

# **CHAPTER – I**

## **INTRODUCTION**

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

Nepal, a small agrarian economy with low indices in the indicators of development, is the poorest country in South Asia having low per capita income of \$270, making it one of the least prominent developed economies in the world.

Development of any country is a gradual and continuous process. It can be maintained that the basic requirement for development of a country depends upon its economic development. Economic development is a multidimensional phenomenon that is influenced by both economic and non-economic factors. Being Nepal a developing country, it has more than 31% of total population living below poverty line. Combating with poverty has been the greatest challenge in the development process of the country. So poverty reduction is the basic tools necessary to develop the country. Economic growth is the most important factor influencing poverty. A key objective of a country's poverty reduction strategy should be to establish conditions that facilitate private sector investment. After the restoration of democracy in 1990, the government move towards a countries poverty reduction policy agenda should extend a variety of policy areas including privatization, trade liberalization, banking and financial sector reforms. The continuing thrust to the private sector in the process of national development has helped in establishing many commercial banks, financial institutions, industries under joint venture arrangement. Commercial banks are important part of financial institution that plays crucial role in the process of economic growth of our country. Banks are the heart of the financial institution whose main aim is to improve the socio-economic condition of the people through mobilizing domestic resources respectively. Generally banks accept deposits from their customers and provide the loans to the concerned people under certain terms and conditions. This process is necessary to supply money and capital in course of economic development. Banks help to collect scattered and unorganized money and invest it for the development of industry, trade, business, agriculture. Banks are

needed for the transaction of money, capital formation and other various economic activities. In this connection, bank is helpful for the extension of economic activities in an economy of the county. Therefore banks are to be considered not as dealers in money but also as the leaders of development in country.

Investment means sacrificing rupee amount of today by expecting more money in future. It is an important ingredient which eventually contributes speedy development in economy. It is concerned with the management of an investor's wealth, which are the sum of current income and the present value of all future income. Investment policy plays the role of engine growth particularly in developing countries like Nepal. Investment helps to mount the Gross Domestic Product (GDP) and upgrade the economic status of the country. Therefore investment policy is an important part of overall economic development of country. In this regards, commercial bank's investment policy is also a push drive to achieve priority of industries in the context of Nepal's economic development.

Bank investment operations are operated by investment policy. Investment policy plays an important role in the development of any bank. A sound and viable investment policy can be effective one for the economy to attain the economic objectives directed towards the acceleration of the pace of development. If there are better investment policies with the banks, both investors, customers, shareholders are attracting which helps to increase the volume and quality of loans, deposits and investment. The loan provided by joint venture banks is guided by several principles such as length of time, their purpose, profitability, safety etc. These fundamental principles of joint venture bank investment are considered while making investment policy.

Investment plays a catalytic role to provide dynamism and competitiveness in the economy through the mobilization of domestic and natural resources and their investment for productive use to the various sectors. To make it more effective, bank formulates sound investment policies, which eventually contribute to the economic growth of a country. The sound policies help banks maximize quality and quantity of investment and thereby achieve the own objective of profit maximization and social welfare. Formulation of investment policy commonly addresses the emerging issues

of poverty alleviation in least developed nature of Nepalese economy. Optimal investment decision plays a vital role in each and every organization. So this subject is relevant for all surrounding that mobilize funds in view of return. Good investment policy ensures maximum amount of investment to all sectors with proper utilization. But if there is bad investment policy return should be negative which ultimately should lead the bank into failure. So to get success in competitive market commercial banks clearly know about good investment policies.

## **1.2 Evolution of Banking in Nepal**

The evolution of banking in Nepal is not so old. Modern banking institution has very recent origin in Nepal. There is no long historical basis of development of bank in Nepal. The first commercial bank introduced in Nepal was Nepal Bank Limited as a semi-government organization established in 1937 A.D.

In addition to this the first central bank named as Nepal Rastra Bank was established in 1956 A.D. under the Nepal Rastra Bank Act 1955 with an objective of supervising, protecting and directing the functions of commercial banking activities.

With the growth of activities in the country the necessity of an additional commercial bank was realized in the country. So Rastriya Banijya Bank an undertaking of HMG, was established in 1965 A.D. under the Banijya Bank Act 1964 as the second commercial bank of Nepal. After adopting liberalization policy and open economic policies private investors are investing their resources to establish various banks. As a result a number of commercial banks as well as development banks and other financial institutions are gradually increasing. Its objective was to create healthy competitive banking system and to provide cheap banking facilities to the people.

## **1.3 Profile of Concerned Banks**

During the past few years several commercial banks have been coming up in the country. But this research is conducted taking only Nabil Bank Limited (NABIL) and Nepal Investment Bank Limited (NIBL).

## **NABIL Bank Ltd. (NABIL)**

NABIL bank Ltd, the commercial bank was established in 1984. Dubai Bank as the initial joint venture partner with 50% equity investment. The shares owned by Dubai bank Ltd (DBL) were transferred to Emirates Bank International Ltd. Dubai sold its entire 50% equity holding to National Bank Ltd, Bangladesh is managing the bank in according with the technical services. Agreement was signed between it (NABIL) and the bank on June 1995. The present configuration consists of 50% share capital of National Bank Ltd, Bangladesh, 10% of NIDC, 9.66% of Rastriya Beema Sansthan, 0.34% of Nepal Stock Exchange and 30% of Nepalese Public. The bank has altogether 14 branches with 4 branches in capital.

### **Present Capital Structure of NABIL**

<b><u>Share Capital &amp; Reserve</u></b>	<b>(NPRs In million)</b>
1. Authorized capital	500.00
2. Issued equity capital	491.65
3. Paid up equity capital	491.65

### **Share Holding Pattern**

1. National Bank Ltd, Bangladesh	50%
2. NIDC	10%
3. Rastriya Beema Sansthan	9.66%
4. Nepal Stock Exchange	0.34%
5. General Public	30%

Following Activities and Services are provided by NABIL including normal functions:

- ❖ SWIFT
- ❖ ATM
- ❖ Tele-banking
- ❖ Locker Facilities
- ❖ Ezee saving scheme
- ❖ Credit Card Facilities
- ❖ Deposit Locker

- ❖ International trade and Bank Guarantee
- ❖ Western Union money transfer

### **Nepal Investment Bank Ltd (NIBL)**

Nepal Investment Bank is previously known as Nepal Indosuez Bank Ltd. It is one of the commercial banks established in 1986 as a joint venture between Nepalese and French partners. The French partner was credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world holding 50% of the capital of NIBL. With the decision of credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen has acquired the 50% shares of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. the bank is renamed as Nepal Investment Bank Limited upon the approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Register's office on April 2002. At present there no foreign investment in it. All the shares are owned by Nepalese Shareholders. The bank has altogether 9 branches with 3 branches in capital.

### **Present Capital Structure of NIBL**

#### **Share Capital & Reserve**

1	Authorized Capital	2700000 shares @Rs 100, Rs 270000000
2	Issued Capital	1699845 shares @ Rs 100, Rs 169984500
3	Paid Up Capital	1699845 shares @ Rs 100, Rs 169984500

#### **Share Holding Pattern**

1. Group of Companies	50%
2. Rastriya Banijya Bank	15%
3. Rastriya Beema Sansthan	15%
4. General Public	20%

Following Activities and Services are provided by NIBL including normal functions:

- ❖ ATM
- ❖ Ezee saving Scheme
- ❖ Remittances
- ❖ Funds transfer

- ❖ 365 days banking
- ❖ Export Credit
- ❖ Locker Facilities
- ❖ Tele banking Service
- ❖ Remittances
- ❖ Deposits
- ❖ Loans and Advances

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

After the restoration of multiparty democracy-system in 1990, Nepal has opened the doors to adopt liberalized and market oriented economic policies in financial sector and free entry of bank and financial institutions to invest on priority sector and productive sectors. After that in short period of time no. of commercial banks have been established.

Due to high competition, there is high flow of money in the market but the economy suffered from limited investment opportunities. Nepalese commercial banks have not formulated their investment policy in an organized manner. There are various problems in resources mobilization by financial institution in Nepal. The most important problem is poor investment climate prevailing in stringent directives, unsecured social environment etc. Lack of sound investment policy is another reason for a commercial bank not to properly utilizing its deposit that is making loan and advance or lending for a profitable project. This condition may lead the commercial bank to the position of liquidation.

