marketable and high market prices. In this case, "MAST" should be applied for the investment. (Unpublished Master Degree Thesis, Kathmandu)
Where as-
M-Marketable
A-Ascertainable
S-Stability
T-Transferability

## b)Profitability

A good bank is one who invests most of its fund in different earning assets standing safety from the problem of liquidity i.e. keeping cash reserve to meet day to day requirement of the depositors.
c) Liquidity:

Liquidity is the ability of the firm to satisfy its short term obligations as they come due.
d) Purpose of Loan:

In the viewpoint of security, a banker should always know that why a customer is in need have a loan. If a borrower misuse the loan granted by the bank, he can never repay therefore in order to avoid this situation each and every bank should demand all the essential detailed information about the scheme of project or activities.

## Diversification:

Howard K., (2002), Diversification or loan helps to sustain loss according to the law of average, if a security of a company is deprived of there may be an appreciation in the securities of other companies. In this way, the loss can be recovered.

## Tangibility:

Rana, (2008), summarize that, a commercial bank should prefer tangible security to an intangible one. Though it may be considered that tangible property doesn't yield an income apart from intangible securities, which have lost their value due to price level inflation.

## Legality:

Explaince that illegal securities will bring out many problems for the investor. A commercial bank must follow the rules and regulations as well as different directions issued by NRB, ministry of finance, ministry of law and other while mobilizing its funds.

## National Interest:

In additional to its own profitability the bank should also consider the national interest. Even though the bank cannot get maximum return from such investment, it should carry out its obligation toward the society and the country.

### 2.2.7 Some important terms

The study in this section comprises of some important banking terms for which efforts have been made to clarify the meaning, which are frequently used in this study, which are given below. Luitel, (2059)
a) Deposits:

Deposit means the amounts deposited in different accounts such as fixed account, saving account, current accounts etc. of a bank or financial institution deposit is the main source of fund of the financial institution.

Deposits are the lifeblood of the commercial bank. Though they constitute the great bulk of Bank liabilities, the success of a bank greatly depends upon the extent to which it may attract mort deposits.
b) Loan and advances:

This is the primary source of income and most profitable asset to a bank. A bank always willing to lend as more as possible since they constitute the larger part of revenue. But bank has to be more careful while providing loans and advances since they may must be realized at short period of time.
c) Investment on government securities, shares and debentures

Though a commercial bank can earn some interest and dividend from the investment on government securities, shares and debentures, it is not the major portion of income, but it is treated as a second source of banking business.
d) Investment on other company's Share and Debentures

Most of commercial banks invest their excess fund to the share and debenture of the other financial and non-financial companies. Due to excess funds but least opportunity to invest those funds in much more profitable sector and to meet the requirement of Nepal Rastra Bank (NRB) directives. Now a day the commercial banks have purchased share and debenture of regional development bank, NIDC's and other development banks.
e) Other Use of Fund

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

## f) Off-balance Sheet Activities

Off balance sheet activities involve contracts for future purchase or sale of assets and all these activities are contingent obligations. These are not recognized as assets or liabilities on balance sheet.

### 2.3 Review of Related Articles

Under this heading, effort has been made to examine and review some of the articles published in different economic journals, Bulletin of World Bank, dissertation papers, magazines, newspapers and other related books.

### 2.3.1 Review of NRB Act (Nepal Bank Patrika, 2003)

There is various acts of the study, which those basically involved in this section; the review of acts framework (environment has significant impact on the commercial banks establishment, their mobilization and utilization of resources. All the commercial banks have to perform to the act, previous specified in the commercial bank Act 2031(1964 A.D.) and the rules and regulation to facilitate the smooth running of commercial banks. The preamble of Nepal Bank Act 2031 clearly states the need of commercial banks in Nepal.
"In the absence of any bank in Nepal the therefore, with the objective of fulfilling that need by providing services to the people and for the betterment of the country", this law is hereby promulgated for the establishment of the bank its operation.
The provisions established by the NRB in the form of prudential norms are as follows:
i) Provision for investment in productive sector:

Being a developing country, Nepal needs to develop its infrastructure and other primary productive sectors likes' agricultural, industrial etc. NRB has directed commercial banks to extent at least $40 \%$ of its credit to productive sector.
ii) Provision for investment in priority sector:

NRB has directed commercial banks to extent least $12 \%$ of its total outstanding credit to priority sector. Commercial bank's credit to deprived sector is also a part of priority sector. Credit to agriculture, cottage and small industries, services business (computer, Tourism) and other business.
iii) Provision for investment in deprive sector:

The deprived sector credit limit is determined by NRB from $0.25 \%$ to $3 \%$ of the total outstanding credit from bank to bank. Commercial banks are required to disburse credit to the deprived sector at the following stipulated ratio:

Table 2.1
Provision for Investment in Deprived Sector

| Name of the Bank | Required Deprived sector lending as \% <br> of total outstanding credit |
| :--- | :--- |
| NIBL, NBL, RBB, NABIL, SCBNL, <br> HBL, | $3 \%$ |
| BOK, EBL, NSBFBL, NBBL | $2.5 \%$ |
| NBBL | $1.75 \%$ |
| LBL, NICBL | $0.75 \%$ |
| Other new bank | $0.25 \%$ |

Source: www.nrb.org.np
iii) Directive Regarding interest spread rate:

NRB has directed the commercial banks to limit its interest rates spread with the maximum of $5 \%$ interest rates spread is the difference between the interests charged on loan advances and the interest paid to the depositors.

### 2.3.2 Review of Articles

Under this heading effort has been made to examine and review some of the related articles published in different books economic journals, Bulletin of World Bank, dissertation papers, magazines, newspapers and other related books.

Balla and Tutesa (1983), There are basically three concept of investment. They are as follows

1. Economic investment- that is an economist's definition of investment
2. Investment in a more general or extended sense, which is used by "the man on the street" and
3. The sense in which we are going to be very much interested namely financial investment.

Pandey (1991), "In investment decision expenditure and benefits should be measured in cash. In investment analysis, cash flow is more important than according profit. It may also be pointed out of that investments decision affects the firm's value. The firm's value will increase if investments are profitable and add to the shareholders wealth. Thus, investment should be evaluated on the basis of a criterion, which is compatible with the objectives of the shareholder's fund maximization. An investment wills all to the shareholder's wealth if it yields benefit in excess to the minimum benefits as per the opportunity cost of capital."

Sharpe, Alexander and Baily, (1998), "Investment in its broader sense, means the sacrifice of current dollars for future dollars. Two different attributes are generally involved: time and risk. The sacrifice takes places in the present in the present and its magnitude as generally uncertain."
F. Morris (1980), In his discussion paper, "Latin America's Banking system in the 1980's" has concluded that most of the banks concentrated on compliance with central bank rules on reserve requirements, credit allocation and interest rates. While analyzing loan portfolio quality, operating efficiency and soundness of bank investment management has largely been overlooked. The huge losses now find in the bank's portfolio in many developing countries and testimony to the poor quality of this oversight investment function.

He further adds that mismanagement in financial institutions has involved inadequate and over optimistic loan appraisal, tax loan recovery, high risk diversification lending and investment, high concentration connected and insider lending, loan mismatching. This has leaded many banks of developing countries to the failure in 1980's.

Dr. Shrestha (1195), Expressed her views as, "The commercial banks fulfill the credit needs of various sector of the economy including agriculture, industry. Commercial banks are based on the profit maximizing of the institution as well as the economic enhancement of the country."

Dr. Singh (1992), has defined investment in this way "Investment is the employment of funds with the aim of achieving additional income of growth of values."

Bajaracharya (2047), through his article," Monetary Policy and deposits mobilization in Nepal," has concluded that the mobilization of domestic saving is one of the monitory policies in Nepal. For this purpose commercial banks stood as the vital and active financial intermediary for generating resources on the form of deposit of deposit of the private sector so far providing credit to the investor's in different aspects of the economy.

Gillesserra (1998), Another article outlined," The Role of commercial banks in Nepalese context" of, concluded the five commercial banks were improving their services, due to pressure of competition for the public benefit.

Chopra (2000), The article entitled, "Role of Foreign Banks in Nepal" of concluded that join venture banks are play vital role in the economic development of the country. This wills undoubtedly increase with time.

## Portfolio management in Nepalese Bank

Regarding the Nepalese commercial banks at present, the portfolio management activities are nascent stage. However, on other hand most of the banks are not doing such activities so far. The reasons of being the activities in lower portfolio may be because of the following reasons:

Dr. Shrestha (1995)

- Unawareness of the client about the services available
- Hesitation of taking risk by the client to use such facilities
- Lack of proper technologies to run such activities in best and successful manners
- Less developed capital market and availability of few financial instruments in the market

Regarding the joint venture banks, they are very eager to provide such services comparing to big govt. owned commercial banks. But because of slow growth of capital market and few financial instruments available in the market, very limited opportunities to the banks for exercising the portfolio management activities.

If we look at the present market scenario, the capital adequacy requirement will increase if the bank concentrates on on-balance sheet activities, which carries cost. On the other hand, banks also have to maintain loan-loss reserve, which relatively curtails net profit of the bank, thus the off balance sheet activities have been exercised predominately in world's most of the commercial banks. Out of them portfolio management activities is picking up day by day. Thus in order to develop and expand the portfolio management activities successfully, investment management methodology of a portfolio manager should reflect high standard and clients the benefits of global strengths, local insights and prudent philosophy.

Thus the Nepalese banks having greater network and access to national and international capital market have to go for portfolio management activities for the increment of their free based income as well as to enrich the client base and to contribute in national economy.

Golchha, second vice-president of FNCCI (1999), in his article, "Private sector views on financial sector", he stated that there is no proper legislation in Nepal, which gives such protection to the borrower as provided in U.S. The government proposed one law, in the name
of the bankruptcy Act, and which is still to come into practice. He said, banks are given much protection by the laws as well as by the central bank by issuing different directives, and bank can very easily take over the mortgage and recover the loan but they still cry foul and blame the real sector for all the non-performing loans.

He said, interest rate charged by the banks to the real sector are quite high, whereas the same banks investing billions of rupees in Treasury Bills for about a quarter percent interest, on the other hand industries.

### 2.3.3 Review of Research Papers

Although investment policy has a great importance in Bank's, significant research work has not done yet on this subject. Very little research has done in this subject.

Dr. Shrestha (1995), book entitled, "Investment planning of commercial banks in Nepal", she has concluded that bank portfolio of commercial banks has been influenced by the variable securities rates. Investment planning and operation of commercial banks in Nepal has no been found satisfactory in terms of profitability, safety, liquidity, productivity, and social responsibility. To overcome this problem she has suggested "commercial banks should perform lending and investment efficiently with proper analysis of the project"

Dr. Pradhan (1998), has carried out a survey of enterprises. Though his research entitled "Financial Management Practices in Nepal" he found some of the major features of the Nepalese financial management. According to him, "the most important finance function appeared to be working capital management. While, the least important one appeared to be maintaining earning is two most widely used financing sources. Most enterprising do no borrow form on bank only and they do switch between banks to banks whichever offers best interest rates. Most enterprise finds that banks are flexible in interest rate.

Further, he said that among the band loans, bank loan of less than one year are more popular in public sector whereas bank loan of 1-5 year are more popular in private sector. In periods of tight money, the majority of private sectors enterprises fell that banks will treat all firms equally
while public sector does not so. Similarly he concludes that the majority of enterprises in traded sector find that banks, interest rate is just right while the majority of non-traded sector find that the same is one higher side."

Bista, (1999), "Nepalma Adhunik Banking Byabashtha" has made and attempts to highlight some of the important indicators, which have contributed to the efficiency and performance of join venture bank. He has concluded that "the join venture banks have brought in many new banking techniques such as computerization, hypothecation, consortium finance and modern fee based activities into the economy."

### 2.3.4 Review of Thesis

Before this, various students regarding the various aspects of commercial banks such as financial performance, lending policy, investment policy, interest rate structure, resources mobilization and capital structure have conducted several thesis works. Some of them as supposed to be relevant for the study are presented below:

Bhattarai (1978), "Lending Policy of commercial banks in Nepal", has tried to examine the lending policy of commercial banks. Her main objective is to examine the collection of resources, utilization of those resources, and investment sectors. She has concluded in the last section that commercial banks should be able to generate capital. Otherwise lower capital formation hampers economic development of the people and whole country. So, they must give more preference on collection of funds, and its proper utilization.

Khadka (1998), "A study on investment policy of NABIL in comparison to other joint venture banks of Nepal" has found that liquidity position of NABIL is worse that of NGBL and NIBL. NIBL has more portion current assets as loan and advances but less portion as investment on government securities. NABIL is comparatively less successful in on balance-sheet operations as well as off-balance sheet operations than hat of other joint venture banks. Profitability positions of NABIL are comparatively not better than that of other joint venture banks. NABIL is more successful in deposit mobilization but failure to maintain high growth rate of profit in compare to NGBL and NIBL".

Joint venture banks to be careful in increasing profit in real sense to maintain the confidence of shareholders, depositors and customers. He has strongly recommended NABIL to utilize its risks assets and shareholders fund to gain highest profit margin, reduce its expenses, and collect cheaper fund for more profitability. He has recommended investing its fund in different sectors of investment and administering various deposits scheme, gift cheque scheme, house building deposit scheme etc. He has recommended following liberal lending policy and investment more percentage to total deposit as loan and advances.

Shahi (1999), "Investment policy of commercial banks in Nepal" has found that "the liquidity position of Nepal Bank Ltd. is comparatively better than that of the joint venture banks. NBL is comparatively less successful in on-balance sheet as well off-balance sheet operations than that of other join venture banks. It has not followed any definite policy with regard to the management of its assets. Similarly profitability position of NBL is not comparatively not better than that of other joint venture banks. A growth ratio of NABIL is lower than other joint venture banks".

Shahi recommended that to get success itself and to encourage financial and economic development of the country through industrialization and commercialization. Commercial bank most mobilizes its fund in different sectors such as purchasing of shares and debentures of other financial and non-financial companies. He has recommended that banks should make continuous efforts to optimize its investment portfolio. He has pointed out the loan default in commercial banks is a result of various factors i.e. political influence, lack of the necessary skills of project appraisal, improper collateral evaluation, irregular supervision and lack of entrepreneurship attitude. He also has suggested enacting loan recovery act to enhance the recovery of loan.

Tuladhar (1999), "A study on investment policy of Nepal Grindlays Bank Ltd. in comparison to other join venture banks (NABIL and HBL)" has found that join venture banks of Nepal are not effectively informative to their clients. These banks have given first priority on education sectors while making investment. The poverty stricken and deprived sectors are given second
priority. His study found that reason behind not providing banking facilities to the rural areas that these banks are profit oriented only. According to him NGBL has maintained successful liquidity than NABIL and HBL.NGBL has successfully maintained and managed assets towards different income generating activities. Profitability position of NGBL is better than NABIL and HBL. Similarly, growth ratios of NGBL are more satisfactory in compare to NABIL and HBL".