Commercial banks invest their funds in limited areas to achieve highest amount of profit. They are found to be more interested in investment in less risky and highly liquidity sectors like in T-Bills, development bonds, retail and consumer lending. There is an obvious hesitation to invest on long-term projects and in venture capital investment. So, many of them follow conservative and un-effective investment policy.

As with everything in Nepal, every commercial bank has an investment in the same sector. They are in consumer leading, tourism, garments and in trading sector. They

are the major sectors. But given the current situation of the country, it is not up to them to decide which sector they want to go into. The main factor for success of any organization is the security situation. Once the security situation stabilizes, then only commercial banks consider rationally as to where they should to invest and grow. So, security problem is the burning problem for every commercial bank to invest their funds in any sector.

Many of Nepalese commercial banks have not formulated their investment policy in an organized manner. Majority of them mainly depend upon the instruction and guidelines of Nepal Rastra Bank. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial bank.

The problems specially related to investment functions of the commercial banks have been presented briefly as under:

- a) Is NABIL Bank's investment policy more effective and efficient than that of NIBL?
- b) Is NABIL Bank's investment strategy successful to utilize its available fund in comparison to the NIBL?
- c) Are they maintaining sufficient liquidity, profitability and risk position?
- d) What is the relationship of investment on loan and advances with total deposits and total net profit?
- e) Does the investment decision affect the total earnings of the commercial bank?

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

The objective of the study is to review the investment policy of NABIL and NIBL Banks. The objectives of the study are:

- (1) To evaluate the liquidity, profit & risk position of NABIL and NIBL
- (2) To find out the relationship between different variables like investment, deposits loan and advances, net profit & compare them between NABIL & NIBL.
- (3) To analyze the utilization of available fund of NABIL & NIBL.
- (4) To analyze the investment policy of NABIL & NIBL.

- (5) To provide suggestions to improve investment policy & performance of NABIL bank based on the finding of the study.

### **1.6 Limitation of the Study**

The limitations of the study are as follows:

- (a) This study is based on secondary data.
- (b) This study is based on the data of five years period
- (c) Only two banks i.e. NABIL and NIBL are taken and compare it with the investment policy.
- (d) This study concentrates only on those factors which are related to investment.
- (e) The study has been carried out on the basis of published financial documents such as balance sheets, profit and loss account, related journals, magazines, which have their own limitations.

### **1.7 Organization of the Study:**

The whole study is divided into following five chapters:

#### **Chapter - I:**

First chapter deals with introduction. This includes introduction, general background, and statement of the problem, objective of the study, significance of the study, limitation of the study and organization of the study.

#### **Chapter - II:**

Second chapter deals with the review of available literature. It includes review of related books, journals, articles and previous unpublished Master Degree Dissertation etc.

#### **Chapter - III:**

Third chapter explains the research methodology used in the study. It includes research design, population and sampling, sources of data, method of data analysis and research variables etc.



**Chapter - IV:**

The fourth chapter, the important chapter of the study will be the presentation and analysis of data as well as major findings of the study.

**Chapter - V:**

The fifth and last chapter covers the summary of the study, the main conclusion that flows from the study and offers some recommendations as well as suggestions for further improvement.

## **CHAPTER-II**

### **REVIEW OF LITERATURE**

Review of literature comprises of review of previous research study articles concerned with this study and other studies with a view for supplement the present research and such review adds to the dimension of the study. This chapter deals with review of books, review of articles, review of research papers, review of unpublished publication and relevant study on this topic.

#### **2.1 Conceptual Framework**

##### **2.1.1 Commercial Bank**

Commercial banks are the heart of financial system so they play an important role in the economic development of the country. They are established for profit earning motives. The invention of the banks based on commercial altitude. Commercial banks are those banks, usually in the private sector, which accept deposits on varying terms including demand deposits and lend to private sector business. It usually receives short-term deposits and advance short-term loans. Commercial banks are restricted to invest their funds in corporate securities. 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. The commercial banks are those banks that pool together the savings of the community and arrange for their productive use. Commercial bank is a corporation, which accepts demand deposits subject to check and makes short- term loans to business enterprises, regardless of the scope of its other services.

Commercial bank deals with other people's money. They have to find ways of keeping their assets liquid so that they could meet the demands of their customers. In their anxiety to make profit, the banks cannot afford to lock up their funds in assets, which are not easily realizable. The depositor's confidence could be secured only if the bank is able to meet the demand for cash promptly and fully. The banker has to keen

adequate cash for this purpose. Cash is an idle asset and hence the banker cannot afford to keep a large portion of his assets in the form of cash. Cash brings in no income to the bank. Therefore the banker has to distribute his assets in such a way that he can have adequate profits without sacrificing liquidity. (*Radhaswamy & Vasudevan, 1997: 510*)

### **2.1.2 Joint Venture Bank**

A joint venture is the joining of two or more enterprises for the purpose of carrying out a specific operation (industrial or commercial) investment, production or trade. The main purpose of the joint ventures is to join economic forces in order to achieve desired end. In order a business organization under joint venture basis, there should be at least two partners from two different countries.

Joint venture banks are such types of institutions that deal with money and substitute of money. They collect fund from corner part of the country in the form of (various types) deposits for advancing to others for expenditure. Joint venture banks plays important role to search new field of investment so that they can mobilize their funds as much as possible. The objective of establish joint venture banks is to help (economically) finance for country industries, trade etc. It always looks for profit.

### **2.1.3 Investment**

#### **(A) Definition**

##### ***In International Context:***

"Investment in its broadest sense means the sacrifice of certain present value for (possibly uncertain) future values." He says the investment is the venture that the return is uncertain. So they have presented their view in the books that bank should look for the safe and less risky investment. (*Sharpe and Alexander, 1998: 1*)

There are basically three concepts of investment:

- (1) Economic investment-that is on economist's definition of investment
- (2) Investment in more general or extended sense, which is used by "the man of the street" or ordinary people

- (3) The sense in which we are going to be very much interested, namely; financial investment.

He says, Banks are those institutions which accept deposit from the public in turn provide credit to trade, business and industry that directly makes a remarkable impact on the economic development of a country. To collect fund and collect as a good investment is a very risky job. Ad-hoc investment decision leads the bank out of the business thereby drawn the economic growth of the country. Hence a sound investment policy is another secret of a successful bank. (*Bhalla and Tutesa, 1983: 2*)

An investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk, it requires a present certain sacrifice for a future uncertain benefit (*Francis, 1991: 1*).

The investment objective is to increase systematically the individual's wealth, defined as assets minus liabilities. The higher the level of desired wealth the higher the must be received. As investor seeking higher return must be willing to take higher level of risk. (*Cheney & Moses, 1992: 13*)

Investing covers a wide range of activities and refers to investing money either in securities or mutual funds. More knowledgeable investors would include other financial assets such as warrants, puts and calls, convertible securities etc. Investing encompasses very conservative positions and aggressive speculation.

He defines the word investment as "An investment can be defined as the commitment of funds to one or more assets that will be held over some future time period". Investment is the study of the investment process and is concerned with the management of an investor's wealth. He further categorizes the investment in two parts via: financial asset; marketable securities and real asset; gold, silver and building.

He shows the importance of studying investments and saying, it is important to remember that all individuals have wealth of some kind if nothing else, the value of their services in the market price. Most individuals must make investment decision

sometimes in their live. He gives an example of a worker about investing his retirement funds.