Tuladhar has not dealt very much on theoretical approach such as liberal lending policy, cost minimization approach, which is very important for the overall and profitability point of view. He has suggested reducing minimum threshold balance i.e. to improve participation of lower class people. However, this is possible by opening branches on the rural areas where increasingly lower level people reside.

Regmi (2001), "A comparative study of the Financial Performance of Himalayan Bank \& Nepal Bangladesh Bank Ltd."suggested that NBBL to increase its current assets because the bank is not maintaining adequate liquidity position in comparison with HBL. As capital structure of both the banks is highly levered both the banks are recommended to maintain and improve mix of debt and owner's equity by increasing equity share. He further suggests to HBL to improve the efficiency in utilizing the deposits in loan and advances for generating the profits. NBBL should try to maintain present position on this regard.

Dhungel (2002), "A comparative study on investment policy of Nepal Bangladesh Bank Ltd.\& other joint venture Banks.(Himalayan Bank Ltd \& Nepal SBI Bank Ltd.)"The profitability position of NBBL is comparatively not better than that of HBL but better than that of NSBI. The bank has followed moderate position in comparison to other two banks. The interest earned to total working fund ratio for NBBL is higher than that of HBL and NSBI and it has also the higher interest paid to total working fund, which reveals that the bank is collecting fund from expensive sources, which may be the higher portion of fixed deposit in its total deposit. Interest earned portion out of operating income of NBBL is lowest of all. This shows that NBBL has earned other income more than interest earned on loan and advances and investment. The bank must maintain its high profit margin for the well being in future.

Pandit (2003), "A study on the investment policy analysis of standard chartered Bank Nepal Ltd. (In comparison to other commercial Banks of Nepal)" In case of total investments to total deposits ratios, Standard Chartered Bank Ltd.,Nepal Bangladesh Bank Ltd. and Nabil bank Ltd. have increasing trend. This increasing trend means charted may use relatively large portion of deposit toward investment in different sectors. It can be concluded that Chartered, Nabil and NBB are uses the skill and attention toward the potential sector of the investment. Lastly the above trend scenario, Chartered has favorable condition then Nabil and NBB for utilizing the total deposit.

Gautam (2004), "Portfolio analysis of Investment in listed companies" portfolio management is concerned with efficient management of portfolio investment in financial assets including shares and debentures of companies. The management may be by professionals, by others or by individuals themselves. A portfolio of an individual or corporate unit is the holding of securities and investment in financial assets. These holding are the results of individual preferences and decisions regarding risk and return.

Lamichane (2005), "Investment policy in Nepal (A comparative study of Agriculture Development Bank with Nepal Bangladesh Bank Ltd. \& Himalayan Bank Ltd.)" The liquidity position of ADB is comparatively better than that of HBL \&NBBL. In spite of the current ratio being the lowest among the three banks, it has maintained the highest cash reserve ratio, cash and bank balance to current assets ratio and investment on government securities ratio.

The trend of the total deposit, total loans \& advances and total investment of ADB shows better position of ADB than that of HBL \& NBBL. However, the most important fact is that the trend of net profit of ADB shows a negative.

Aryal (2005), "Investment Policy of joint venture banks in Nepal (In comparative study of Everest Bank Ltd. with NABIL Bank Ltd. and Nepal Bangladesh Bank Ltd.)" The liquidity position of EBL is comparatively better than NABIL and NBBL. It has higher cash and bank balance to total deposit and cash bank balance to current assets ratio. It has made enough
investment policy on loan and advances. EBL is comparatively average successful in it's on balance sheet operation as well as off balance sheet activities in compared to NABIL and NBBL. Risk ratio shows that EBL has maintained higher risk which indicates heterogeneous variability in its operation. Whereas there is moderate risk taken by NABIL and NBBL. EBL has maintained high growth rates in total deposit, loan and advance but has moderate position in investment. EBL has less growth rate than NABIL and NBBL.

Gupta (2007), "Comparative Analysis of Financial Performance of Commercial Banks in Nepal". The researcher has taken Everest bank Ltd.Bank of Kathmandu and Standard Chartered Bank Ltd. as sample. The major objective of the study was to evaluate liquidity ratio. Activity ratio, profitability ratio and other market related ratios of these sample banks. The researcher had used descriptive and analytical research design in writing the research study. The research had also used F-Test in testing the hypothesis.

Gupta concluded that among three sample bank BOK maintained the highest liquidity position during the research period in comparisons to other two banks. The study further added that SCBNL had the excellent assets utilization in order achieve that goal of maximizing the shareholder's wealth. In the same way SCBNL generated the highest net profit and paid the highest dividend per share to shareholders.

Udas (2008), "A Comparative study of investment policy of Nepal Bangladesh Bank Ltd. and Bank of Kathmandu Ltd." His objectives of the study were to examine the financial performance of NBL and BOK for a period of $2051 \backslash 52$ to $2055 \backslash 56$. To show the cause of changes in cash position of the two banks at two balance date. And to suggest and recommend the banks to improve their financial performance.

Udas had found on his study that the current ratio of both banks were below conventional rule. But the ratio was high in NBBL as compared to BOK. The cash and bank balance of NBBL was found to be in decreasing trend while that of BOK was quite fluctuating over the study periods. BOK had a higher portion of cash and bank balance out of its current assets compared to NBBL. It was also found with the help of standard deviation and coefficient of variation that

BOK had greater variability in overall liquidity ratio. NBBL is in better position in terms of utilizing customers' deposits in the form of loans and advances. However, both banks are utilizing their deposit funds through loans and an advance but comparatively NBBL is doing more efficiency than BOK. Since BOK is suffering losses in three rascal years, thus showing its operational deficiencies in mobilizing the resources in productive sectors. Thus, it can conclude that the profitability position of NBBL is far better than that of BOK.

### 2.4 Research gap

After detail study of the previous thesis, researcher has reached to this conclusion that they have researched and analyzed the data on the topic related to financial performance and investment policy up to the fy $2007 \backslash 08$. Furthermore, there had not been comparative analysis of investment policy of NBL and NBBL. That's why, researcher has tried to show the comparative analysis of investment policy of CB and has also analyzed the relationship between different variables. This work is different with previous works. Study period is also different than previous studies although there are similar topics.
The researcher has used more secondary data. Only few primary data are used through questionnaire and interviews related to investment policy. The risk factors of institution have been analyzed. The researcher has comparatively analyzed the deposit collection position of the financial institution and fund mobilization.

## CHAPTER III

## RESEARCH METHODOLOGY

### 3.1 Introduction

The method and definite technique which guide to study and gives ways to perform research work is known as research design. Research methodology describes the methods, techniques and process applied in the entire aspect of the study. The basic objective of this study is to measure the trends in the terms of assets and liabilities of commercial banks. "Research is the process of systematic and in-depth study or search for any particular topic, subject or area of investigation, backed by collection compilation, presentation and interpretation of relevant details or data." Dr Michael,(2000).

The term 'research' refers to the systematic method consisting of enunciating the problem, formulating the hypothesis, collecting the facts of data, analyzing the facts and reaching certain conclusions either in the form of solutions towards the concerned problem or in certain generalization for some theoretical formulation Kothari, (2000 ).

Research has its special significance in solving various operations and planning problems of business and industry. Research Methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives.

### 3.2 Research Design

The research design is the conceptual structure with in which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data. The task of defines the research project, popularly known as research design. The function of research design is to provide for the collection of relevant evidence with minimum expenditure of effort, time and money. It is the main part of thesis or any research work. The study is based on descriptive from fy $2061 \backslash 62$ to $2065 \backslash 66$. It deals with Investment Policy on commercial banks on the basis of available information. As the title suggests, it is more analytical and impractical research design. The study is based on recent historical data. This covers five years period and less descriptive. The research has been completed within about one year period.

### 3.3 Source of Data

Source of data has concider bulletins, journal articles and other publication of different banking institutions. Taking consideration into the sources of data, the primary sources of data are about to be bank publications, central bank's rules and regulations, audited financial statements etc.

## a) Primary source

Primary data collected through questionnaire by distributing to the respondents. Beside this, the officers of various departments have directly approached to understand their real grievances and interview. Discussions have with the officers and financial experts of selected two banks in this process of primary data collection.

## b) Secondary source

As, the present study undertaken to evaluate the performance of the bank, the secondary sources of data are use in the study. Data have been collected from various sources like annual reports and financial statement of the bank, official records, monthly bulletins, various published periodicals, magazines and dissertations and all available reports and material of selected banks. The data used in the study are secondary in nature.

### 3.4 Population and Sample

All the items under consideration in any field of research constitute a population. Population of study is listed at present 28 commercial banks in Nepal. Hence, here is selected only a few items from the population for the study purpose. The items so, selected constitute what is technically called a sample. Here only two commercial banks have been selected for the study purpose. They are as follows:
a. Nepal Bank Limited
b. Nepal Bangladesh Bank Limited

### 3.5 Method of Analysis

To make rational decision in keeping with the objectives of the bank, the researcher must have certain analytical tools. The more useful tools of financial analysis are the subjects of this chapter.

Here, various financial and statistical tools have been used to achieve the objectives of the study. For this purpose, statistical tools such as Karl Pearson's coefficient of correlation and least square method have been calculated to show the relationship between various variables. Likewise, some financial tools such as ratio analysis, growth ratios, analysis and trend analysis have been used.

### 3.5.1 Financial Tools

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of balance sheet and profit and loss account.

## a) Effective Interest Rate

Effective interest rate gives the information about how costly are the interest rate earning assets. If the cost of acquiring fund for investment is high, it earns less income and ultimately decreases profit of the finance company. Therefore it is better to have lower interest cost rate. The effective interest cost rate is calculated as:

Effective Interest Rate $=$ Interest Paid $\backslash$ Total Deposit $* 100$

## b) Interest Cost Rate

This indicates the earning capacity of earning assets. In this study, earning assets of finance companies is taken as loan and advances and total investment.

Interest cost rate is calculated by using following formula:

$$
\text { Interest Cost Rate }=\frac{\text { Interest Earned }}{\text { Interest Earning assets }} \times 100
$$

## c) Interest Spread Rate

Interest spread rate is difference in rate at which finance companies earn through investment and rate offered in attracting deposits and borrowings. In other words, rate of interest income on loans and investments less rate of interest expenses on deposits and borrowings. Higher the spread in rate higher will be income of the financial institution.

The Interest spread rate is calculated as:
Interest Spread Rate $=$ Effective Interest Rate - Interest Cost Rate

## c) Total Investment to Total Deposit Ratio

This ratio measures how successfully and efficiently the banks are mobilizing their fund on investment in various securities.

Total investment to total deposit ratio is calculated as:

Total Investment to Total Deposit $=\frac{\text { Total } \quad \text { Investment }}{\text { Total }} \quad$ Deposit $\quad 100$

## d) Loan and Advance to Total Deposit

This ratio actually measures the extent to how successful to mobilize the total deposit on loan and advances for the purpose of profit generation. It can be calculated by using following formula:

Loan and Advance to Total Deposit Ratio $=\frac{\text { Loan and Advance }}{\text { Total Deposit }} \times 100$

### 3.5.2 Statistical Tools

Many statistical tools are often employed in the analysis and interpretation of data as an aid to managerial decisions. Following statistical tools are used more systematically.

### 3.5.2.1 Arithmetic Mean

Arithmetic mean of a given set of observations is their sum dividend by the numbers of observations. In this study, arithmetic mean of different ratios are calculated in general if x 1 ,
$\mathrm{x} 2, \mathrm{x} 3, \ldots \ldots \mathrm{xn}$ are the given n observation, then their arithmetic mean, usually denoted by is given by:

$$
\frac{\sum X}{N}
$$

Where,

$$
\begin{aligned}
& \mathrm{X}=\text { the sum of the observation and } \\
& \mathrm{N}=\text { the no. of years }
\end{aligned}
$$

### 3.5.2.2 Standard Deviation (SD)

The standard deviation is defined as the positive square root of the arithmetic mean of the square of the observation of the given observation from their arithmetic mean thus: if $x 1+x 2+\ldots \ldots \ldots+x n$ is a set of $n$ observation then its $S D$ is given by

The SD measure the absolute dispersion of the mass of figures in a series. A small SD means a high degree of uniformity of the observations and homogeneity of a series and vice-versa. SD of different ratios are calculated;

$$
\frac{\sum X-\bar{X}}{\sqrt{N}}
$$

### 3.5.2.3 Coefficient of Variance (CV)

Standard deviation is only on absolute measure of dispersion, depending upon the units of management. The relative measure of dispersion based on standard deviation is called the coefficient of standard deviation and is given by; $\frac{\sigma}{\bar{X}}$

### 3.5.2.4 Coefficient of Correlation Analysis

"Correlation many be defined as the degree of linear relationship existing between two or more variables. Two variables are said to be correlated when the change in the value of one variable is accompanied by the change of another variable." Dr. Azaya Bikaram Sthapit. Statistical Methods. Buddha Academic Publishers and distributors Pvt. Ltd. Kath. 2003.p. 362

In case of highly correlated variable under this topic Karl Pearson's co-efficient of correlation has been found out the relationship between the following variables.

1. Correlation of coefficient between deposit and lending.
2. Correlation of coefficient between total deposit and net profit.
3. Correlation of coefficient between average deposit interest rate and total deposit.
4. Correlation of coefficient between interest spread rate and net profit.
5. Correlation of coefficient between total deposit and investment.

Karl Pearson's coefficient of correlation is widely used in practice to measure the degree of relationship between two variables by following relationship.
$r=\frac{\sum x y}{\sqrt{\sum x^{2} \cdot y^{2}}}$
Where
$\Sigma \mathrm{r}=$ Co-efficient of correlation
$\Sigma \mathrm{XY}=$ Sum of the product of the observation in series X and Y .
$\sum \mathrm{X}=$ Sum of the observation in series X .
$\sum \mathrm{Y}=$ Sum of the observation in series Y .
$\sum \mathrm{X} 2=$ The sum of the square of item in X series.
$\sum \mathrm{Y} 2=$ The sum of the square of item in X series.

In correlation analysis, the value of coefficient of correlation 'r' between 0 and 1 indicates the goodness of fit. The highest value of ' Y ' denotes better fit the value of rxy $=+1$, rxy $=-1$ and rxy $=0$ indicates perfect positive, perfect negative and no relationship between the variables respectively.

### 3.5.2.5 Probable Error

The probable error of the correlation coefficient is applicable for the measurement of reliability of the compared value of the correlation coefficient 'r'. Dr. Sunity

Shrestha and Dhruba Prasad Silwal, Statistical Method in Management. Kathmandu, Taleju Pracashan 2057, p. 325.

Probable error of correlation coefficient usually denoted by P.E.(r) is an old measure of testing the reliability of an observed value of correlation coefficient in so far as it depends upon the conditions of random sampling, it is worked out as.
$\mathrm{P} . \mathrm{Er}=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$
Where,
$\mathrm{r}=$ correlation coefficient $n=$ No. of pairs of observation.

### 3.5.2.6 Least Square Linear Trend Analysis

The straight line trend implies that irrespective of the seasonal and cyclical swings and irregular fluctuations, the trend values increases or decreases by a constant absolute amount to per unit of time. Hence, the linear trend value from a series in arithmetic progression the common different I.e. being ' b ' the slope of the trend line.

To compute the straight line trend

$$
\begin{gathered}
\mathrm{Y}=\mathrm{a}+\mathrm{bx} \\
\text { Where, } \\
\mathrm{Y}=\text { dependent variable } \\
\mathrm{X}=\text { independent variable } \\
\mathrm{A}=\mathrm{x}=0 \quad \text { constant, which computes } \mathrm{y} \text { value } \\
\text { When, } \\
\mathrm{a}=\frac{\sum x}{n} \\
\mathrm{~b}=\frac{\sum x y}{x^{2}}
\end{gathered}
$$

```
b}=\mathrm{ constant which is change in y corresponding to change in x by one unit.
x = 1 - base year
    x unit = 1 year
```

The constant (a) is simply equal to the mean of $y$ value and constant ' $b$ ' the rate of change i.e. slopes of trend line.

Here, least square linear trend analysis the trend of total deposit, deposit interest rate, interest spread rate, net profit and investment of NBL and NBBL from f/y 2061 to 2065 and makes the forecast for the next five year up to 2070.

## CHAPTER - IV <br> PRESENTATION AND ANALYSIS OF DATA

### 4.1 Introduction

The data presentation and analysis is the important part of the study because all the information and ideas will be analyzed and presented in this chapter. The basic objectives of this study have been already mentioned in the first chapter.

The Investment Policy aspects have discussed in the review of literature. In the research methodology necessary analytical tools and techniques have been employed for the accomplishment of prescribed objectives. In this chapter efforts have been made to process the obtained data analyzed and interpret them. The available data are presented in table and graph and they are analyzed with the help of statistical mathematical prated on the basis of which facts are explored.

### 4.1.1 Analysis of Deposit and Lending

The deposits of banks are raw material that is essential for the operation of its basic functions. The deposit must be sufficient to meet the demand of the loan seekers. Inadequate level of deposit hinders the growth of the particular financial institutions. So various deposit schemes are introduced by selected two banks to get rid from deposit crunch.
For Nepal Bank Ltd.
Table 4.1
Deposit and Loan position of NBL (Rs in million)

| Nepal Bank Ltd. |  |  |  |  |  | Source: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | 2061162 | 2062163 | 2063164 | $2064 \backslash 65$ | $2065 \backslash 66$ | Annual |
| Deposit | 35934.20 | 35829.80 | 39014.20 | 41829.40 | 44628.20 |  |
| Loan | 14199.30 | 14490.30 | 11058.50 | 13251.10 | 19482.20 | nding |

The above table 4.1 shows the actual deposit figure of the understudied bank i.e. Nepal Bank Ltd. in their respective years. The loan amount generally does not exceed the deposit figures except in preliminary period of the establishment. The reason behind it is that statuary liquidity to be maintained by commercial banks. The deposit has been decreased from Rs. 35934.20 million to Rs. 35829.80 million till FY $2062 \backslash 63$ and afterward it has been increased. Similarly, the lending fund increasing from Rs. 14199.30 million to Rs. 14490.30 million till FY $2062 \backslash 63$ and decreasing from Rs. 14490.30 million to Rs. 11058.50 million till FY $2063 \backslash 64$ and than observed afterwards.

Graph 4.1
Bar Diagram of Deposit and Loan position of NBL


On the basis of data available in Graph 4.1, the above bar diagram has been plotted. The diagram portrays that the gap between the deposit and loan the studied period. It means that the most of the deposit had been employed as lending various sectors.

## For Nepal Bangladesh Bank Ltd.

Table 4.2
Deposit and Loan position of NBBL (Rs in million)
Nepal Bangladesh Bank Ltd.

| FY | $2061 \backslash 62$ | 2062163 | $2063 \backslash 64$ | $2064 \backslash 65$ | 2065\66 | Sourc <br> $e$ : <br> Апnи |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Deposit | 12807.40 | 12125.60 | 13015.10 | 9385.10 | 10883.70 |  |
| Loan | 9644.70 | 9626.90 | 9796.40 | 9169.40 | 9469.60 |  |

reports of corresponding selected banks.

The deposit and lending of NBBL is rising over the studied period as shown in table 4.2. It's deposit fluctuation from Rs. 12807.40 million till $2061 \backslash 62$ to $2062 \backslash 63$ and increased to Rs. 13015.10 million in 2063164 than again decrease to Rs. 9385.10 million and afterward increased to Rs. 10883.70 million. The lending of the bank decreased from Rs. 9644.76 million to Rs. 9626.90 million till $2061 \backslash 62$ to $2062 \backslash 63$ and increased to Rs. 9796.40 million in $2063 \backslash 64$ and again decreased to Rs. 9169.40 in $2064 \backslash 65$ and afterward increased to Rs. 9469.60 in $2065 \backslash 66$.

Graph 4.2
Bar Diagram of Deposit and Loan position of NBBL


On the basis of data available in graph 4.2, the above bar diagram has been plotted. The diagram portrays that the comparative positing of deposit and lending of NBBL in respective year. The bank has adopted aggressive lending policy in comparative to NBL and it can be seen in above.

### 4.1.2 Analysis of Deposit and Net Profit

The deposits of banks are main source that is essential for the operation of its basic functions. The net profit also main part of the banks. Our money market is being much more comparative and only those fittest banks can only sustain or exist in the prevailing situations. It is not doubt to say that the commercial banks having higher net profit only survive in financial environment otherwise it has to loose its existence.

## For Nepal Bank Ltd.

Table 4.3
Deposit and Net profit position of NBL (Rs in million)

| Nepal Bank Ltd. |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| FY | $2061 \backslash 62$ | $2062 \backslash 63$ | $2063 \backslash 64$ | $2064 \backslash 65$ | $2065 \backslash 66$ |
| Deposit | 35934.20 | 35829.8 | 39014.20 | 41829.40 | 44628.20 |
| Net <br> profit | 1730.13 | 1207.26 | 226.95 | 239.21 | 794.40 |

Source: Annual reports of corresponding selected banks

The above table shows that the actual deposit figures of the understudied bank i.e. NBL in their respective years. The net profit of NBL does not exceed the deposit figures. The deposit has been decreased from Rs 35934.20 million to Rs 35829.80 million till $2062 \backslash 63$ and afterward it has been increased. Similarly, the net profit is decreasing Rs 1207.26 million to Rs 239.21 million till $2064 \backslash 65$ and increasing Rs 794.4 million in FY $2065 \backslash 66$.

Graph 4.3
Bar Diagram of Deposit and Net Profit position of NBL


On the basis of data available in graph 4.3, the above bar diagram has been plotted, the diagram portrays that the gap between the deposit and net profit the studied period. It means that the most of deposit had been increased as net profit.

## For Nepal Bangladesh Bank Ltd.

Table 4.4
Deposit and Net Profit position of NBBL (Rs in million)

| Nepal Bangladesh Bank Ltd |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FY | $2061 \backslash 62$ | $2062 \backslash 63$ | 2063164 | $2064 \backslash 65$ | $2065 \backslash 66$ |
| Deposit | 12807.40 | 12125.60 | 13015.10 | 9385.10 | 10883.7 |
| Net profit | 2.643 | (781.93) | (1797.16) | (1061.58) | 596.49 |

The deposit and net profit of NBBL is fluctuating trend over the studied period as shown in table 4.4. Its deposit fluctuation from Rs 12807.4 million to Rs 12125.60 million till $2061 \backslash 62$ to $2062 \backslash 63$ and increased to Rs 13015.10 million in $2063 \backslash 64$ then again decrease to Rs 9385.10 million and afterward increase to10883.70 million. The net profit of the bank decreased from Rs 2.643 million to Rs -1061.58 million till $2061 \backslash 62$ to $2064 \backslash 65$ and afterward Rs 596.49 million in FY $2065 \backslash 66$.

Graph 4.4
Bar Diagram of Deposit and Net Profit position of NBBL


On the basis of data available in table 4.4, the above bar diagram has been plotted. The diagram portrays that the gap between the deposit and net profit the studied period. It means that the most of deposit has been employed as lending various sectors.

### 4.1.3 Analysis of impact of interest rate on deposit

To study the inter-relation between interest cost rate and deposits first of all we should find out the effective interest rate.

Effective interest rate gives the information about how costly are the interest rate earning assets. If the cost of acquiring fund for investment is high, it earns less income and ultimately decreases profit of the finance company. Therefore it is better to have lower cost rate is calculated by using following formula.

$$
\text { Effective interest rate }=\frac{\text { Interest } \quad \text { Paid }}{\text { Total } \text { Deposit }} \times 100
$$

The Effective interest rate of NBL and NBBL shown in table 4.5

Table 4.5
Effective interest rate

| FY | NBL |  |  | NBBL |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Interes <br> t Paid | Total Deposit | $\begin{aligned} & \text { Cos } \\ & \mathrm{t} \\ & \text { Rate } \\ & \% \end{aligned}$ | Interes <br> t Paid | Total Deposit | $\begin{aligned} & \mathrm{Cos} \\ & \mathrm{t} \\ & \text { Rate } \\ & \% \end{aligned}$ |
| $2061 \backslash 62$ | 748.90 | $\begin{aligned} & 35934.2 \\ & 0 \end{aligned}$ | 2.08 | 625.40 | $\begin{aligned} & 12807.4 \\ & 0 \end{aligned}$ | 4.88 |
| $2062 \backslash 63$ | 774.30 | $\begin{aligned} & 35829.8 \\ & 0 \end{aligned}$ | 2.16 | 547.90 | 12125.6 | 4.52 |
| $2063 \backslash 64$ | 772.60 | $\begin{aligned} & 39014.2 \\ & 0 \end{aligned}$ | 1.98 | 518.10 | $\begin{aligned} & 13015.1 \\ & 0 \end{aligned}$ | 3.98 |
| $2064 \backslash 65$ | 772.70 | $\begin{aligned} & 41829.4 \\ & 0 \end{aligned}$ | 1.85 | 432.20 | 9386.0 | 4.6 |
| $2065 \backslash 66$ | 780.51 | $\begin{aligned} & 44628.2 \\ & 0 \end{aligned}$ | 1.75 | 397.10 | 10883.7 | 3.65 |

Effective interest rate of selected two banks at different fiscal year is also shown in graphical from in graph 4.5

Graph 4.5


The above graph represents the movement of effective interest cost rate of NBL and NBBL over five year. According the graph trend line of NBL is downward from $2.08 \%$ to $1.75 \%$. Same way the trend line of NBBL downward from $4.88 \%$ to $3.98 \%$ and than upward $4.60 \%$ and lastly decreasing $3.65 \%$.

From the above data we can concluded that both bank paying low interest rate every year on deposit because trend line of graph is in decreasing trend year by year.

### 4.1.4 Analysis the relationship between Interest Spread Rate and Profitability

Interest spread rate is difference in rate at which finance companies earn through investment and rate offered in attracting deposit and borrowing. In other words, rate of interest expenses on deposits and borrowings. Higher the spread in rate higher will be income of the selected banks. The interest spread rate is calculated by using following formula:

Interest spread rate $=$ Effective interest rate - Interest cost rate The Interest spread rate of NBL and NBBL shown in table 4.6.

Table 4.6
Interest Spread Rate (Rs in million)

|  | FY | NBL |  |  | NBBL |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Effective <br> Int. rate \% | Interest <br> cost <br> rate \% | Interest <br> spread <br> rate \% | Effective Int. rate \% | Interest <br> cost rate <br> \% | Interest <br> spread <br> rate \% |
|  | $\begin{aligned} & 2061 \backslash 6 \\ & 2 \end{aligned}$ | 13.47 | 2.08 | 11.39 | 8.87 | 4.48 | 3.99 |
|  | $\begin{aligned} & 2062 \backslash 6 \\ & 3 \end{aligned}$ | 14.14 | 2.16 | 11.98 | 7.28 | 4.52 | 2.76 |
|  | $\begin{aligned} & 2063 \backslash 6 \\ & 4 \end{aligned}$ | 6.81 | 1.98 | 4.83 | 6.09 | 3.98 | 2.11 |
|  | $\begin{aligned} & 6064 \backslash 6 \\ & 5 \end{aligned}$ | 7.02 | 1.87 | 5.17 | 9.63 | 4.6 | 5.03 |
|  | $\begin{aligned} & 2065 \backslash 6 \\ & 6 \end{aligned}$ | 8.17 | 1.75 | 6.42 | 7.63 | 3.65 | 3.98 |
| Average |  |  |  | 7.96 | Average |  | 3.57 |

Source:
Annual reports corresponding selected banks

Graph 4.6


The above trend line shows up and between the studied periods. NBL has $11.39 \%$ interest spread rate in FY $61 \backslash 62$ and $11.98 \%$ in FY $62 \backslash 63$ and this difference is due to loan loss
provision clause. Later, it come down up to $4.83 \%$ in $63 \backslash 64$ where trend line of NBBL is also up and down which is $3.99 \%$ in $61 \backslash 62,2.76 \%$ in $62 \backslash 63$ and $2.11 \%$ in $63 \backslash 64$. The above trend line shoes zigzag position of both banks and the main cause behind this is loan loss provision and recovery of provisional loan.

The table 4.6 shows also interest spread of NBL and NBBL where NBL has maintained highest interest at the average spread rate of 7.96 and NBBL has maintained at the average spread rate of $3.57 \%$.

Table 4.7
Interest spread rate and Net profit of NBL and NBBL (Rs in million)

| FY | NBL |  | NBBL |  |
| :---: | :---: | :---: | :--- | :--- |
|  | Interest spread <br> rate $\%$ | Net profit | Interest <br> spread rate $\%$ | Net <br> profit |
| $2061 \backslash 62$ | 11.39 | 1730.13 | 3.99 | 2.643 |
| $2062 \backslash 63$ | 11.98 | 1207.26 | 2.76 | -781.93 |
| $2063 \backslash 64$ | 4.83 | 226.95 | 2.11 | -1797.16 |
| $2064 \backslash 65$ | 5.17 | 239.21 | 5.03 | -1061.58 |
| $2065 \backslash 66$ | 6.42 | 794.40 | 3.98 | 596.49 |
| Average | 7.96 | 839.59 | 3.57 | -608.31 |

Source: Annual reports of corresponding selected banks

The above table shows interest spread rate and net profit of NBL and NBBL where NBL has maintained highest interest spread as the average spread rate 7.96 and NBBL of 3.57 . Similarly, average net profit of NBL is 839.59 and NBBL is -608.31 .