In his view, the investment of funds in various asset is only a part of the overall financial decision making and planning that most individuals must do. Before investing, each individual should develop an overall financial plan. Such a plan will typically include the decision of whether to purchase a house; major investment for most individuals. Also decision must be made about insurance of various types- life, health etc. (*Charles, 1998: 5*)

In Investment decision, expenditures and benefits should be measured in cash In Investment analysis, cash flow is more important than accounting profit. It may also be pointed out that investment decision affect the firm's value. The firm's value will increase if investments are profitable and add to the Shareholder' wealth. Thus investment should be evaluated on the basis of a criterion which is compatible with the objective of the shareholders fund maximization. An investment will add to the shareholders wealth if it yields benefits in excess of the minimum benefits as per the opportunity cost of capital. (*Pandey, 1999: 407*)

***In Nepalese Context:***

A sound investment policy of a bank is such that their funds are distributed on different types of assets with good profitability on the one hand & provides maximum safety and security to the depositors and banks on the other hand. Moreover, risk in banking sectors tends to be concentrated in loan portfolio. When bank gets into serious financial trouble its problem usually spring from significant amounts of loan that have become uncollectible due to mismanagement, manipulation of loans, misguided lending policy or unexpected economic down turn. Therefore the banks investment policy must be such that it ensures that it is sound and prudent in order to protect public funds.

Further in details it deals with what type of loan do bank make? And how much of loans in each sector to be invested? The banks make a variety of loans to a wide variety of customers from many different purposes from purchasing automobile to

construction of homes and making trade with foreign countries. Therefore no uniform rules can be laid down to determine the portfolio of a bank. The environment in which the bank operates is influenced its investment policy. The nature and availability of funds also differ widely. The investment policy to be applied in Kathmandu may not applicable to the customer of Jumla because the demand for loans is less in rural areas whereas it is higher in city in urban areas. (*Baidhya, 1999: 46-47*)

### **(B) Importance of Investment Decision**

It is important to note that investment in the long term assets invariably requires funds to be tied up in the current assets such as inventories and receivable. The firm's investment decisions would generally include expansion, acquisition, modernization and replacement of long term assets. Investment decision is very important because it influence the firms growth in long term, affect the risk of the firm require the large amount of funds, difficult decision to make.

**i) Growth-** The effects of investment decisions extend into the future and have to be endured for a longer period than consequences of the current operating expenditure. A firm's decision to invest in long term assets has a decisive influence on the rate and direction of its growth. Wrong decision can prove disastrous for the continued survival of the firm's on the other hand inadequate investment in assets will make it difficult for the firm to complete successfully and maintain its market share.

**ii) Risk-** A long term commitment of funds may also change the risk complexity of the firm. If the adoption of an investment increases average gain but causes frequent fluctuations in its earnings the firm will become more risky. Thus investment decisions shape the basic character of a firm.

**iii) Funding-** Investment decision generally involve large amount of funds which make it imperative for the firm to plan its investment programmers very carefully and make an advance arrangement for procuring finances internally or externally.

**iv) Irreversibility-** Most investment decisions are irreversible. It is difficult to find a market for such capital items once they have been acquired. The firm will incur heavy losses if such assets are scrapped.

**v) Complexity-** Investment decisions are among the firm's most difficult decisions. They are an assessment of future events which are difficult to predict. It is really a complex problem to correctly estimate the future cash flow of an investment. Uncertainty in cash flow is caused by economic, political, social and technological forces. From the above delimitation, investment can be associated to that financial activity which is done for future uncertain earnings, sacrificing money at present which involves risk.

### **(C) Types of Investment decisions**

Investments are classified in two ways which are as follows:

#### **A.**

**i) Expansion of existing business**

**ii) Expansion of new business**

**iii) Replacement and modernization**

A company may add capacity to its existing product or service line to expand existing operations. This is known as *the investment on expansion of existing business*. For example, a bank may increase its branches to provide more services to the people.

A company will invest in new sectors whether to produce goods or services. This is known as *the investment on expansion of new business*. Expansion of new business is concerned with quite new business for the company. For example, if a textile manufacturing company starts to produce soap within the firm, which the firm has not manufactured before, this represents expansion of new business. Sometimes a company acquires an existing firm to expand business. Investment in the existing or new products may also be called as revenue-expansion investments.

*Modernization and replacement* main objective is to improve operating efficiency and reduce costs. When assets become outdated and obsolete with technological

changes, the firm must decide to replace those assets with new assets that operate more economically. For example, if a cement company changes from semi-automatic drying equipment to fully automatic drying equipment it is modernization and replacement decision. Replacement decision helps to introduce more efficient and economical assets and therefore it is also called cost-reduction investment. However, replacement decisions which involve substantial modernization and technological improvements expand revenue as well as reduce costs.

**B.**

**i) Mutually exclusive investments**

**ii) Independent investments**

**iii) Contingent investments**

*Mutually exclusive investments* serve the same purpose and compete with each other. If one investment is undertaken, others will have to be excluded. A company may for example either use a more labor intensive; semi-automatic machine precludes the acceptance of the highly automatic machine.

*Independent Investments* serve different purposes and do not compete with each other. For example a heavy engineering company may be considering expansion of its plant capacity to manufacture a new product light commercial vehicle. Depending on their profitability and availability of funds, the company can undertake both investments.

*Contingent investments* are dependent projects; the choice of one investment necessitates undertaking one or more other investments. For example, if a company decides to build a factory in a remote and backward area, it may have to invest in houses, roads, hospitals, schools, etc. for employees to attract the work force. Thus, building of factory also requires investment in facilities for employees. The total expenditure will be treated as single investment.

**(D) Investment Evaluation Criteria**

**i) Net Present Value Method**

NPV is the classic economic method of evaluating the investment proposals. It is one of the discounted cash flow techniques explicitly recognizing the time value of money



to evaluate the investment proposals. It correctly postulate that cash flows arising at different time periods differ in value are comparable only when their equivalent present values are found out. It is calculates as follows:

$$\frac{C_t}{NPV} = (1 + k)^n$$

Where,

NPV = net present value

C<sub>t</sub> = net cash flow in year't'

K = opportunity cost of capital

N = expected life of project

Σ = a Greek letter 'summation'

Acceptance rule:

Accept NPV > 0

Reject NPV < 0

May accept = 0

## ii) Internal Rate of Return Method

IRR method follows discounted cash flow technique which takes into account the time value of money. IRR is defined as that rate of return at which PV of cash inflows and PV of cash outflows are equal. NPV is zero at IRR. The internal rate of return is the interest rate which equates the present value of expected future cash inflows with the cost of initial outlay. It can be calculated by solving the following equation:

$$\sum_{t=0}^n \frac{CF_t}{(1+IRR)^t} = 0$$

$$\text{or, } \sum_{t=0}^n CF_t (PVIF_{IRR,t}) = 0$$

$$\text{or, } -NCO(PVIF_{IRR,t}) + \text{Cash inflows } (PVIFA_{IRR,t}) = 0$$

(in case of even cash inflows)

**Method of interpolation:**

$$\text{IRR} = \text{LR} + \frac{\text{PV}_{\text{LR}} - \text{PV}_{\text{IO}}}{\text{PV}_{\text{LR}} - \text{PV}_{\text{HR}}} \times (\text{HR} - \text{LR})$$

where,

IRR = Internal rate of return

LR = Low rate

HR = High rate

PV<sub>LR</sub> = Present value of cash inflows at low rate

PV<sub>HR</sub> = Present value of cash inflows at high rate

PV<sub>IO</sub> = Present value of investment outlay

Acceptance Rule: A project is considered acceptable if its IRR is greater than the rate of return required by the firm, otherwise it is rejected.” (Khadka & Adhikari; 2059: 84-86)

**iii) Profitability Index**

Another time adjusted method of evaluating the investment proposal is the profitability index (PI). It is the ratio of the present value of cash influence at the required rate of return, to the initial cash out flow of the investment. It may be gross or net. It is calculated as follows:

$$\text{PI} = \frac{\text{PV} (Ct)}{C_0}$$

Where,

PI = Profitability Index

PV (Ct) = Present value of cash flow in yr't'

C<sub>0</sub> = Initial cash outlay

Acceptance rule:

Accept PI > 1

Reject PI < 1

May accept PI = 1

#### **iv) Payback Period**

The payback is one of the most popular and widely recognizing traditional methods of evaluating investment proposal. It is defined as the number of years to cover the original cost outlay invested in a project. It is calculated as follows:

$$\text{Payback} = \frac{\text{Initial Investment}}{\text{Annual Cash Inflow}}$$

Generally two methods are used to determine the investment proposal in payback method i) ranking method ii) the shortest the payback period if the payback period calculated for a project is less than the maximum payback set by the management, it will be accepted, if not, it will be rejected.