### 4.1.5 Analysis the relationship between total investment and total deposit

Commercial banks and financial companies invest their collected funds in various government securities and other financial or non financial companies. This relation measures how successfully and efficiently the banks are mobilizing their fund on investment in various
sectors. This relation of NBL and NBBL are calculated and presentation below. The ratio of total investment to total deposit is calculated by using following formula.

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

Total Investment to Total Deposit is calculated by dividing Total Investment by Total Deposit which is shown in table 4.8 .

Table 4.8
Total Investment to Total Deposit (Rs in million)

| FY | NBL |  |  | NBBL |  |  | Source: <br> Annual reports |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Investment | Deposit | Ratio <br> \% | Investment | Deposit | Ratio <br> \% |  |
| 2061\62 | 550 | 35934.2 | 1.53 | 2699.167 | 12807.4 | 21.08 |  |
| 2062\63 | 14490.2471 | 35829.8 | 40.44 | 2411.720 | 12125.6 | 19.89 | nding |
| 2063164 | 16072.1799 | 39014.2 | 41.20 | 2661.834 | 13015.1 | 20.45 | selected |
| 2064\65 | 16570.7555 | 41829.4 | 39.62 | 1034.560 | 9386.0 | 11.02 |  |
| $2065 \backslash 66$ | 13397.86 | 44628.2 | 30.02 | 1389.901 | 10883.7 | 12.77 |  |
| Average |  |  | 30.56 | Average |  | 17.04 | above |

analysis shows that total investment to total deposit ratio of NBL and NBBL. Both banks have fluctuating trend total investment to total deposit ratio. Higher ratio of NBL is $40.44 \%$ in FY $2062 \backslash 63$ and lower ratio is $1.53 \%$ in FY 2061\62. In same way the highest ratio of NBBL is $21.08 \%$ in FY $2061 \backslash 62$ and lowest ratio is 11.02 in FY 2064\65.

The mean ratio of NBL and NBBL are 30.56 and 17.04 times respectively. NBL has higher ratio than NBBL. The higher mean ratio of NBL shows the bank is mobilizing its funds on investment in various sector more efficiently.

The above analysis, it can concluded that NBL is more successful in utilizing its total deposit by investing in various sector.

Graph 4.7


### 4.1.6 Priority Sector Lending

Every commercial bank is intended to invest their fund and float their credit in more interest generating sector. The desired sector may not contribute sufficiently in growth of GDP, Per capita income, National income and reducing problem of unemployment. Non-government commercial banks are born for making money by utilizing the deposit and capital collected. So they merely concentrate their attention in more profitable sector. Thus, NRB has compelled commercial banks to flow their loan and advanced in certain sector that provides impetus to economic development of the nation. These commercial banks are provided the strict guidance to flow at least $40 \%$ of their total deposit in productive sector. The sector has been clearly defined and categorized into three parts. They are (i) priority sector (ii) Industrial loan (iii) others. Further, commercial banks are also instructed to flow at least $12 \%$ of their total loan in priority sector. The priority sector includes Agriculture, cottage and small industries, services and deprived sector. The cottage and small industries lie under the head of the nation. This sector has been able to utilize the idle raw materials and human resources efficiency. The lending made on deprived sector lending is targeted to eliminate poverty, unemployment and other problem, prevailing in the society and nation at large. It assists in balance economic development and reduces economic inequality of the nation.

Table 4.9
Productive and priority sector lending (Rs in million)

| NBL |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sector | $2061 \backslash 62$ | $2062 \backslash 63$ | $2063 \backslash 64$ | $2064 \backslash 65$ | $2065 \backslash 66$ |
| Total Loan | 14199.3 | 14490.3 | 11058.5 | 13251.10 | 19482.30 |
| Agriculture | 993.951 | 869.418 | 663.51 | 530.044 | 584.469 |
| Industries | 1419.93 | 1159.224 | 552.929 | 662.555 | 779.292 |
| Business | 2839.86 | 2753.157 | 2322.285 | 2385.198 | 4286.106 |
| Housing | 4259.79 | 4636.896 | 3870.475 | 5035.418 | 7792.92 |
| Automobile | 3549.825 | 4057.285 | 3096.38 | 4240.352 | 5844.69 |
| Other | 1135.944 | 1014.321 | 552.925 | 397.533 | 194.823 |

Source: Annual reports of corresponding selected banks

Graph 4.8


The above table shows the actual loan on different sector of the understudied bank i.e. NBL in their respective years. The loan amount diversified on different sector i.e. Agriculture, Industries, Services Business, Housing, Automobile and other. NBL has floated Rs 993.951
million out of its lending on agriculture sector in FY 2061\62. The loan of agriculture sector is decreasing trend during the study period. Similarly, NBL has floated Rs 1419.93 million out of its lending on industries in FY $2065 \backslash 66$ Rs 779.292 million. It has floated Rs 2839.86 million in FY 2061\62 and Rs 4286 million in FY 2065\66. On housing sector it has floated Rs 4259.79 million in FY $2061 \backslash 62$ which is increasing trend. On automobile sector it has floated Rs 3549.825 million in FY $2061 \backslash 62$ and Rs 5844.69 million in FY $2065 \backslash 66$ which is also increasing trend during the study period.

A conclusion can be drawn that NBL has increasing investment on housing and automobile sector year by year. It indicates that NBL is not more successful in utilizing its total loan by investing in various sectors. NBL must invest agriculture, cottage and small industries lie under the head of priority sector leading as it has contributed towards development of the nation.

Table 4.10
Productive and priority sector lending (Rs in million)

| NBBL |  |  |  |  |  | Source: <br> Annual <br> eports of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sector | $2061 \backslash 62$ | $2062 \backslash 63$ | 2063\64 | $2064 \backslash 65$ | $2065 \backslash 66$ |  |
| Loan | 9644.70 | 9626.90 | 9796.40 | 9169.40 | 9469.60 |  |
| Agriculture | 675.129 | 577.56 | 587.784 | 366.776 | 284.088 | correspondin |
| Industry | 964.47 | 770.152 | 489.82 | 458.47 | 378.784 | $g$ selected |
| Business | 1736.046 | 1829.111 | 1861.316 | 1650.492 | 1799.224 | banks |
| Housing | 2989.857 | 3080.608 | 3624.668 | 3484.372 | 3977.232 |  |
| Automobile | 2507.622 | 2695.532 | 2742.992 | 2934.208 | 2935.576 |  |
| Other | 771.576 | 673.883 | 489.82 | 275.082 | 94.696 |  |

Graph 4.9


The above table shows the actual loan on different sector of the understudied bank i.e. NBBL in their respective years. The loan amount diversified on different sector i.e. Agriculture, Industries, Services business, Housing, Automobile and Other. NBBL has floated Rs. 675.129 million out of the lending on agriculture sector in FY $2061 \backslash 62$ and Rs. 284.088 million in FY $2065 \backslash 66$ which is decreasing trend. It has floated Rs. 964.47 million on industries sector in FY $2061 \backslash 62$ and Rs. 378.784 million in FY $2065 \backslash 66$ which is also decreasing trend. Similarly, floated Rs 1736.046 million on service business in FY $2061 \backslash 62$ and Rs. 1799.224 million in FY 2065\66. NBBL has floated Rs 2989.857 million on housing sector in FY $2061 \backslash 62$ and Rs 3977.232 in FY2065\66. It has floated Rs 2507.622 million on automobile in FY $2061 \backslash 62$ and Rs. 2935.576 in FY $2065 \backslash 66$ which is increasing trend.

A conclusion can be drawn that NBBL has also increasing investment housing sector year by year. It indicates that NBBL has invest on priority on housing sector, which means NBBL is not more successful in utilizing its total deposit by investing in various sector. NBBL must invest agriculture, cottage and small industries lie under the head of priority sector leading as it has contributed towards development of the nation.

### 4.2 Statistical Analysis

Under this heading some statistical tools are analyzed which are related to the different variables correlation coefficient and trend values are applied to active the objectives of the study.

### 4.2.1 Coefficient of correlation Analysis

If two variables vary in such a way that movements in one are accompanied by movement in the other, these variables are correlated. Correlation analysis assists use in ascertaining the degree and direction of relationship between two or three variables.

### 4.2.1.1 Coefficient of Correlation Analysis between Deposit and Lending

In this correlation analysis, deposit and loan is assumed as independent variable ( x ) and dependent variable (y) respectively. The purpose of composing coefficients of correlation is to justify whether there is any relationship between variables or not. The various calculations are shown in appendix 4.1. The following table shows the coefficient of correlation between deposit and loan (r), coefficient of determination ( $r^{2}$ ), probable error (P.Er) and 6P.Er of two commercial banks during the study period.

Table 4.11
Correlation Analysis between Deposit and Loan

| Banks | Evaluation Criterion |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | r | $\mathrm{r}^{2}$ | P.Er | $6 \mathrm{P} . \mathrm{Er}$ |
| NBL | 0.9873 | 0.9748 | 0.0076 | 0.0456 |
| NBBL | 0.9762 | 09530 | 0.0142 | 0.0851 |

Source: Annual reports of corresponding selected banks

Coefficient of correlation ' $r$ ' between deposit and loan of NBL is 0.9873 during the study period which indicates there is near to perfect positive relationship between the variables. Coefficient of determination $\mathrm{r}^{2}$ is 0.9748 indicates that $97.48 \%$ of total variation in the dependent variable (loan) has been explained by the independent variable (deposit). Here r
$(0.9873)>6$ P.Er $(0.0456)$ which indicates there is significant relationship between deposit and loan.

Coefficient of correlation 'r' of NBBL between deposit and loan is 0.9762 during the study period which indicates there is near to perfect positive relationship between the variables. Coefficient of determination $r^{2}$ is 0.9530 indicates that $95.30 \%$ of total variation in the dependent variable (loan) has been explained by the independent variable (deposit). Here, r $(0.9762)>6 \mathrm{P} . \operatorname{Er}(0.085)$ which means there is significant relationship between deposit and loan.

Now, from above study it can be concluded that both the understudied banks are high degree of positive correlation between deposit and lending. I $n$ other words, the increase in amount of deposit collected will result into enhancement in level of loan and advances outflow in both banks. But the degree of coefficient of correlation of NBL is slightly higher than NBBL.

### 4.2.1.2 Coefficient of correlation analysis between Deposit and Net Profit

In correlation analysis of deposit and net profit, the deposit is independent variable (x) whereas net profit is dependent variable ( y ). The main purpose of computing coefficient of correlation is to justify whether there is any relationship between two variables or not.

Table 4.12
Correlation analysis between Deposit and Net profit

| Banks | Evaluation criterion |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | r | $\mathrm{r}^{2}$ | $\mathrm{P} . \mathrm{Er}$ | $6 \mathrm{P} . \mathrm{Er}$ |
| NBL | -0.5952 | 0.3543 | 0.1948 | 1.1687 |
| NBBL | -0.1721 | 0.0296 | 0.2927 | 1.7562 |

Source: Annual report of corresponding selected banks

Coefficient of correlation ' $r$ ' of NBL between deposit and net profit is -0.5952 during the study period which indicates that there is negative relationship between the variables. Coefficient of determination ( $\mathrm{r}^{2}$ ) is 0.3543 indicates that $35.43 \%$ of total variation in dependent variable (net
profit) had been explain by the independent variable (deposit). Here $\mathrm{r}<6 \mathrm{P} . E r$, there is not significant relationship between deposit and net profit.

Coefficient of correlation ' $r$ ' between deposit and net profit of NBBL is -0.1721 during the study period which indicates that low degree of negative relationship between variables. Coefficient of determination ( $\mathrm{r}^{2}$ ) is 0.0296 indicates that $2.96 \%$ of total variation in the dependent variable (net profit) has been explained by the independent variable (deposit).

### 4.2.1.3 Coefficient of Correlation analysis between Average Deposit Interest Rate and Total Deposit

In this analysis, total interest rate is independent variable ( x ) and dependent variable (y). The main purpose of computing correlation of coefficient is to justify whether there is any relationship between two variables or not.

Various calculations are done in appendix 4.3. The following table shows that coefficient of correlation (r) between the variables, coefficient of determination ( $\mathrm{r}^{2}$ ), probable error (P.Er) and $6 \mathrm{P} . \mathrm{Er}$ of the commercial banks during the study period.

Table 4.13
Correlation analysis between Deposit Interest Rate and Total Deposit

| Banks | Evaluation criterion |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | r | $\mathrm{r}^{2}$ | $\mathrm{P} . \mathrm{Er}$ | $6 \mathrm{P} . E r$ |
| NBL | -0.9857 | 0.9716 | 0.3814 | 2.2884 |
| NBBL | 0.0526 | 0.0028 | 0.6737 | 4.0420 |

Source: Annual reports of corresponding selected bank

Coefficient of correlation ' $r$ ' of NBL between deposit interest rate and total deposit is -0.9857 which indicates there is negative relationship between the variables. Coefficient of determination $\left(\mathrm{r}^{2}\right)$ is 0.9716 indicates that $97.16 \%$ of total variation in the dependent variable. Total deposit has been explained by the independent variable (interest rate). Here r <6P.Er which indicates there is not significant relationship between deposit interest rate and deposit.

Coefficient of correlation ' $r$ ' of NBBL between deposit interest rate and total deposit is 0.0526 which indicates there is positive relationship between variables but this value is near about zero. So, we can assume that there is not relationship between variables.

On the basis of above analysis, it can be concluded that there is not significant relationship between deposit interest rate and total deposit of NBL and are negatively correlated which means every increase and decrease in deposit interest rate will result to opposite. NBBL correlation of coefficient is small which can be assumed as there is not relationship between the variables. There is not any effect in the total deposit on increase or decrease of interest rate.

### 4.2.1.4 Coefficient of Correlation between Interest spread rate and Net profit

In correlation analysis of interest spread rate and net profit, the interest spread rate is independent variable ( x ) where as net profit is dependent variable (y). The main purpose of computing coefficient of correlation is to justify whether there is any relationship between two variables or not.

To find out the correlation, various calculations are made in appendix 4.4. The following table shows the coefficient of correlation between interest spread rate and net profit (r), coefficient of determination ( $\mathrm{r}^{2}$ ), probable error (P.Er) and six times probable error (6P.Er) of selected two banks during the study period.

Table 4.14
Correlation analysis between Interest spread rate and Net profit

| Banks | Evaluation criterion |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | r | $\mathrm{r}^{2}$ | P.Er | $6 \mathrm{P} . E r$ |
| NBL | 0.9176 | 0.8420 | 0.0477 | 0.3006 |
| NBBL | 0.0582 | 0.0034 | 0.2860 | 1.8037 |

Source: Annual reports of corresponding selected banks

Coefficient of correlation ' $r$ ' of NBL between interest spread rate and net profit is 0.9176 during the study period which indicates that there is high degree of positive relationship
between the variables. Coefficient of determination $\left(\mathrm{r}^{2}\right)$ is 0.8420 indicates that $84.20 \%$ of total variation in dependent variable (net profit) has been explained by the independent variable (interest spread rate). Here $r>6$ P.Er, there is significant relationship between interest spread rate and net profit.

Coefficient of correlation between interest spread rate and net profit of NBBL is 0.0582 during the study period which indicates that positive relationship between variables but this value is small near about zero. So, we can assume there is not relationship between the variables. Coefficient of determination is 0.0034 indicates that $0.34 \%$ of total variation in the dependent variable (net profit) has been explained by the independent variable (interest spread rate).

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

In correlation analysis of total deposit and investment, the deposit is independent variable ( x ) whereas investment is dependent variable (y). The main purpose of computing coefficient of correlation is to justify whether there is any relationship between two variables or not.

To find out the correlation, various calculations are made in appendix 4.5. The following table shows the coefficient of correlation between deposit and investment (r), coefficient of determination ( $\mathrm{r}^{2}$ ), probable error (P.Er) and six times probable error ( $6 \mathrm{p} . \mathrm{Er}$ ) of selected two banks during the study period.

Table 4.15
Correlation analysis between Deposit and investment

| Banks | Evaluation Criterion |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | r | $\mathrm{r}^{2}$ | $\mathrm{P} . E r$ | $6 \mathrm{P} . E r$ |  |
| NBL | 0.9802 | 0.9609 | 0.1075 | 0.1050 |  |
| NBBL | 1.057 | 1.1172 | -0.0353 | - |  |
|  |  |  |  | 0.2120 |  |

Source: Annual reports of corresponding selected banks

Coefficient of correlation (r) of NBL between deposit and investment is 0.9802 during the study period which indicates there is high degree of positive relationship between the variables. Coefficient of determination ( $\mathrm{r}^{2}$ ) is 0.9609 indicates that $96.09 \%$ of total variation in dependent variable (investment) has been explained by the independent variable (deposit). Here $\mathrm{r}>6 \mathrm{P}$.Er, there is significant relationship between deposit and investment.

Similarly, coefficient of correlation between deposit and investment of NBBL is 1.057 during the study period. The value is very near about 1 . So we can assume there is perfect relationship between the variables. Coefficient of determination is 1.1172 which is also near about 1 indicates $100 \%$ of total variation in dependent variable (investment) has been explained by the independent variable (deposit).

### 4.2.2 Trend Analysis

Under this topic, an effort has been made to calculate, analyze and interpret the trend value of various variables. The main objectives of this analysis is to highlight the trend value of total deposit, interest rate, interest spread rate, net profit and total investment forecasted for five years. The trend values for the fiscal year 2061 to 2070 of two commercial banks are obtained in the following table.

Table 4.16
Estimated value of Dependent variable (y)

| Variable | ' $a$ ' | ' b ' | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NBL | 39447.16 | 2338.76 | 34769.64 | 37108.4 | 39447.16 | 41785.92 |  |  |  |
| NBBL | 11643.56 | -658.7 | 12960.96 | 12302.26 | 11643.56 | 10984.86 |  |  |  |
| NBL | 0.0196 | -0.0009 | 0.0215 | 0.0206 | 0.0196 | 0.0186 |  |  |  |
| NBBL | 0.0433 | -0.0024 | 0.0481 | 0.0457 | 0.0433 | 0.0409 |  |  |  |
| NBL | 0.0796 | -227.79 | 455.67 | 227.87 | 0.80 | -227.71 |  |  |  |
| NBBL | 0.04 | 0.0023 | 0.031 | 0.033 | 0.036 | 0.038 |  |  |  |
| NBL | 839.73 | -283.88 | 1407.49 | 1123.61 | 839.73 | 555.85 |  |  |  |
| NBBL | -608.31 | 303.12 | -1214.55 | -11.43 | -608.31 | -305.19 |  |  |  |
| NBL | 12216.21 | 2997.62 | 6220.97 | 9218.59 | 12216.21 | 15213.83 |  |  |  |
| NBBL | 2039.44 | -399.57 | 2838.58 | 2439.01 | 2039.44 | 1639.87 |  |  |  |

Source: Annual reports of corresponding selected banks
$a=$ constant which computes $y$ value
$\mathrm{b}=$ constant which is change in y corresponding change in x by one unit

Now, the above summarized trend value of different variables of selected two commercial banks have been plotted in graphical forms.

Graph for trend analysis of Total Deposit

Graph 4.10


The above figure shows that trend line of total deposit of NBL and NBBL. As the slope of trend line of total deposit is posit for NBL and negative for NBBL.

NBL has total deposit 34769.64 in FY 2061 and at the end of forecasted year 2070 is 55818.48, which is in slightly increasing trend indicates the deposit is increasing with higher growing rate.

NBBL has total deposit 12960.96 at FY 2061 and the end of forecasted year 2070 is 7032.66, which is in slightly decreasing trend shows that the deposit is not increasing with higher growth rate.

A conclusion can be drawn that NBL has large amount of deposit than NBBL.

Graph for Trend analysis of Deposit Interest Rate


The above figure shows that the trend line of deposit interest rate of NBL and NBBL. As the slope of trend line of deposit interest rate is negative for both banks.

NBL has deposit interest rate 0.0215 in FY 2061 and at the end of forecast year 2070 is 0.01281 which is the decreasing trend indicates NBL is paying low interest rate every year on deposit.

NBBL has deposit interest rate 0.0481 in FY 2061 and at the end of forecasted year 2070 deposit interest rate is 0.0265 which is decreasing year by year.

A conclusion can be drawn that both banks have a decreasing trend of deposit interest rate. It indicates that both banks are paying low interest rate every year on deposit.

Graph for trend analysis of Interest Spread Rate


The above figure shows that the trend line of interest spread rate of NBL and NBBL. As the slope of trend line of interest spread rate of NBL is negative and NBBL is positive.

NBL has interest spread rate 455.67 in FY 2061 and at the end of forecasted year 2070 it is 1594.48 which is in decreasing trend, it indicates it has large loan loss provision and lower the spread in rate lower will be income of the bank.

NBBL has interest spread rate 0.0311 in FY 2061 and at the end of forecasted year 2070 it is 0.0518 which is in increasing trend and indicates the higher spread in rate higher will be income of the bank and NBBL recovery of provisional loan.


The above figure shows that the trend line of net profit of NBL and NBBL. As the slope of trend line of net profit of NBL is negative and NBBL is positive.

NBBL has net profit 1407.49 in FY 2061 and at the end of forecasted year 2070 it is -1147.43 which is in decreasing trend and the trend graph also shows that bank will not able to generate profit after 2065. This indicates profit scenario of this bank is not good.

NBBL has net profit -1214.55 in FY 2061 and at the end of forecasted year 2070 it is 1513.53, which is increasing trend. At the starting of the analysis period net profit of this bank is in negative position but at the end of forecasting year net profit of NBBL is highest, which indicates net profit scenario of this bank is good.

In conclusion, net profit of NBBL is in increasing trend and NBL has decreasing trend. According to this trend NBL cannot generate earning profit after 2065.

Graph 4.14


The above trend analysis shows that the trend line of total investment of NBL and NBBL. As the slope of trend line of total investment of NBL is positive slope and NBBL is negative slope.

NBL has total investment 6220.97 in FY 2062 and at the end of forecasted year 2070 it is 33199.55 which is in increasing trend.

The NBBL has total investment 2638.58 in FY 2061 and at the end of forecasted year 2070 it is -757.55 which is in decreasing trend.

## Major Finding of the Study

The major findings of this study as evaluated and found in analysis are summarized as follows:

1. The mean ratio of deposit and lending policy of NBL and NBBL are 36.72 and 82.95 times respectively. It shows that NBBL has higher ratio than NBL. It indicates the better mobilization of deposit by NBBL.
2. The deposit of NBL is Rs. 35934.20 million in $2061 / 2062$ to Rs. 44628.20 million 2065/066 increasing trend but net profit of NBL is Rs. 1730.13 million in 2061/062 to

Rs. 794.40 million in 2065/066. Similarly, the deposit and net profit of NBBL is Rs. 12807.40 million and Rs. 2.643 million in 2061/062 to Rs. 10883.7 and 596.49 million in 2065/066.
3. The average cost rate of NBL and NBBL is $1.96 \%$ and $4.33 \%$ of respectively which indicate NBL has lower cost rate. It means that NBL is paying low interest rate every year on deposit.
4. Higher the spread in rate higher will be income of the both banks. The average interest spread rate of NBL and NBBL are $7.96 \%$ and $3.57 \%$ respectively. NBL has higher rate than NBBL. It means NBL has successes recovery of provisional loan.
5. The banks are mobilizing their fund on investment in various sectors. The average ratio of NBL and NBBL is $30.56 \%$ and $17.04 \%$ of respectively. This indicates NBL has highest average and NBBL has lowest during the study period.
6. NRB has directed commercial banks to extent at least $40 \%$ of its credit to productive sector but NBL and NBBL have only 10 to $15 \%$ invest productive sector their loan amount.

## CHAPTER V SUMMARY, CONCLUSION AND RECOMMENDATION

The intent of this study is to evaluate the "Investment Policy of NBL and NBBL." A brief introductory framework has been presented in the first chapter, review of various books, related journals, and unpublished masters level thesis that were consulted during the research period have been described in the second chapter, research methodology used to conduct the study has been described in third chapter and data information collected have been presented, analyzed and interpreted in fourth chapter.

The main efforts in this chapter are firstly to present the summary of major finding and then to give the suggestions to the banks on the basis of these findings.

## Summary

In the initial stage, the researcher has identified the problems for research and set objectives to solve the problems about investment policy of selected commercial banks as described in introduction chapter. Research can't go forward without the study of some literatures. Therefore to make the study more effective, related literatures have been reviewed. The review of literature provides the foundation of knowledge in order to under take this research more precisely. The second chapter includes concept of banking, commercial banks, joint venture banks, investment and investment policy along with some terminologies.

Various methods and statistical tools are used to find the objectives of the study. The research methodology has been described in third chapter, which is a way to solve the research problems with the help of various statistical tools and techniques. This chapter includes the various financial as well as statistical tools which are use to analyze the data in order to get the conclusion. This chapter includes the research design, population and sample data collection procedure, and methods of data analysis. This study is mainly conducted on the basis of secondary data collected from annual reports, official reports, economic journal, financial statement etc. and authorize website of Nepal stock exchange. The five years financial statements (ie. From 2061\62 to 2065\66) has been examined for the purpose of the study.

Forth chapter is important one, in which the researcher has tried to analyze the data on the basis of information received. The presentation and analysis of data has been made comparative analytical and their interpretation has been done in this chapter by applying the wide varieties of methodology and tools as stated in chapter three. It includes the various financial and statistical tools. In case of financial tools and various statistical tools such as arithmetic mean, standard deviation, coefficient of correlation, trend analyses have been applied to fulfill the objective of this study. The major findings of the study are also included in the final section of the presentation and analysis chapter.

### 5.2 Conclusion

It is a fact that the globalization of joint venture bank is a reality. The growth and increasing integration of the world economy has been parelled by expansion of global banking activities in Nepal. Nepal being a developing country can't deny the fact. CBs have growth potentiality, which is responded by collecting deposit and developing new and highly innovative financial techniques that lead the foundation for totally new approach to the provision of banking service. This study is mainly concerned with investment policy and profitable relevant have been calculated and analyzed. Many CBs are growing and operating in Nepal as commercial and merchant banks. All CBs are operating with higher technology. There only two CBs (NBL and NBBL) are selected to examine and evaluate the financial data. Besides, financial statements of the five years from fy 2062 to 2066 have been covered for the purpose of the study. Conclusion of this study is based on secondary data.

1. Both the banks have utilized their deposit by loan flowed in different sector. There is high degree of positive correlation between deposit and lending for NBL and NBBL. Loan and advance as well as deposits are in increasing trend, their increase is not in proportionate manner for NBL but NBBL has fluctuating trend in deposit as well as lending. Immense increase in deposits had led to little increase in loan and advances due to the increase in the interest rate. It can conclude that NBBL failure in deposit utilization is due to their lending confined for short term only. NBBL should give emphasis also long term lending for better utilization of the deposit.
2. Every commercial bank to be careful in increasing profit in real sense to maintain the confidence of shareholders, depositors and customers. NBL has increasing trend of net profit but NBBL has fluctuating and decreasing trend of net profit. It can be concluded NBL is utilize its assets and shareholders fund to gain highest profit margin, reduces its expenses and collect cheaper fund for more profitability. NBBL is comparatively less successful in on-balance sheet operations as well as off-balance sheet operations than NBBL. There is negative correlation between deposit and net profit it can concluded that there is not significant relationship between deposit and net profit. It means there is not increasing profit through only deposit and other source. It can be found to increase profit or those funds to be search by both banks which support its net profit.
3. There is high degree of positive relationship between interest spread rate and net profit for NBL but NBBL has zero correlation. It can be concluded that higher the spread in rate higher will be income of the NBL it is not effect for NBBL.
4. NBL has higher total investment to total deposit ratio than NBBL. The higher ratio of NBL shows the bank is mobilizing its funds on investment in various sectors more efficiently.
5. NBL and NBBL both banks have give high priority towards non productive sectors. Both banks have allocated highest percentage of its loan amount to housing sectors and nominal amount has been allocated to agricultural, cottage and small industries sectors.

### 5.3 Recommendations

This little focuses on some selected actionable recommendations based on the findings of the analysis. After highlighting on Investment Policy of the commercial banks on the basis of financial and statistical analysis, following suggestions and recommendations can be advanced to overcome inefficiency and weakness to improve present investment policy and other management's of the banking business. After this study, the researcher has found some problems in deposit collection, utilization of collected deposit and policy to collect loan and advance for the sake of better result. The following common recommendations are made.