#### **(E) Principle of Good Investment Policy**

In choosing specific investment, investor will need define ideas regarding a number of features which their portfolios should possess. These features should be consistent with the investors general objectives and in additional, should afford them all the incidental conveniences and advantages which are possible in their circumstances. The following are the suggested features as the ingredients from which many successful investors compound their selection policies.

##### **i) Principle of Safety**

The safety sought in investment is not absolute or complete the word means, rather protection against loss under reasonable likely conditions or variations. It calls for careful review of economic and industrial trends before choosing any type of investments or the time to invest. Thus this principle recognizes that errors are unavoidable and requires extensive diversification.

##### **ii) Adequate liquidity and Collateral Value**

An investment is a liquid asset if it can be converted into cash without delay at full market value in any quantity. For an investment to be liquid it must be i) reversible or ii) marketable. The difference between reversibility and marketability is that reversibility is the process whereby the transaction is reversed or terminated while marketability involves the sale of the investment in the market for cash. To meet

emergencies, every investor must have a sound portfolio to be sure for the additional funds which may be needed for the business opportunities. Whether money rising is to be done by sale or by borrowing it will be easier if the portfolio contains a planned proportion of higher-grade and readily saleable investment.

### **iii) Stability of income**

Stability of income must be looked at different ways just as was security of principle. An investor must consider stability of monetary income and stability of the purchasing power of income. However, emphasis upon income stability may not always be consistent with other investment principles. If monetary income stability is stressed, capital growth and diversification will be limited.

### **iv) Capital Growth**

Capital appreciation has today become an important principle recognizing the connection between corporation and industry growth and very large capital appreciation, Investors and their advisors constantly are seeking "growth stock". It is exceedingly difficult to make a successful choice. The ideal "growth stock" is the right issue in the right industry bought at the right time.

### **v) Tax Status**

To plan an investment program without regarding to one's tax status may be costly to the investor. There are really two problems involved here, one concerned with the burden of income taxes upon that income. When investor's incomes are small, they are anxious to have maximum cash returns on their hand, investors who are not pressed for cash income often find that income taxes deplete certain types of investment incomes less than others. Thus affecting their choice.

### **vi) Purchasing Power Stability**

Since an investment nearly always involves the commitment of current funds with the objective of receiving greater amounts of future funds, the purchasing power of the future funds should be considered by the investor. For maintaining purchasing power stability, investors should carefully study.

- (a) The degree of price level inflation they accept.
- (b) The possibility of gain and loss in the investment available to them

(c) Limitations imposed by personal and family considerations.

### **vii) Conceivability**

To be safe from social disorders, government confiscation, or unacceptable levels of taxation, property must be conceivable and level no record of income received from its use or sale. Gold and precious stones have long been estimated for purposes because they combine high value with bulk and are readily transferable.

## **2.2 Review of Related Studies**

Various studies have been conducted in this respect in Nepal and important ones are reviewed here under:

Bhodhi B. Bajracharya (1990) study on "**Monetary Policy and deposit mobilization in Nepal**" concluded that the mobilization of domestic savings in one of the monetary policies on Nepal. For this purpose commercial banks stood as the vital and active financial intermediary for generating resources in the form of deposit of the private sector so far providing credit to the investor's in different aspects of the economy.

He has explained that Commercial banks only can play an important role to mobilize the national savings. Now a days other financial institutions like finance companies, cooperative societies have been established actively to mobilization deposits in the proper sectors so that return can be ensured from the investment. (*Bajracharya, 1990: 93-97*)

Govinda Bahadur Thapa (1994) study on "**Financial system of Nepal**" concluded that the commercial banks including foreign joint venture banks seem to be doing pretty well in mobilizing deposits. Likewise, loans and advances of these banks are also increasing. But compared to the high credit needs particularly by the newly emerging industries, the banks still seem to lack adequate funds. The banks are increasing their lending to non-traditional sectors along with the traditional sectors

Out of the eleven commercial banks (excluding two recently opened regional commercial banks) Nepal Bank Ltd. and Rastriya Banijya Bank ate operating with a nominal profit the later turning towards negative from time to time. Because of non

recovery of accrued interest the margin between interest income and interest expenses is declining. Because of these two local banks, in traditional off- balance sheet operation, these banks have not been able to increase their income from commission and discount. On the contrary, they have got heavy burden of personal and administrative overheads. Similarly, due to accumulated overdue and defaulting loans, profit position of these banks has been seriously affected. On the other hand, the foreign venture banks have been functioning in an efficient way. They are making huge profit after year and have been distributing large amount of bonus and dividends to its employees and shareholders. Because of their effective persuasion for loan recovery, overdue and defaulting loans have been limited resulting in high margins between income and interest expenses. Similarly, concentration of these banks to modern off-balance sheet operations and efficient personal management has added to the maximization of their profits. (Thapa, 1994: 29-37)

Shekhar Bahadur Pradhan (1995) study on "**Deposit Mobilization, its problem and prospectus**" has presented a short glimpse on investment in different sectors its problem and prospectus. On his article, he has expressed that Deposit is the lifeblood of any financial institution or non-government organization. He has also added in consideration of ten commercial banks nearly three dozen of finance companies, the latest figure does produce a strong feeling that a serious review must be made of problems and prospectus of deposit sector. Barring few joint venture banks other organization heavily in the business deposit receiving and credit disbursement. In light, he has pointed out following problems of deposit mobilization in Nepalese perspective:

- (1) Due to the lack of education most of Nepalese people do not go for saving in institutional manner. However, they are very much used of saving be it in the form of cash, ornaments or kind. Their reluctance to deal with institutional system are governed by their lower level of understanding about financial organizations, process requirements, office hours, withdrawal system, availability of depositing facilities and so on.
- (2) Due to the lesser office hours of banking system people prefers for holding the cash in the personal possession.
- (3) Unavailability of the institutional services in the rural areas.

- (4) No more mobilization and improvement of the employment of deposits in the loan sectors.

Mr. Pradhan has not only pointed out the problems but also suggested for the prosperity of deposit mobilization. They are given as:

- (1) By cultivating the habit of using the formal sector for transaction must be a priority and continuous educational program.
- (2) By adding service hours system will definitely be an appropriate step.
- (3) By providing sufficient institutional service in the rural areas. If deposit mobilization materializes, that should be taken as major achievement as this generated fund can be used somewhere else by the bank. Nepal Rastra Bank could endorse this deposit collection by continuing to subsidize overhead cost for little longer period. A full scale of field office system could be taken back and modes manpower strength deputed to cut down overhead cost.
- (4) Nepal Rastra Bank could also organize training program to develop skilled manpower.
- (5) The scheme of mobilizing the deposits in the form of free personal accident insurance, deposit insurance may be fruitful .Not only waiting for potential customer it is better to reach to the potential depositors. (*Pradhan, 1995:91*)

Dev Lal Kishi (1996) study on "**The changing face of the banking sector and the HMG/N recent budgetary policy**" concluded that following an introduction of the reform in the banking sector as an integrate part of the liberal economy policy more banks and finance companies have come up as a welcome measure of competition. However, because of poor investment policies and lack of internal central the two government controlled banks, Nepal Bank Ltd. and Rastriya Banijya Bank non performing assets have increased substantially. Now, Nepal Rastra Bank has awarded the management contact to foreign companies to improve the condition of non-performing assets. The policy of giving management of professional consultant is a part of the financial sector reform policy of NRB. (*Kishi, 1996: 27-32*)

Sunity Shrestha (1997) study on "**Lending operation of commercial banks of Nepal and its impact on GDP.**" deals with the objective to make an analysis of contribution of commercial banks lending to the Gross Domestic Product (GDP) of Nepal. She has

set hypothesis that there has been positive impact of lending of commercial banks to the GDP. In research methodology, she has considered GDP as the dependent variable and various sectors of lending viz. agricultural, industrial, commercial service, general and social sectors as independent variables; multiple regression technique has been analyzed in the contribution.