1. Even though, the trend line of deposit collection is upward moving in last five years. But the deposit is the main source of funds for commercial banks. Therefore the banks should make more effort to increase their deposit collection. They can provide various schemes, facilities to their customers such as cumulative deposit schemes, life insurance facilities to the depositors, evening counter, 365 days services etc. to make deposit which incourage the customers to open their accounts in these banks. The net profit trend of NBL and NBBL are highly negative in first there fiscal year because of more than $60 \%$ non performing assets but now, NBL is earning profit last two years. Therefore, the bank should look forwarded to maximize the profit through good lending and sound management.
2. Total deposit is not correlated with the bank's net profit. This is very serious matter and the main cause of over liquidity. Thus, try to make the correlation between total deposit and net profit.
3. All CB's are advised to increase their capital base by which they can grave sufficient deposit and wide field for commission based transaction. Non interest bearing deposits should focus for maintain the high interest spread rate and ultimately the high profitability of CB's
4. Interest spread rate is one of the measurements of assessing the operating efficiency in terms of reduction of intermediation cost of any CBs and FIs. The state owned CBs
and development banks are bound to maintain higher spread rate because of their higher intermediary cost. The CBs constantly attempt to lower the spread. The spread rate should fall to a desired level for the ultimate benefits to depositors, borrowers, financial institutions and economy as a whole.
5. The correlation of NBL between net profit and total investment is lower than NBBL. Therefore NBL should look investment opportunity and should invest it's deposit evaluating risk and return of the project trend line of NBL for total deposit, loan and advanced, net profit, total investment all shows upward moving, which means it is growing efficiently. Even though growth rate of investment in fluctuated. Therefore, it is recommended to invest in uniform rate to make the total earning stable.
6. NRB has directed the commercial banks to invest their certain percentage of deposit in deprive and priority sectors. Therefore, it also becomes the responsibility of the banks. The study has found that the sample banks have not invested in deprive sectors. They are only concern to grant the loan and advance to the secured sectors keeping mortgage.

From the study we found that commercial banks are not encouraging small-scale investors small-scale investors not using the bank facility may be lack of knowledge about banks facilities or they may be afraid of the long procedure of getting loan from the banks. Average no. small-scale investors, borrow money from informal sectors. So banks should make their huge investment on these small sectors by making large no. of customers, which helps to make engaged large no. of semi- skilled and unskilled manpower. Banks are also suggested to make their investment on agriculture sector. I found all commercial banks are not focusing on these sectors also.

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### 5.4 Concluding Remarks

In the context of Nepal, financial reforms are critical for ensuring that Nepal's financial system will be able to intermediate efficiently in mobilizing domestic saving and providing financial resources and services for private investment and activities. The financial sector is currently facing serious problems, as a result of on going liquidity problems of government owned banks and the new lending of that bank has been curtailed. This has affected the availability of credit to the private sector. Such situations normally create new opportunities for joint venture banks. Hence, to take advantage of such opportunities the bank must be though in the liquidity position. To fulfill the need, main criteria could be the large capital base. Some of them are still working with traditional approach. They need to achieve innovative approach for banking by bringing professionalism in their business.

Among various objectives with which government has permitted to operate joint venture bank in Nepal is to boost foreign investment. Therefore, they are recommended to import the foreign investment in Nepal by means of their wide international banking network, advance management techniques and so on. So, all commercial banks are recommended to invest more funds in such securities instead of keeping them idle. To get success an encourage financial and economical
development of the country, commercial banks must mobilize their funds in different sectors such as to purchase share and debenture of other financial and non financial companies.

It is often said that joint venture commercial banks mainly focus on their banking services, especially to big multinational companies, large scale industries and manufactures so they should be accessible to all small, medium and higher level of customers.

Table No. 4.
Extimated value of dependend variable (y)

| Variable | 'a' | 'b' | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Total Deposit

| NBL | 39447.16 | 2338.76 | 34769.64 | 37108.4 | 39447.16 | 41785.92 | 44124.68 | 46463.44 | 48802.20 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NBBL | 11643.56 | -658.7 | 12960.96 | 12302.26 | 11643.56 | 10984.86 | 10326.16 | 9667.46 | 9008.76 |

## Deposit Interest Rate

| NBL | 0.0196 | -0.0009 | 0.0215 | 0.0206 | 0.0196 | 0.0186 | 0.0177 | 0.01669 | 0.01572 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| NBBL | 0.0433 | -0.0024 | 0.0481 | 0.0457 | 0.0433 | 0.0409 | 0.0385 | 0.0361 | 0.0337 |

Interest Spreat Rate

| NBL | 0.0796 | -227.79 | 455.67 | 227.87 | 0.80 | -227.71 | -455.51 | -683.30 | -911.10 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| NBBL | 0.0433 | -0.0024 | 0.0481 | 0.0457 | 0.0433 | 0.0409 | 0.0403 | 0.0426 | 0.0449 |

## Net Profit

| NBL | 839.73 | -283.88 | 1407.49 | 1123.61 | 839.73 | 555.85 | 271.97 | -11.91 | -295.79 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| NBBL | -608.31 | 303.12 | -1214.55 | -11.43 | -608.31 | -305.19 | -2.07 | 301.05 | 604.17 |

## Total Investment

| NBL | 12216.21 | 2997.62 | 6220.97 | 9218.59 | 12216.21 | 15213.83 | 18211.45 | 21209.07 | 24206.69 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| NBBL | 2039.44 | -399.57 | 2838.58 | 2439.01 | 2039.44 | 1639.87 | 1240.3 | 840.73 | 441.16 |

Source: Annual reports of corresponding selected banks
$\mathrm{a}=$ constant which computes y value
$\mathrm{b}=$ constant which is change in y corresponding change in x by one unit

## Appendix 4.1 (A)

Calculation of Coefficient of Correlation between Total Deposit and Total Loan by using actual mean method
(NBL)

| FY | Deposit <br> $(\mathrm{x})$ | Loan <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 35934.2 | 14199.3 | -3512.96 | -297 | 1043349.12 | 12340887.96 | 88209 |
| 2063 | 35829.8 | 14490.3 | -3617.36 | -6 | 21704.16 | 13085293.37 | 36 |
| 2064 | 39014.2 | 11058.5 | -432.96 | -3437.8 | 1488429.89 | 187454.36 | 11818468.84 |
| 2065 | 41829.4 | 13251.1 | 2382.24 | -1245.2 | -2966365.25 | 5675067.42 | 1550523.04 |
| 2066 | 44628.2 | 19482.3 | 5181.04 | 4986 | 25832665.44 | 26843175.48 | 24860196 |
|  | $\sum \mathrm{x}=$ <br> 197235.8 | $\sum \mathrm{y}=$ <br> 72481.5 |  |  | $\sum \mathrm{xy}=$ <br> 25419783.36 | $\sum \mathrm{x}^{2}=$ <br> 58131878.59 | $\sum \mathrm{y}^{2}=$ <br> 38317432.88 |

Source: Annual Reports of NBL

Calculation of coefficient of correlation between Deposit and Lending
$\bar{X}=\frac{\sum X}{N}=\frac{197235.8}{5}=39447.16$
$\bar{Y}=\frac{\sum Y}{N}=\frac{72481.5}{5}=14496.3$
Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{25419783.36}{\sqrt{58131878.59 \times 38317432.88}} \\
& r=0.9973
\end{aligned}
$$

Coefficient of determination $\left(r^{2}\right)=0.9748$

$$
\begin{aligned}
\text { Probable error (P.Er.) } & =\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}} \\
= & \frac{0.6745(1-0.9748)}{\sqrt{5}} \\
& =0.0076
\end{aligned}
$$

6 P. Er. $=0.0456$

## Appendix 4.1 (B)

## Calculation of Coefficient of Correlation between Deposit and Loan

(NBBL)

| FY | Deposit <br> $(\mathrm{X})$ | Loan <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\Sigma \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 12807.4 | 9644.7 | 1163.84 | 101.3 | 117896.99 | 1354523.55 | 10261.69 |
| 2063 | 12125.6 | 9636.9 | 482.04 | 93.5 | 45070.74 | 232362.56 | 8742.25 |
| 2064 | 13015.1 | 9796.4 | 1371.54 | 253 | 346999.62 | 1881121.97 | 64009 |
| 2065 | 9386.0 | 9169.4 | -2257.56 | -374 | 844327.44 | 5096577.15 | 139876 |
| 2066 | 10883.7 | 9469.6 | -759.86 | -73.8 | 56077.67 | 577387.22 | 5446.44 |
|  | $\sum \mathrm{X}=$ <br> 58217.8 | $\sum \mathrm{Y}=$ <br> 47717.0 |  |  | $\sum \mathrm{xy}=$ <br> 1410372.458 | $\sum \mathrm{x}^{2}=$ <br> 9141972.45 | $\sum \mathrm{y}^{2}=$ <br> 228335.38 |

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{58217.8}{5}=11643.56 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{47717}{5}=9543.4
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{1410372.458}{\sqrt{9141972.45 \times 228335.38}} \\
& =0.9762
\end{aligned}
$$

Coefficient of determination $\left(\mathrm{r}^{2}\right)=0.9530$
Probable Error P. Er. $=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
=\frac{0.6745(1-0.9530)}{\sqrt{5}}
$$

$$
=0.0142
$$

6 P. Er. $=0.0851$

## Appendix 4.2 (A)

Calculation of Coefficient of Correlation between Total Deposit and Net Profit (NBL)

| FY | Deposit <br> $(\mathrm{X})$ | Net <br> Profit <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 35934.2 | 1730.13 | -3512.96 | 890.54 | - <br> 3128431.368 | 12340887.96 | 793061.49 |
| 2063 | 35829.8 | 1207.26 | -3617.36 | 367.67 | - | 13085293.37 | 135181.23 |
| 2064 | 39014.2 | 226.95 | -432.96 | -612.64 | -265248.614 | 187454.36 | 375327.77 |
| 2065 | 41829.4 | 239.21 | 2382.24 | -600.38 | - | 5675067.42 | 360456.14 |
|  |  |  |  |  | 1430249.251 |  |  |
| 2066 | 44628.2 | 794.40 | 5181.04 | -45.19 | -234131.198 | 26843175.48 | 2042.14 |
|  | $\sum \mathrm{X}=$ | $\sum \mathrm{Y}=$ |  |  | $\sum \mathrm{xy}=-$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ |
|  | 197235.8 | 4197.95 |  |  | 5857557.983 | 58131878.59 | 1666068.77 |

Source: Annual Reports of NBL
$\bar{X}=\frac{\sum X}{N}=\frac{1972.35}{5}=39447.16$
$\bar{Y}=\frac{\sum Y}{N}=\frac{4197.95}{5}=839.59$
Coefficient of correlation (r) $=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{-5857557.98}{\sqrt{58131878.59 \times 1666068.77}} \\
& =0.5952
\end{aligned}
$$

Coeffient of determination $(r)^{2}=0.8420$
Probable error $($ P. Er. $)=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-0.8420)}{\sqrt{5}} \\
& =0.0477
\end{aligned}
$$

6 P. Er. $=0.2860$

## Appendix 4.2 (B)

## Calculation of Correlation between Total Deposit and Net Profit

(NBBL)

| FY | Deposit <br> (X) | Net profit (Y) | $X=X-$ | $Y=Y-\bar{Y}$ | $\sum x y$ | $\sum \mathrm{x}^{2}$ | $\sum y^{2}$ | Sou <br> rce: $\mathrm{An}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 12807.4 | 2.643 | 1163.84 | 610.95 | 711048.048 | 1354.52 | $\begin{gathered} 37325 \\ 9.90 \end{gathered}$ | $\begin{array}{r} \text { nua } \\ 1 \end{array}$ |
| 2063 | 12125.6 | -781.93 | 482.04 | -173.62 | -83691.78 | $\begin{gathered} 232362.5 \\ 6 \end{gathered}$ | $\begin{gathered} 30143 . \\ 90 \end{gathered}$ | Re <br> por |
| 2064 | 13015.1 | -1797.16 | 1371.54 | -1188.85 | -1630555.33 | $\begin{gathered} 1881121 . \\ 97 \end{gathered}$ | $\begin{aligned} & 14133 \\ & 64.32 \end{aligned}$ | ts <br> of |
| 2065 | 9386.0 | -1061.58 | $2257.56$ | -453.27 | 1023284.22 | $5096577 .$ <br> 15 | $\begin{gathered} 20545 \\ 3.69 \end{gathered}$ | $\begin{aligned} & \text { NB } \\ & \text { BL } \end{aligned}$ |
| 2066 | 10883.7 | 596.49 | -759.86 | 1204.8 | -915479.33 | $\begin{gathered} 577387.2 \\ 2 \end{gathered}$ | $\begin{aligned} & 14515 \\ & 43.04 \end{aligned}$ | $\bar{X}=\underline{\sum x}=\underline{58217.8}$ |
|  | $\begin{gathered} \sum X= \\ 58217.8 \end{gathered}$ | $\begin{gathered} \sum \mathrm{Y}= \\ -3041.55 \end{gathered}$ |  |  | $\begin{gathered} \sum \mathrm{xy}= \\ -895364.172 \end{gathered}$ | $\begin{gathered} \sum \mathrm{x}^{2}= \\ 7788803 . \\ 431 \end{gathered}$ | $\begin{aligned} & \sum y^{2}= \\ & 34737 \\ & 64.85 \end{aligned}$ | $\bar{Y}=\underline{\sum y}=\underline{3041.55}$ |

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{-895364.1728}{\sqrt{7788803.431 \times 3473764.85}} \\
& =-0.1721
\end{aligned}
$$

Coefficient of determination $\left(r^{2}\right)=0.0296$
Probable Error (P. Er.) $=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
=\frac{0.6745(1-0.0296)}{\sqrt{5}}=0.2927
$$

6 P. Er. $=1.7562$

## Appendix 4.3 (A)

Calculation of Coefficient of Correlation between Average Deposit Interest Rate and Total Deposit NBL

| FY | Deposit <br> Interest <br> Rate | Total <br> Deposit | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 0.0208 | 35934.2 | 0.0012 | -3512.96 | -4.2156 | 0.00000144 | 12340887.96 |
| 2063 | 0.0216 | 35829.8 | 0.002 | -3617.36 | -7.2347 | 0.000004 | 13085293.37 |
| 2064 | 0.0198 | 39014.2 | 0.0002 | -432.96 | -0.0866 | 0.00000004 | 187454.36 |
| 2065 | 0.0185 | 41829.4 | -0.0011 | 2382.24 | -2.6216 | 0.00000121 | 5675067.42 |
| 2066 | 0.0175 | 44628.2 | -0.0021 | 5181.04 | -10.8802 | 0.00000441 | 26843175.48 |
|  | $\sum \mathrm{x}=$ | $\sum \mathrm{Y}=$ |  |  | $\sum \mathrm{Y}=$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ |
|  | 0.098 | 197235.8 |  |  | -25.0387 | 0.0000111 | 58131878.59 |

Source: Annual Reports of NBL

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{0.098}{5}=0.0196 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{197235.8}{5}=39447.16
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
=\frac{-25.0387}{\sqrt{0.0000111 \times 58131878.59}}
$$

$$
=-0.9857
$$

Coefficient of determination $\left(\mathrm{r}^{2}\right)=0.9716$
Probable Error $($ P. Er. $)=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-0.9716)}{\sqrt{5}} \\
& =0.3814
\end{aligned}
$$