The multi variety analysis has shown that all the variables except service sector lending have positive impact on GDP. Thus, in conclusion she has accepted the hypothesis i.e., there has been positive impact by the lending of commercial banks in various sectors of economy, except service sector investment. (*Shrestha, 1997: 23-27*)

Ramesh Lal Shrestha (1998) study on "**A study on Deposit and Credits of commercial banks in Nepal**" concluded that the credit deposit ration would be 51.30% other things remaining the same in Nepal, which was the lowest under the period of review. Therefore he had strongly recommended that the joint venture banks should try to give more credit entering few field as far a possible, otherwise they might not be able to absorb even the total expenses. (*Shrestha, 1998: 16*)

Mr. Ramesh Ghimire (2005) study on "**Foreign Investment in Nepal**" has expressed his view that Nepal encourages foreign investment as joint venture operations with Nepalese investors or as 100 percent foreign owned enterprises. After the restoration of multi-party democracy system in 1990, Nepal has opened the doors to foreign investment in practically every sector of economic activity. The New Industrial Policy of 1992 identifies foreign investment promotion as an important strategy in achieving the objectives of increasing industrial production to meet the basic needs of the people, create maximum employment opportunities and pave the way for the improvement in the balance of payments. Foreign investment is expected to supplement domestic private investment through foreign capital flows, transfer of technology, improvement in management skills and productivity and providing access to international markets. In this context, HMG is encouraging foreign investments in Nepal by providing attractive incentives and facilities within a liberal and open policy. (*Ghimire, 2005: 95*)



### **2.3 Review of Master's Degree Thesis**

Various thesis works have been conducted by various students regarding the various aspects of commercial banks such as financial performance, lending policy, investment policy, interest rate structure, resources mobilization, capital structure etc. Some of them, relevant for study is presented below:

Mr. Raja Ram Khadka (1998) conducted a thesis research on "A Comparative study of investment policy of Nepal Arab Bank Ltd. to other joint venture banks of Nepal". The main objectives of the study was to discuss fund mobilization and investment policy of NABIL in respect to its fee-based off balance sheet transaction and fund base of balance sheet transaction in comparison to other JVBs and to evaluate the liquidity asset management efficiency and profitability position in related fund mobilization of NABIL in comparison to the JVBs.

He has found that NABIL is comparatively less successful in on-balance sheet utilization as well as off-balance sheet operation than that of other JVBs, which predicted that NABIL could not mobilize as efficiently as other JVBs and may be behind in the comparative market of banking in the coming days. Profitability position of NABIL is comparatively not better than that of other JVBs. Therefore, NABIL maintain its high profit margin in future & growth ratio of NABIL seems to be more successful to increase its sources of funds than other JVBs. The liquidity position of NABIL is comparatively worse than that of other JVBs; NABIL has utilized more portions of current assets as loan and advances and less portion as investment on government securities.

He suggested the JVBs 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 and reduce its expenses and collect fund for more profitability. Also to maintain the ratio of cash and bank balance to total deposit NABIL has to increase cash and bank balance to meet loan demand. It also should strongly follow liberal lending policy and invest more and more percentage amount of total deposits in loan and advances.

Mr. Upendra Tuladhar (1999) has conducted his study entitled "A study on investment policy of Nepal Grindlays Banks Ltd. in comparison to other joint venture banks. (NABIL and HBL)". The main objectives of study was to evaluate liquidity assets management, efficiency, profitability and risk position of NGBL in comparison to NABIL and HBL and to find out relationship to find out relationship between deposits and total investment deposit and loan advances and net profit.

He has found that the liquidity position of NGBL better than NABIL and HBL. NGBL has successfully maintains and manages assets towards different income generating activities. Income from loan and advances and total investment is the main income source of NGBL and it can affect the bank net profit. Profitability position and growth ratio of NGBL is better than NABIL and HBL. There should be negative correlation coefficient in case of NGBL and NABIL and positive correlation coefficient in case of HBL between deposits and total investment.

The researcher has concluded that joint venture banks of Nepal are not effectively providing information to their clients. These banks have given first priority on education sectors while making investment. The poverty stricken and deprived banking facilities to the rural areas is that these banks were profit oriented only. He recommends bank have to increase cash and bank balance to meet the need of investment and demand of loans and advances. They provide less loan and advance compare to its total deposits, so they follow a liberal lending policy so that more percentage of deposits can be invested to different profitable sectors.

NGBL give less priority of investing in government securities so they have to invest its fund in purchase of shares and debentures of other government and semi-government companies.

Mr. Shiba Raj Laudari (2001) in his thesis study entitled, "A study on investment policy of Nepal Indosuez Bank Ltd. in comparison to Nepal SBI Bank Ltd." that interest earned ratio to total working fund of NIBL can not be considered satisfactory. So, it has to manage just required working fund so as it is completely in effect. This helps the bank to manage the best possible working fund. The NIBL bank is not in better position regarding its on balance as well as off balance activities in compare to

SBI. It does not seem to follow any definite policy regarding the management of its assets. He further found that the profitability position of NIBL bank is comparatively worse than that of SBI. The bank must maintain its high profit margin for the well being in future. NIBL bank has maintained high growth rate in comparison to SBI bank though it is not successful to make enough investment. And can say that the bank is successful in increasing its sources of funds and its mobilization. Finally he concluded that there is significant difference between return on loan and advance ratio of NIBL and SBI. But there is no significant relationship between return on loan and advance ratio. The calculated value is less than tabulated value. The position of NIBL bank in regard to utilization of the funds to earn profit is not better in comparison to SBI. Commercial banks should be able to generate capital. Otherwise lower capital formation hampers economic development of the people.

Mr. Rabindra Joshi (2003) in his thesis study entitled, "A comparative study on investment policy of Standard Chartered Bank Nepal Ltd. and Everest Bank Ltd." that both banks have non-satisfactory current ratio in this study period. The SCBNL is not in a better position to maintain its cash and bank balance in comparison to EBL but it doesn't mean it can't meet its daily requirement to make the payment on customer's deposits. He has recommended that to collect more amounts as deposit through large variety of deposit schemes like cumulative deposit scheme, prize bond scheme, gift cheques scheme, interest scheme etc. investment means use of their resource in different income sector. The banks should come forward with national priority tasks i.e. deposit collection, resource mobilization. The tasks are possible when they expand branches, more employment opportunities, service to more customers, developing skills and expertise in local staffs, satisfactions on profit earning and exchange of autonomy provided by them. A policy should be formulated to enhance its income and should control its administrative expenses, try to collect cheaper funds being more profitable. So they increase net profit earning in future.

Mr. Dipak Pandit (2004) in his thesis work entitled, "Investment policy analysis of Joint Venture Bank" has made an attempt to examine and interpret the investment policies adopted of Joint Venture Banks of Nepal. He has mainly found out the liquidity position of BOK and EBL have not satisfactory. SBI's loan and advance to total deposit ratio is lower at all. The profitability position of all banks is not

satisfactory. In case of growth ratio SBI has failure to maintain its positive growth ratio of total investment and net profit. There is significant relationship between deposits and total investment of BOK and EBL. But there is no significant relationship between deposits and total investment of SBI only.

He has recommended that SBI, BOK and EBL have to improve present fund mobilization and investment. They have to increased cash and bank balance to meet current obligations and loan demand. They have to follow the liberal lending policy. They have to try for the collection of the fund at cheaper rate.

Ms. Jyoti Joshi (2005) conducted a study on "Investment policy of Commercial Banks in Nepal: A comparative study of Everest Bank Limited with NABIL Bank Limited & Bank of Kathmandu". The objectives of the study are:

- To discuss fund mobilization & investment policy of EBL, NABIL & Bank of Kathmandu.
- To evaluate liquidity, efficiency, profitability and risk position.
- To evaluate the growth ratio of loan & advances, total investment with other financial variables.
- To analyze the trend of deposits utilization towards loan & advances and total investment.

She has found that the liquidity position of EBL is comparatively better than BOK. EBL has good deposit collection and has enough investment on government securities. Profitability ratio of EBL is average profitable in comparison to other commercial banks i.e. NABIL & BOK and risk position is moderate risk between NABIL & BOK. The growth ratio of EBL is high in total deposit loan and advances & net profit than BOK & NABIL. Similarly, the bank is successful in increasing its sources of fund & its mobilization than NABIL & BOK.

She recommends mobilizing EBL's idle cash and bank balance in profitable sector as loan & advance as it increase the profit of bank. For mobilizing funds bank should collect a large variety of deposit through schemes like cumulative deposit scheme, price bond scheme, gift cheque scheme recurring deposit scheme, deposit linked life

insurance scheme, monthly interest scheme and many more. EBL has successfully invested on government securities & loan & advances but has failed to return, so it should imitate strong steps for the recovery part, which in turn can show high growth in profitability and should take more consistent liberal lending policy. EBL also adopt innovative approach on banking. The business of the bank should be customer oriented. It should strengthen and activate its marketing function, as it is an effective tool to attract and retain the customers.

#### **2.4 Research Gap**

Nepal Arab Bank Limited and Nepal Investment Bank Ltd. are the first two joint ventures banks of Nepal. All of the above research related to investment policy does not embrace these facts and comparison has been made regardless of establishment, which is quite unfeasible as the new bank and the old bank cannot be compared. So to fulfill this gap, the present study is conducted on the investment policy by taking the two oldest joint venture banks, NABIL and NIBL of Nepal.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

Research methodology describes the methods and process as applied in the entire subject of the study. It is a way to systematically solve the research problem. Research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objectives in view C.R.Kothari, 1989. The research methodology adopted for the present study is mentioned in this chapter which deals with research design, sources of data, data collection, sample and population.

#### **3. 1 Research Design**

Research is a systematize effort to gain new knowledge. "Research design is the conceptual structure within which research is conducted". It constitutes the blueprint for the collection, recording, interpretation, reporting and analysis of data. Descriptive and analytical research designs have been used to achieve the objective of this study. Descriptive Techniques have been applied to evaluate investment performance of NABIL and compare it with NIBL as well as some statistical and financial tools have been adopted to examine facts. The study is design as to give a clear picture of the bank's investment circumstances with the help of available data and with some useful suggestions & recommendation.

#### **3. 2 Population and Sample**

There are 26 commercial banks operating in Nepal by mid July 2008. However, the study of all banks in the thesis is almost impossible. So out of the total population of 26 commercial, two banks viz, NABIL Bank Ltd. and Nepal Investment Bank Limited are taken as sample to fulfill the objectives.

#### **3.3 Nature and Source of data**

The study is mainly based on the secondary data relating to the study of investment analysis of NABIL & NIBL banks as they are available at NABIL & NIBL. Determining the sources of data is an important step in the collection of data.

Basically this study is conducted on the basis of two sources: secondary and analyzed data and primary data. Primary data were also used through formal and informal talks, interview, and questionnaire. For analysis the data are collected from Bank's Financial Statement & Annual Reports of these two banks and another related data are collected from many institutions and regulating authorities like NRB, Security Exchange board, Nepal Stock Exchange Ltd., Economic Survey, Ministry and Finance, Budget Speech of different fiscal years, T.U. and SDC library, various articles published in the newspaper, worldwide web, internet, magazines, journals, reports etc.

### **3.4 Method of Data Presentation and Analysis**

The data presentation and analysis are focal part of the study. Ranges of financial and statistical tools are used to analyze the collected data and to achieve the objectives of the study. The analysis of the data will be done according to pattern of data available. Because of limited time and resources, simple analytical statistical tools such as graph, percentage, coefficient of correlation, regression analysis and the technique of least square are adopted in this study. In the same way, some strong financial tools such as ratio analysis and trend analysis have also been used for financial analysis. The data extracted from annual report, financial statement and other available information are processed and tabulated in various tables and charts under different headings according to their nature. .

### **3.5 Financial Tools**

Financial tools, like ratio analysis have been used to examine the financial strength & weakness of banks in this study. Ratio analysis is used to compare a firm financial performance. From the help of ratio analysis the quantitative judgment can be done regarding financial performance of a firm. It basically helps to analyze the strength and weakness of the firm. In this study different ratios which are related to the investment operation of the bank are calculated which are given below.

#### **3.5.1 Liquidity Ratios**

Liquidity means the ability of a firm to satisfy its short-term obligations as they come due. It measured by the speed with which bank assets can be converted into cash to meet deposit withdrawal and other current obligations. The following ratios are evaluated under liquidity ratio:

**a) Current ratio:**

The calculation of current ratio is based on a simple comparison between current liabilities. It measures short-term solvency, so it is often called liquidity solvency ratio and working capital ratio. Current ratio is calculated by applying following formula.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}}$$

**b) Cash and Bank Balance to Current Asset ratio:**

Cash and bank balance to current assets ratio reflects the portion of cash and bank balance in total of current assets. Cash and bank balance are highly liquid assets than other in current assets portion so this ratio visualizes higher liquidity position than current ratio. This ratio can be calculated by using the following formula:

$$\text{Cash and Bank balance to Current assets ratio} = \frac{\text{Cash and Bank balance}}{\text{Current assets}}$$

**c) Cash and Bank Balance to Total Deposit Ratio**

Cash and bank balance are the current assets. It includes cash on hand and foreign cash on hand; cheques and other cash items, balance with domestic banks and balance held in foreign banks. Total deposit includes current, saving and fixed deposit, money at call & short notice & other deposits. This ratio is calculated by dividing cash and bank balance by total deposit. This can be presented as,

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

**d) Investment on Government Securities to Current Asset Ratio:**

Investment on government securities includes treasury bills and development bond. This ratio is calculated by dividing investment on govt. securities by current assets. This can be presented as,

$$\begin{aligned} &\text{Investment on Government Securities to Current Asset Ratio} \\ &= \frac{\text{Investment on Government Securities}}{\text{Total Current Assets}} \end{aligned}$$



Here investment on government securities includes treasury bills and development bond etc.

**e) Loan and Advances to Current Assets Ratio:**

Loan & advances are current assets, which generates income for the bank and show the percentage of loan and advances in the total assets. Loan & advances include loans, advances, cash credit, loan & foreign bill, purchase & discounted. This ratio can be computed by dividing loans and advances by current assets. This can be states as,

$$\text{Loan and Advances to Current Assets Ratio} = \frac{\text{Loan \& advances}}{\text{Current assets}}$$

**3.5.2 Asset Management Ratio**

Asset management ratios are employed to evaluate the efficiency with which the firm manage & utilizes its assets. It is also called turnover ratios because it indicates the speed with which assets are being converted or turnover. The following ratios are used in this asset management ratio:

**a) Loan & Advances to Total Deposit Ratio**

This ratio shows how successfully the banks are utilizing its total deposits on loan & advances for generating profit. Higher ratio implies the better utilization of total deposits. Mathematically it is presented as,

$$\text{Loan \& Advances to Total Deposit Ratio} = \frac{\text{Loan \& Advances}}{\text{Total deposit}}$$

**b) Total Investment to Total Deposit**

This ratio implies the utilization of firms deposit on investment in government securities and share, debentures of other companies and bank. Mathematically it is presented as,

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

The numerator consists of investment on government securities, investment on debenture and bond, shares in subsidiary companies, shares in other companies and other investment.

**c) Loan & Advances to Total Working Fund Ratio**

Loan & advance is the major component in total working fund (total assets) which indicates the ability of bank to canalize its deposits in the form of loan & advances to earn high return. This can be obtained by dividing loan & advances by total working fund. Mathematically it is presented as,

$$\text{Loan \& Advances to Total Working Fund Ratio} = \frac{\text{Loan \& Advances}}{\text{Total Working fund}}$$

Here, the denominator includes all assets of on balance items. In other words this includes current assets, loans for development banks and other miscellaneous assets but excludes off balance sheet items like letter of credit, letter of guarantee etc.

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

This ratio shows the banks investment on government securities in comparison to the total working fund. This ratio is calculated by dividing investment on government securities by total working fund. This is presented as,

$$\text{Investment on Gov. Securities to Total Working Fund} = \frac{\text{Investment on government securities}}{\text{Total working fund}}$$

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

This ratio shows the banks investment in shares and debenture of the subsidiary and other companies. This ratio can be derived by dividing investment on shares and debentures by total working fund. This is presented as,

$$\text{Investment on Shares \& Debentures to Total Working Fund} = \frac{\text{Investment on shares and debentures}}{\text{Total working fund}}$$

Here the numerator indicates investment on debentures, bonds and shares of other companies.