6 P. Er. $=2.29$

## Appendix 4.3 (B)

Calculation of coefficient of correlation between Average Deposit Interest Rate and Total
Deposit NBBL

| FY | Deposit <br> Interest <br> Rate (X) | Total <br> Deposit <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 0.0488 | 12807.4 | 0.0055 | 1163.84 | 6.4011 | 0.00003025 | 1354523.55 |
| 2063 | 0.0452 | 12125.6 | 0.0019 | 482.04 | 0.9159 | 0.00000361 | 232362.56 |
| 2064 | 0.0398 | 13015.1 | -0.0035 | 1371.54 | -4.8004 | 0.00001225 | 1881121.97 |
| 2065 | 0.0460 | 9386.0 | 0.0027 | -2257.56 | -6.0954 | 0.00000729 | 5096577.15 |
| 2066 | 0.0365 | 10883.7 | -0.0068 | -759.86 | 5.1670 | 0.00004624 | 577387.22 |
|  | $\sum \mathrm{X}=$ | $\sum \mathrm{Y}=$ |  |  | $\sum \mathrm{xy}=$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ |
|  | 0.2165 | 58217.8 |  |  | 1.5882 | 0.00009964 | 9141972.45 |

Source: Annual Report of NBBL

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{0.2165}{5}=0.0433 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{58217.8}{5}=11643.56
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{1.5882}{\sqrt{0.00009964 \times 9141972.45}} \\
& =-0.0526
\end{aligned}
$$

Coefficient of determination $\left(\mathrm{r}^{2}\right)=0.0028$
Probable Error (P. Er.) $=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-0.0028)}{\sqrt{5}} \\
& =0.3008
\end{aligned}
$$

6 P. Er. $=1.8049 \mathrm{~s}$

## Appendix 4.4 (A)

Calculation of coefficient of correlation between Interest Spread Rate and Net Profit
NBL

| FY | Interest <br> Spread <br> rate (X) | Net <br> Profit <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 0.1139 | 1730.13 | 0.0343 | 890.54 | 30.5455 | 0.001176 | 793061.49 |
| 2063 | 0.1198 | 1207.26 | 0.0402 | 367.67 | 14.7803 | 0.001616 | 135181.23 |
| 2064 | 0.0483 | 226.95 | -0.0313 | -612.64 | 19.1756 | 0.000980 | 375327.77 |
| 2065 | 0.0517 | 239.21 | -0.0279 | -600.38 | 16.7506 | 0.000778 | 360456.14 |
| 2066 | 0.0642 | 794.40 | -0.0154 | -45.19 | 0.6959 | 0.000237 | 2042.14 |
|  | $\Sigma \mathrm{X}=$ | $\sum \mathrm{Y}=$ |  |  | $\sum \mathrm{xy}=$ <br> 81.9479 | $\sum \mathrm{x}^{2=}$ <br> 0.004787 | $\sum \mathrm{y}^{2=}$ <br> 1666068.77 |

Source: Annual Reports of NBL

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{0.3980}{5}=0.0796 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{4197.95}{5}=839.59
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{81.9479}{\sqrt{0.004787 \times 1666068.77}} \\
& =-0.9176
\end{aligned}
$$

Coefficient of determination $\left(r^{2}\right)=0.8420$
Probable Error (P. Er.) $=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-0.8420)}{\sqrt{5}} \\
& =0.0477
\end{aligned}
$$

6 P. Er. $=0.2860$

## Appendix 4.4 (B)

Calculation of Coefficient of Correlation between Interest Spread Rate and Net Profit
(NBBL)

| FY | Interest <br> Spread <br> Rate (X) | Net Profit <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 0.0399 | 2.643 | 0.0042 | 610.95 | 2.5660 | 0.000018 | 373259.9 |
| 2063 | 0.0276 | -781.93 | 0.0633 | -173.62 | -10.9901 | 0.004007 | 30143.9 |
| 2064 | 0.0211 | -1797.16 | -0.0146 | -1188.85 | 17.3572 | 0.000213 | 1413364.32 |
| 2065 | 0.0503 | -1061.58 | 0.0146 | -453.27 | -6.6177 | 0.000213 | 205453.69 |
| 2066 | 0.0398 | 596.49 | 0.0041 | 1204.8 | 4.9397 | 0.000017 | 1451543.04 |
|  | $\Sigma \mathrm{X}=$ | $\Sigma \mathrm{Y}=$ |  |  | $\sum \mathrm{xy}=$ <br> 7.2551 | $\sum \mathrm{x}^{2}=$ <br> 0.004468 | $\sum \mathrm{y}^{2}=$ <br> 3473764.85 |

Source: Annual Reports of NBBL

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{0.1785}{5}=0.0357 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{-3041.55}{5}=-608.31
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{7.2551}{\sqrt{0.004468 \times 3473764.85}} \\
& =0.0582
\end{aligned}
$$

Coefficient of determination $\left(\mathrm{r}^{2}\right)=0.0034$
Probable Error (P. Er. $)=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-0.0034)}{\sqrt{5}} \\
& =0.3006
\end{aligned}
$$

6 P. Er. $=1.8037$

## Appendix 4.5(A)

Calculation of Coefficient of Correlation between Total Deposit and Total Investment (NBL)

| FY | Total <br> Deposit <br> $(\mathrm{X})$ | Total <br> Investment <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 35934.2 | 550 | -3512.96 | -11666.21 | 40982929.08 | 12340887.96 | 136100.46 |
| 2063 | 35829.8 | 14490.25 | -3617.36 | 2274.04 | -8226021.33 | 13085293.37 | 5171244.73 |
| 2064 | 39014.2 | 16072.18 | -432.96 | 3855.97 | -1669480.77 | 187454.36 | 14868504.64 |
| 2065 | 41829.4 | 16570.76 | 2382.24 | 4354.55 | 10373583.19 | 5675067.42 | 18962066.51 |
| 2066 | 44628.2 | 13397.86 | 5181.04 | 1181.65 | 6122175.92 | 26843175.48 | 1396296.72 |

Source: Annual Reports of NBBL

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{197235.8}{5}=39447.16 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{61081.05}{5}=12216.21
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{47583186.8}{\sqrt{58131878.59 \times 40534213.06}} \\
& =-0.9802
\end{aligned}
$$

Coefficient of determination $\left(r^{2}\right)=0.9609$
Probable Error (P. Er. $)=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-0.9609)}{\sqrt{5}} \\
& =0.0175
\end{aligned}
$$

6 P. Er. $=0.1050$

## Appendix 4.5 (B)

Calculation of coefficient of correlation between Total Deposit and Total Investment
NBBL

| FY | Total <br> Deposit <br> $(\mathrm{X})$ | Total <br> Investment <br> $(\mathrm{Y})$ | $X=X-\bar{X}$ | $Y=Y-\bar{Y}$ | $\sum \mathrm{xy}$ | $\sum \mathrm{x}^{2}$ | $\sum \mathrm{y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2062 | 12807.4 | 2699.167 | 1163.84 | 659.727 | 767816.67 | 1354.52 | 435239.72 |
| 2063 | 12125.6 | 2411.720 | 482.04 | 372.28 | 179453.85 | 232362.56 | 138592.40 |
| 2064 | 13015.1 | 2661.834 | 1371.54 | 622.394 | 853638.27 | 1881121.97 | 387374.29 |
| 2065 | 93015.1 | 1034.560 | -2257.56 | -1004.88 | 2268576.89 | 5096577.15 | 1009783.82 |
| 2066 | 10883.7 | 1389.901 | -759.86 | -649.539 | 493558.70 | 577387.22 | 421900.91 |
|  | $\sum \mathrm{x}=$ | $\sum \mathrm{y}=$ |  |  | $\sum \mathrm{xy}=$ | $\sum \mathrm{x}^{2}=$ | $\sum \mathrm{y}^{2}=$ |
|  | 58217.8 | 10197.2 |  |  | 4563044.387 | 7788803.431 | 2392891.131 |

Source: Annual Report of NBBL

$$
\begin{aligned}
& \bar{X}=\frac{\sum x}{N}=\frac{58217.8}{5}=11643.56 \\
& \bar{Y}=\frac{\sum y}{N}=\frac{10197.182}{5}=2039.44
\end{aligned}
$$

Coefficient of correlation $(\mathrm{r})=\frac{\sum x y}{\sqrt{\sum x^{2} \times \sum y^{2}}}$

$$
\begin{aligned}
& =\frac{4563044.387}{\sqrt{7788803.431 \times 2392891.131}} \\
& =1.057
\end{aligned}
$$

Coefficient of determination $\left(\mathrm{r}^{2}\right)=1.1172$
Probable Error (P. Er.) $=\frac{0.6745\left(1-r^{2}\right)}{\sqrt{n}}$

$$
\begin{aligned}
& =\frac{0.6745(1-1.1172)}{\sqrt{5}} \\
& =-0.0353
\end{aligned}
$$

6 P. Er. $=-0.2120$

## Appendix 4.6 (A)

Analysis of Total Deposit trend of NBL (in million)

| FY | Total <br> Deposit <br> $(\mathrm{y})$ | $\mathrm{x}=\mathrm{yr}-2063$ | xy | $\sum \mathrm{x}^{2}$ | Trend Value <br> $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 35934.20 | -2 | -71868.4 | 4 | 34769.64 |
| 2062 | 35829.80 | -1 | -35829.8 | 1 | 37108.4 |
| 2063 | 39014.20 | 0 | 0 | 0 | 39447.16 |
| 2064 | 41829.40 | 1 | 42829.40 | 1 | 41785.92 |
| 2065 | 44628.2 | 2 | 89256.4 | 4 | 44124.68 |
|  | $\sum \mathrm{y}=$ | $\sum \mathrm{x}=$ | $\sum \mathrm{xy}=$ | $\sum \mathrm{x}^{2}=0$ |  |
| 197235.8 | 0 | 23387.6 |  |  |  |

Source: Annual Reports of NBL

The equation of straight line trend is :-

$$
\begin{aligned}
& Y=a+b x \\
& x=0 \square \text { Since }
\end{aligned}
$$

$\mathrm{a}=\frac{\sum y}{n}=\frac{197235.8}{5}=39447.16$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{23387.6}{10}=2338.76$

Estimated Deposit trend value for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{Y}=39447.16+$ <br> 2338.76 x |
| :---: | :---: | :---: |
| 2066 | 3 | 46463.44 |
| 2067 | 4 | 48802.20 |
| 2068 | 5 | 51140.96 |
| 2069 | 6 | 53479.72 |
| 2070 | 7 | 55818.48 |

## Appendix 4.6 (B)

Analysis of Total Deposit trend of NBBL

| FY | Total <br> Deposit <br> $(y)$ | $\mathrm{x}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 12807.4 | -2 | 4 | -25614.8 | 12960.96 |
| 2062 | 12125.6 | -1 | 1 | -12125.6 | 12302.26 |
| 2063 | 13015.1 | 0 | 0 | 0 | 11643.56 |
| 2064 | 9386.0 | 10883.7 | 2 | 1 | 9386.0 |
| 2065 |  | $\sum \mathrm{x}=0$ | $\sum \mathrm{xy}=$ | $\sum \mathrm{x}^{2}=10$ |  |
|  |  | -6587 |  | 10984.86 |  |
|  |  |  |  |  |  |

Source: Annual Reports of NBBL

The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{58217.8}{5}=11643.56$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{-6587}{10}=-658.7$

Estimated Total Deposit for five years

| Fiscal Year | $\mathrm{x}=\mathrm{Yr}-2063$ | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=11643.56-658.7 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 3 | 9667.46 |
| 2067 | 4 | 9008.76 |
| 2068 | 5 | 8350.06 |
| 2069 | 6 | 7691.36 |
| 2070 | 7 | 7032.66 |

## Appendix 4.7 (A)

Analysis of Deposit Interest Rate trend of NBL

| FY | Deposit <br> Interest <br> Rate (y) | $\mathrm{x}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | Trend value <br> $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 0.0208 | -2 | 4 | -0.0416 | 0.0215 |
| 2062 | 0.0216 | -1 | 1 | -0.0216 | 0.0206 |
| 2063 | 0.0198 | 0 | 0 | 0 | 0.0196 |
| 2064 | 0.0185 | 1 | 1 | 0.0185 | 0.0186 |
| 2065 | 0.0175 | 2 | 4 | 0.035 | 0.177 |
|  | $\sum \mathrm{y}=0.0982$ | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=-0.0097$ |  |

Source: Annual Reports of NBBL

The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{0.0982}{5}=0.0196$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{-0.0097}{10}=-0.00097$

Estimated Deposit Interest Rate for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=0.0196-0.00097 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 3 | 0.01669 |
| 2067 | 4 | 0.01572 |
| 2068 | 5 | 0.01475 |
| 2069 | 6 | 0.01378 |
| 2070 | 7 | 0.01281 |

## Appendix 4.7 (B)

Analysis of Deposit Interest Rate trend of NBBL

| FY | Deposit <br> Interest <br> Rate (y) | $\mathrm{x}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | Trend value <br> $y_{c}=\mathrm{a}+\mathrm{bx}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\mathrm{y}=0.0433-$ <br> 0.0024 x |
| 2061 | 0.0488 | -2 | 4 | -0.0976 | 0.0481 |
| 2062 | 0.0452 | -1 | 1 | -0.0452 | 0.0457 |
| 2063 | 0.0398 | 0 | 0 | 0 | 0.0433 |
| 2064 | 0.0460 | 1 | 1 | 0.0460 | 0.0409 |
| 2065 | 0.0365 | 2 | 4 | 0.073 | 0.0385 |
|  | $\sum \mathrm{y}=0.2163$ | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=-0.0238$ |  |

Source: Annual Reports of NBBL

The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{0.2163}{5}=0.0433$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{-0.0238}{10}=-0.0024$

Estimated of Deposit Interest Rate for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=0.0433-0.0024 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2061 | 3 | 0.0361 |
| 2062 | 4 | 0.0337 |
| 2063 | 5 | 0.0313 |
| 2064 | 6 | 0.0289 |
| 2065 | 7 | 0.0265 |

## Appendix 4.8 (A)

Analysis of Interest spread Rate trend of NBL

| FY | Interest <br> Spread <br> Rate (Y) | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=0.0796-$ <br> 227.7940 x |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 0.1139 | -2 | 4 | -0.2278 | 455.6676 |
| 2062 | 0.1198 | -1 | 1 | -0.1198 | 227.8736 |
| 2063 | 0.0483 | 0 | 0 | 0 | 0.796 |
| 2064 | 0.0517 | 1 | 1 | 0.0517 | -227.7144 |
| 2065 | 0.0642 | 2 | 4 | 0.1284 | -455.5084 |
|  | $\sum \mathrm{y}=0.3979$ | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=-2277.9397$ |  |