### 3.5.3 Profitability Ratios

Profitability ratios are very helpful to measure the overall efficiency of operations of a firm in term of profit. It is true indication of financial performance of any institutions. Higher the profit ratio, the higher will be the efficiency bank and vice versa. Profitability position can be evaluated through following different ways:

#### a) Return on Loan and Advance Ratio

This ratio indicates how efficiency the bank has employed its resources in the form of loan & advances. This ratio is computed by dividing net profit (loss) by loan and advances. This can be expressed as,

$$\text{Return on Loan and Advances} = \frac{\text{Net Profit}}{\text{Loan \& advances}}$$

#### b) Return on Equity Ratio (ROE)

Net worth refers to the owner's claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the banks have used the funds of owners. Total investment earned to total outside assets ratio. This can be stated as,

$$\text{ROA} = \frac{\text{Net Profit}}{\text{Total equity capital}}$$

#### c) Total Interest Earned to Total Outside Asset Ratio

This ratio measures the interest earning capacity of the bank through the efficient utilization of outside assets. Higher ratio implies efficient use of outside assets to earn interest. This ratio is calculated by dividing total interest earned by total outside assets. This can be presented as,

$$\text{Total Interest Earned to Total Outside Asset} = \frac{\text{Total interest earned}}{\text{Total outside assets}}$$

### 3.5.4 Risk Ratios

Risk taking is the prime business of banks investment management. It increases effectiveness and profitability of the bank. These ratios indicate the amount of risk associated with the various banking operations which ultimately influences the banks investment policy. The following ratios are evaluated under this topic:

#### a) Liquidity Risk Ratio

This ratio measures the level of risk associated with the liquid assets i.e. cash, bank balance that are kept in the bank for the purpose of satisfying the deposit demand for cash. This ratio is calculated by dividing total cash and bank balance by total deposits. It can be stated as,

$$\text{Liquidity Risk Ratio} = \frac{\text{Total cash and bank balance}}{\text{Total deposits}}$$

#### b) Credit Risk Ratio

It measures the possibility that loan will not be repaid or that investment will deteriorate in quality or go into default with consequent loss to the bank. By definition, credit risk ratio is expressed as the percentage of non-performing loan to total loan & advances. Here, dividing total loan and advances by total assets derives this ratio. This can be stated as,

$$\text{Credit Risk Ratio} = \frac{\text{Total loan \& advances}}{\text{Total assets}}$$

### 3.3.5 Growth Ratios

Growth ratios are directly related to the fund mobilization & investment management of commercial bank. It represents how well the commercial bank is maintaining its economic & financial position. To examine and analyze the expansion and growth of the bank following growth ratios are calculated in this study.

- a) Growth ratio of total deposits.
- b) Growth ratio of loan and advance.
- c) Growth ratio of total investment.
- d) Growth ratio of net profit.

### 3.6 Statistical Tools

To achieve the objective of this study, some important statistical tools are used such as mean, Standard deviation, co-efficient of variation co-efficient of correlation, trend analysis and test of hypothesis (t-Statistic) which are as follows:

#### a) Standard Deviation

Standard deviation is an important and widely used to measure dispersion. A standard deviation is the positive square root of the arithmetic mean of the squares of the deviations of the given observations from their arithmetic mean. It is denoted by the letter  $\sigma$  (sigma). In this study standard deviation of different ratios are calculated.

#### b) Co-efficient of variation

The co-efficient of variation is the most commonly used measure of relative variation. It is the relative measures of dispersion, comparable across distribution, which is defined as the ratio of the standard deviation to the mean expressed in percent. It is used in such problems where the researcher wants to compare the variability of data more than two years. It can be shown as,

$$\text{Co-efficient of variation} = \frac{\text{standard deviation}}{\text{Mean}} \times 100\%$$

#### c) Co-efficient of Correlation

This analysis interprets and identifies the relationship between two or more variables. In the case of highly correlated variable, the effect on none variable may effects another correlated variable. This study tries to find out relationship between the following variables.

- a) Co-efficient of correlation between deposit and loan and advances.
- b) Co- efficient of correlation between total deposit and total investment.

This tools analyze the relationship between these variables and help the bank to make appropriate policy regarding deposit collection, fund utilization and maximization profit.

#### **d) Trend Analysis**

These analysis analyze the trend of deposit, loan and advances, investment and net profit of NABIL and NIBL and make the forecast for the next 5 years.

- i. Trend analysis of total deposit
- ii. Trend analysis of loan and advance
- iii. Trend analysis of total investment
- iv. Trend analysis of net profit

The trends of related variable can be calculated as,  $Y = a+bx$

#### **e) Test of Hypothesis**

The objective of the test is to get the significant different regarding the parameters the population on the basis of sample drawn from the population. This test has been conducted on the various relations related with the banking business.

- i. Test of hypothesis on loan & advances to total deposit ratio of NABIL and NIBL.
- ii. Test of hypothesis on total investment to total deposit ratio of NABIL and NIBL.

## **CHAPTER - IV**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Financial Analysis**

In this topic employing some financial tools such as liquidity ratio, asset management ratio, profitability ratio and other ratios are used to achieve the objective of the study. Only those ratios are calculated and analyzed which are very important to evaluate investment policy of a commercial bank.

##### **4.1.1 Liquidity ratio**

A commercial bank must maintain its satisfactory liquidity position to satisfy the credit needs of the community, to meet the demands for deposits withdrawal, pay maturity obligation in time and convert non cash into cash to satisfy immediate needs without loss to the bank and without consequent impact on long-run profitability of the bank. The liquidity position of NABIL and NIBL has been calculated from the following ratio:

##### **a) Current Ratio**

The calculation of current ratio is based on a simple comparison between current assets and current liabilities. This is the broad measure of liquidity position of the bank. The standard of current ratio is 2:1 for banking and 1:1 for seasonal business so on.

We have,

$$\text{Current Ratio} = \frac{\text{Total current assets}}{\text{Total current liabilities}}$$

Current Ratios of NABIL and NIBL from fiscal year 2002/2003 to 2006/2007 are given below in Table: 4.1.

**Table: 4.1**  
**Current Ratio**

<b>Banks</b>	<b>Fiscal Year</b>					<b>Mean</b>	<b>S.D.</b>	<b>C.V%</b>
	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>			
<b>NABIL</b>	0.91	0.93	0.96	1.01	0.80	0.92	0.07	7.58
<b>NIBL</b>	0.89	0.89	0.92	0.92	0.94	0.91	0.02	2.14

*(Source: Appendix – I)*

The table showed that the current ratio of both the banks has met the standard ratio of 2:1 in none of the year. This clearly indicates that both the bank faces difficulties to meet its obligation. As NABIL maintained an average ratio of 0.92:1, NIBL maintained an average current ratio of 0.91:1 in the five years period taken for research. Similarly, the C.V. of NABIL (7.58%) and that of NIBL (2.14%) indicates that the current ratio of NABIL is more volatile than that of NIBL. Comparing two banks, NABIL has maintained slightly higher current ratio than NIBL. However, it seems necessary that both bank increase their current ratio and meet the standard ratio of 2:1 to avoid bankruptcy. The failure of both the banks to interrelate between the current assets and current liabilities has resulted the low current ratio and jeopardized the bank solvency. Thus, both the banks should increase its current assets in proportion to the current liabilities to have sound liquidity position.

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

Cash and Bank Balance to Current Ratio reflects the portion of cash and bank balance in total of current assets. Cash and bank balance are the most liquid current assets. This ratio measures the percentage of most liquid fund with the bank to make immediate payment.

Where,

Cash and Bank Balance is composed of cash on hand including foreign cheques, other cash items and balance with domestic banks and abroad.



Current assets consists of Cash and Bank Balance, money at call or short-term notice, loan and advances, investment in government securities and other interest receivable and other miscellaneous current assets.