Source : Annual Reports of NBL
The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{0.3979}{5}=0.0796$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{-2277.9397}{10}=-227.79$

Estimated Interest Spread Rate for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=0.0796-$ <br> 227.7940 x |
| :---: | :---: | :---: |
| 2066 | 3 | -683.3024 |
| 2067 | 4 | -911.0964 |
| 2068 | 5 | -1138.8904 |
| 2069 | 6 | -1366.6844 |
| 2070 | 7 | -1594.4784 |

## Appendix 4.8 (B)

Analysis of Interest Spread Rate trend of NBBL

| FY | Interest <br> Spread <br> Rate (Y) | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=$ <br> $0.0357+0.0023 \mathrm{x}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 0.0399 | -2 | 4 | -0.0798 | 0.0311 |
| 2062 | 0.0276 | -1 | 1 | -0.0276 | 0.0334 |
| 2063 | 0.0211 | 0 | 0 | 0 | 0.0357 |
| 2064 | 0.0503 | 1 | 1 | 0.0503 | 0.038 |
| 2065 | 0.0398 | 2 | 4 | 0.0796 | 0.0403 |
|  |  | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=0.0225$ |  |

Source: Annual Reports of NBBL

The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{0.1787}{5}=0.0357$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{0.0225}{10}=0.0023$

Estimated Interest Spread Rate for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{y}=0.0357+0.0023 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 3 | 0.0426 |
| 2067 | 4 | 0.0449 |
| 2068 | 5 | 0.0472 |
| 2069 | 6 | 0.0495 |
| 2070 | 7 | 0.0518 |

## Appendix 4.9 (A)

Analysis of Net Profit trend of NBL

| FY | Net Profit <br> (Y) | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | $\begin{gathered} \mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx} \\ \mathrm{Y}=839.73- \\ 283.88 \mathrm{x} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 1730.13 | -2 | 4 | -3460.26 | 1407.49 |
| 2062 | 1207.26 | -1 | 1 | -1207.26 | 1123.61 |
| 2063 | 226.95 | 0 | 0 | 0 | 839.73 |
| 2064 | 239.91 | 1 | 1 | 239.91 | 555.85 |
| 2065 | 794.40 | 2 | 4 | 1588.8 | 271.97 |
|  | $\Sigma \mathrm{y}=4198.65$ | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=-2838.81$ |  |

Source: Annual Reports of NBL
The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{4198.65}{5}=839.73$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{-2838.81}{10}=-283.88$

Estimated Net Profit for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{Y}=839.73-283.88 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 3 | -11.91 |
| 2067 | 4 | -295.79 |
| 2068 | 5 | -579.67 |
| 2069 | 6 | -863.55 |
| 2070 | 7 | -1147.43 |

## Appendix 4.9 (B)

Analysis of Net Profit trend of NBBL

| FY | Net Profit <br> (Y) | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{x}^{2}$ | xy | $\begin{gathered} Y_{c}=a+b x \\ Y=-608.31 \\ +303.12 x \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2061 | 2.643 | -2 | 4 | -5.286 | -1214.55 |
| 2062 | -781.93 | -1 | 1 | 781.93 | -911.43 |
| 2063 | -1797.16 | 0 | 0 | 0 | -608.31 |
| 2064 | -1061.58 | 1 | 1 | 1061.58 | -305.19 |
| 2065 | 596.49 | 2 | 4 | 1192.98 | -2.07 |
|  | $\Sigma \mathrm{y}=-3041.537$ | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=3031.204$ |  |

Source: Annual Reports of NBBL

The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{-3041.537}{5}=-608.31$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{3031.204}{10}=303.12$

Estimated Net Profit for five years

| Fiscal Year | $\mathrm{Y}=\mathrm{Yr}-2063$ | $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{Y}=-608.31+303.12 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 3 | 301.05 |
| 2067 | 4 | 604.17 |
| 2068 | 5 | 907.29 |
| 2069 | 6 | 1210.41 |
| 2070 | 7 | 1513.53 |

## Appendix 4.10 (A)

Analysis of Total Investment trend of NBL

| FY | Total <br> Investment <br> $(Y)$ | $\mathrm{X}=\mathrm{Yr}-2063$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (Y) | $\mathrm{x}^{2}$ | xy | $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{Y}=12216.21$ <br> +2997.62 x |  |
| 2061 | 550 | -2 | 4 | 1100 | 6220.97 |
| 2062 | 14490.25 | -1 | 1 | -14490.25 | 9218.59 |
| 2063 | 16072.18 | 0 | 0 | 0 | 12216.21 |
| 2064 | 16570.76 | 1 | 1 | 16570.76 | 15213.83 |
| 2065 | 13397.86 | 2 | 4 | 26795.72 | 18211.45 |
|  | $\sum \mathrm{y}=$ | $\sum \mathrm{x}=0$ | $\sum \mathrm{x}^{2}=10$ | $\sum \mathrm{xy}=$ |  |
| 61081.05 |  |  | 29976.23 |  |  |

Source: Annual Reports of NBL
The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{61081.05}{5}=12216.21$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{29976.2284}{10}=2997.62$

## Estimated Total Investment for five years

| Fiscal Year | $\mathrm{Y}=\mathrm{Yr}-2063$ | $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{Y}=12216.21+2997.62 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 3 | 21209.07 |
| 2067 | 4 | 24206.69 |
| 2068 | 5 | 27204.31 |
| 2069 | 6 | 30201.93 |
| 2070 | 7 | 33199.55 |

## Appendix 4.10 (B)

Analysis of Total Investment trend of NBBL
$\left.\begin{array}{|c|c|c|c|c|c|}\hline \text { FY } & \begin{array}{c}\text { Total } \\ \text { Investment } \\ (Y)\end{array} & \mathrm{X}=\mathrm{Yr}-2063 \\ & & & \mathrm{x}^{2} & \mathrm{xy} & \mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx} \\ \mathrm{Y}=2039.44- \\ 399.57 \mathrm{x}\end{array}\right]$.

Source: Annual Reports of NBBL
The equation of straight line trend is :-
$Y=a+b x$
Since $\Sigma \mathrm{x}=0$
$\mathrm{a}=\frac{\sum y}{n}=\frac{10197.2}{5}=2039.44$
$\mathrm{b}=\frac{\sum x y}{\sum x^{2}}=\frac{-3995.629}{10}=-399.57$

Estimated Total Investment for five years

| Fiscal Year | $\mathrm{X}=\mathrm{Yr}-2063$ | $\mathrm{Y}_{\mathrm{c}}=\mathrm{a}+\mathrm{bx}$ <br> $\mathrm{Y}=2039.44-399.57 \mathrm{x}$ |
| :---: | :---: | :---: |
| 2066 | 2 | 840.73 |
| 2067 | 4 | 441.16 |
| 2068 | 5 | 41.59 |
| 2069 | 6 | -357.98 |
| 2070 | 7 | -757.55 |

## Annex 1

## Population of the commercial Bank

1. Nepal Bank Limited
2. Rastriya Banijya Bank
3. Agriculture Development Bank Limited
4. NABIL Bank Limited
5. Nepal Investment Bank Limited
6. Standard Chartered Bank Limited
7. Himalayan Bank Limited
8. Nepal SBI Bank Limited
9. Nepal Bangladesh Bank Limited
10. Everest Bank Limited
11. Bank of Kathmandu
12. Nepal Credit and Commerce Bank Limited
13. Lumbini Bank Limited
14. Nepal Industrial and commercial Bank Limited
15. Machhapuchchhre Bank Limited
16. Kumari Bank Limited
17. Laxmi Bank Limited
18. Siddhartha Bank Limited
19. Global Bank Limited
20. Kist Bank Limited
21. Citizens Bank International Limated
22. Prime commercial Bank Limited
23. DCBL Bank limited
24. Bank of Asia Nepal Limited
25. Nepal Merchant Bank Limited
26. Development Credit Bank Limited
27. NMB Bank Limited
28. Sunrise Bank Limited

## Annex 2

## PROFILE OF SAMPLE BANK

## NEPAL BANK LIMITER

Nepal Bank Ltd. was incorporated in 1937 under Nepal Bank Act of 1937 with an authorized capital share of RS 10 million and issued capital RS 2.5 million of which paid up capital was RS 842 thousand with 10 shareholders. At first, the government owned the majority of share. Now government owns only $40 \%$ share with the suggestion of World Bank to transfer the ownership to the private sector for better functioning of the financial sector. It is the first bank of Nepal to establish under the principal of join venture (Joint venture between government and general public).

Nepal Bank Ltd. has the following objectives
Continue to maintain leading share of banking sector with a significant presence in all major geographical areas in the country.

Provide competitive and customer oriented banking services to all customers through competent and professional staff.

Reclaim leadership with in the national financial community.

## NEPAL BANGLADESH BANK LIMITED

The head office of Nepal Bangladesh Bank Ltd. is at new Baneswar, Bijuli Bazar in Kathmandu. Nepal Bangladesh Bank Ltd. was established in June 1994 with a authorized capital of Rs 240 million and paid-up capital of Rs 60 million as a joint venture bank with IFIC Bank Ltd. of Bangladesh.

The prime object of this bank is to render banking services to the different sectors like industries, traders, businessman, priority sector, small entrepreneurs and weaker section of the society and every other people who need banking services. During the period of 15 years of its operation, it has accommodated a large number of clients and has been able to provide excellent services to its clients. It has a network of 17 branches all over Nepal.

## BIBLIOGRAPHY

## Books

Baidhya, Shakespeare (2004). Banking and Insurance Management. Kathmandu: Monitor Nepal.
Bista, Bhagat (1999). Nepal Ma Adhunik Banking Byabastha. Kathmandu: Model Prakashan.
Charles P Jones. (1991). Investment Analysis and Management. Bombay: Himalayan publishing house.

Dangol, Ratnaman (2003). Management of Investment. Seventh Edition, New York: Harper collions publishers.

John M. Cheney and Edward A Moses (2001). Fundamentals of Investment. Delhi: St. Poul west publishing company.
K. Reilly (2003). Essentials of Financial Management. New York: Harper Collins College Publishers

Kothari C.R. (2000). Research Methodology Methods and Techniques. Second Edition, Kathmandu: Vishwa Prakashan.

Luitel, Chakrapani (2059). Banking \& Insurance. 1st edition, Kathmandu: Nima Pustak Prakashan.

Michael Dr. V.P.(2000). Research Methodology in Management. Bombay: Himalaya Publising House Enlarge edition

Modigliani. H. and Miller H.(1999). Corporate Finance and the Theory of Investment. UAS: American Economic Review.

Pandey, I.M. (2005). Financial Management. Sixth Edition, New Delhi: Vikash Publishing House Ltd.

Shrestha, Dr. Suniti (1995). Investment Planning of Commercial Banks in Nepal. Kathmandu: Taleju Prakashan.

Shrestha, Madhu Sunar, (2007). Fundamental of Banking. 2nd edition, Kathmandu: Buddha Academic Publishers and Distributors Pvt. Ltd.

Singh, Preeti (1992). Investment Management. Bombay: Himalayan publishing house.
Thapa, Kiran \& Neupane, Dipendra K. (2009). Banking \& Insurance. 1st edition, Kathmandu: Asmita Books Publication.
W.J Sharpe and Alecxander and J Gorden (1999). Eastern Economic Edition. Fifth Edition, New Delhi: Printice Hal of India.

## Journals $\backslash$ Articles:

Bodhi B. Bajracharya (2047). Monetary Policy and deposit mobilization in Nepal Rajat Jayanti Smarika.
F. Morris (1980). Latin America's Banking System in the 1989's. (World bank didcussion paper 81. The World Bank Washing DC 1990\}

Golchha, Diwakar (1999). Private Sector Views on Financial Sector. Vol.X. 2.
Gradner C. John and trazcinka A Charies (1992) The Journal of Financial Research. Vol. XV, No. 1
http; \lwww.nepalnews.com.nplcontentslenglishmonthly\businessage\2004\dec\sectoral.
K. Pradhan Ghimire, Banijya Bankharu Prathamikta Chhetrama Lagani Garna Bhanda Harjana Tirna Tayar, 1999, Nepal Samachar Patra.

Shrestha, Shiva Raj (2003). Portfolio Management in Commercial Bank Theory and Practice. Nepal Bank Patrika.

## University Thesis

Aryal, Bibas Babu (2005). Investment Policy of Joint Venture Banks in Nepal. (In comparative study of Everest Bank Ltd. with NABIL Bank Ltd. and Nepal Bangladesh Bank Ltd.)". an unpublished master's degree thesis, T.U, Kathmandu.

Bhattarai, Ramala (1978). Lending Policy of Commercial Banks in Nepal. an unpublished master's degree thesis, T.U, Kathmandu.
Dhungel, Prvakar (2002). A comparative study on investment policy of Nepal Bangladesh Bank Ltd. \& other joint venture Banks.(Himalayan Bank Ltd \& Nepal SBI Bank Ltd.). an unpublished master's degree thesis, T.U, Kathmandu.
Gautam, Satish Prasad (2004). Portfolio analysis of Investment in listed companies. an unpublished master's degree thesis, T.U, Kathmandu.
Gupta, Ruby (2007). Comparative Analysis of Financial Performance of Commercial Banks in Nepal. An unpublished master's degree thesis, T.U, Kathmandu.

Khadka, Raja Ram (1998). A study on investment policy of Nepal Arab Bank Ltd. with Nepal Grindlays Bank Ltd. and Nepal Indosuez Bank Ltd. An unpublished master's degree thesis, T.U, Kathmandu.
Lamichhane, Sita (2005). Investment policy in Nepal. (A comparative study of Agriculture Development Bank with Nepal Bangladesh Bank Ltd. \& Himalayan Bank Ltd.)", an unpublished master's degree thesis, T.U, Kathmandu.
Pandit, Kul Chandra (2003). A study on the investment policy analysis of standard chartered Bank Nepal Ltd. (In comparison to other commercial Banks of Nepal)", an unpublished master's degree thesis, T.U, Kathmandu.
Regmi, Ganesh (2000). A Comparative Study of the Financial Performance of Himalayan Bank \& Nepal Bangladesh Bank Ltd. an unpublished master's degree thesis, T.U, Kathmandu.

Shahi, Prem Bahadur (1999). Investment Policy of commercial banks in Nepal. An unpublished master's degree thesis, T.U, Kathmandu.

Tuladhar, Upendra (1999). A study on investment policy of Nepal grindkays bank ltd. In comparison to other joint venture banks (NABIL \$ HBL). an unpublished master's degree thesis, T.U, Kathmandu.

Udas, Shyam Kumar (2008). A Comparative Study of Investment Policy of Nepal Bangladesh Bank Ltd. and Bank of Kathmandu Ltd. an unpublished master's degree thesis.