**Table: 4.2**  
**Cash and Bank Balance to Current Assets Ratio (%)**

<b>Banks</b>	<b>Fiscal Year</b>					<b>Mean</b>	<b>S.D.</b>	<b>C.V%</b>
	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>			
<b>NABIL</b>	8.25	6.82	3.74	3.05	6.89	5.75	2.00	34.80
<b>NIBL</b>	12.32	11.00	9.60	13.04	10.35	11.26	1.26	11.20

*(Source: Appendix – I)*

The above table showed that the cash and bank balance of NABIL occupied 8.25% of current Assets in the fiscal year 2002/03. Similarly, the ratio was 6.82%, 3.74%, 3.05% and 6.89% in the fiscal year 2003/04, 2004/05, 2005/06 and 2006/07 respectively. In average, NABIL maintained 5.75% of the current assets as cash and bank balance. Similarly, the ratio in NIBL ranged from 9.60% in the fiscal year 2004/05 to 13.04 in the fiscal year 2005/06. The average ratio of NIBL is 11.26% and the C.V. on such ratio is 11.20%. Comparing two banks, NIBL maintained higher percentage of current assets as liquid assets (especially cash and bank balance) than NABIL and also the cash and bank balance to current assets ratio of NIBL is more uniform than that of NABIL as the C.V. of NIBL is less than that of NABIL.

**c) Cash and Bank Balance to Total Deposit Ratio**

Cash and Bank balance includes cash on hand, foreign cash on hand, cheques and other cash items, balance with domestic bank and balance held aboard. This ratio is calculated by dividing cash & bank balance by total deposit.

The following table shows the cash and bank balance to total deposits ratio of NABIL and NIBL. Through this table cash and bank balance to total deposit ratio are analyzed & standard deviation, mean & C.V is calculated by using the formula.

**Table: 4.3****Cash and bank balance to total deposit ratio (%)**

<b>Banks</b>	<b>Fiscal Year</b>					<b>Mean</b>	<b>S.D.</b>	<b>C.V%</b>
	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>			
<b>NABIL</b>	8.51	6.87	3.83	3.26	5.99	5.69	1.94	34.10
<b>NIBL</b>	11.69	10.65	9.40	12.34	9.97	10.81	1.08	9.10

*(Source: Appendix – I)*

It is observed that total cash and bank balance to total deposit of both NABIL and NIBL are in a fluctuating trend. The ratio of NABIL ranged from 8.51% in F/Y 2002/03 and to 3.26% in F/Y 2005/06. However, the ratio of NIBL ranged from 9.40% in F/Y 2004/05 to 12.34% in F/Y 2005/06. The mean ratio of NIBL is higher than that of NABIL. The higher mean ratio of cash and bank balance to total deposits of NIBL reveals that liquidity position of NIBL regard to its total deposits is more satisfactory than that of NABIL. The standard deviation of NABIL is higher than NIBL. On the basis of co-efficient of variation it can be concluded that NABIL's ratios are less consistency than that of NIBL because it's higher C.V i.e.  $34.10 > 9.10\%$ . The ratio indicated that NIBL has the policy of keeping more percentage of its total deposit as cash to meet its liabilities than NABIL. Hence, higher percentage of NIBL's total deposit remains idle in the form of cash.

**d) Investment on Govt. Securities to Current Asset Ratio**

This ratio examines that portion of commercial banks current assets, which is invested on different government securities. More or less, each commercial bank is interested to invest their collected fund on different types of securities issued by government at different times to utilize their excess fund and have other purpose. Though, government securities are not so liquid a cash and bank balance of commercial bank, they can be easily sold in the market or converted into cash in other ways.

This ratio shows that out of total current assets, how much percentage of it has been occupied by the investment on government securities. The ratio is calculated by dividing investment on government securities by total current assets. The ratios are presented in the following table.

**Table: 4.4****Investment on govt. securities to current asset ratio**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	25.88	25.78	16.13	11.15	23.66	20.52	5.89	28.7
<b>NIBL</b>	5.32	17.96	13.95	14.09	13.81	13.03	4.18	32.09

*(Source: Appendix – I)*

The above table reveals that the mean ratio of investment on govt. securities to current assets of NABIL is higher than the mean ratio of NIBL i.e.  $20.52 > 13.03$ . NABIL has followed the fluctuating trend but NIBL's performance is poor from this point of view. The ratio indicates that higher percentage of current assets of NABIL is invested in risk free sector (government securities) than the percentage of current assets of NIBL.

**e) Loan and Advance to Current Assets Ratio**

Loan and advances are the current assets of commercial bank, which includes loan and advances, cash, credit, overdraft, loan and foreign bill purchase and discount. A commercial bank should not keep its all collected fund as cash and bank balances but they should be invested a loan and advance to the customer because they must earn high profit by mobilization funds for long life banking. They should pay interest on these deposit funds even they don't generate loan and advances and may lose some earning. But high loan and advances may be harmful because they need sufficient liquidity.

The ratio is calculated by dividing loan and advances to current assets. The ratios are presented in the following tables.

**Table: 4.5****Loan and advances to current assets ratio (%)**

Banks	Fiscal Year					Mean	St.dev	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	55.93	57.50	70.72	62.61	76.49	64.65	7.85	12.15
<b>NIBL</b>	76.78	63.98	72.50	71.35	71.35	71.58	4.21	5.89

*(Source: Appendix – I)*

The above table shows that both banks' loan and advances to current assets ratio are in a fluctuating trend. The highest ratio of NABIL is 70.72% (F/Y 2004/05) and NIBL is 76.78% (F/Y 2002/03) respectively.

In case of the mean ratio, NIBL has maintained high ratio in comparison to NABIL. The higher mean ratio of loan and advances to current assets of NIBL reveals that its liquidity position with regard to its current asset is more satisfactory than of NABIL.

#### 4.1.2 Analysis of the Asset Management Position of the banks

A commercial bank should be able to manage its assets very well to earn high profit, to satisfy its customers and for its own existence. This ratio measures how efficiently the bank manages the resources at its commands.

The following ratios are measured as the assets management ratio of the NABIL and NIBL in comparison.

##### a) Loan and advances to total deposit ratio

This ratio actually measures the bank's ability to utilize the depositors fund to earn profit by providing loan and advances. This ratio is compute by dividing loan and advances by total deposit. A high ratio of loan and advances indicates better mobilization of collected deposits and vice-versa. But it should be noted that too high ratio might not be better from its liquidity point of view. The following table reflects loan and advances to total deposit ratio of NABIL and NIBL

**Table: 4.6**  
**Loan and advances to total deposit ratio (%)**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	57.68	58.01	72.57	66.79	66.60	64.33	5.72	8.89
<b>NIBL</b>	72.86	61.87	71.04	67.50	70.59	68.77	3.86	5.60

*(Source: Appendix –II)*

The above table shows that NABIL's and NIBL's loan and advances to total deposit ratio have fluctuating trend during the study period. The highest ratio of NABIL and

NIBL are 72.57% (F/Y 2004/05) and 72.86% (F/Y 2002/03) respectively. In average, the ratio of NIBL is higher than that of NABIL (i.e.  $68.77 > 64.33$ ). It shows that NIBL seems to be strong to mobilize its total deposit as loan and advances in comparison to NABIL. On the basis of coefficient of variation, it can be concluded that NIBL's loan and advances is more consistent that of NABIL's because of its lower C.V. i.e.  $5.60 < 8.89$ .

From the table, it can be concluded that the total deposit of NIBL is slightly highly mobilized than that of NABIL as loans and advances.

#### **b) Total investment to total deposit ratio**

A commercial bank may mobilize its deposit by investing its fund in different securities issued by government and other financial and non-financial companies. Now the effort has been made to measure the extent to which the banks are successful in mobilize the deposits on investment. In the process of portfolio management of banks assets various factors such as availability of fund, liquidity requirement, central banks norms etc are to be considered in general. A high ratio is the indicator of high success to mobilize the banking fund as investment and vice versa. The following table shows the ratio of total investment to total deposits of NABIL and NIBL.

**Table: 4.7**  
**Total investment to total deposit ratio (%)**

<b>Banks</b>	<b>Fiscal Year</b>					<b>Mean</b>	<b>S.D.</b>	<b>C.V %</b>
	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>			
<b>NABIL</b>	44.85	41.33	29.27	31.93	38.32	37.14	5.79	15.59
<b>NIBL</b>	21.52	33.51	27.60	29.60	26.57	27.76	3.92	14.12

*(Source: Appendix –II)*

Above table reveals that both bank's total investment to total deposit ratios are in fluctuating trend. NABIL's has highest ratio in F/Y 2002/03 i.e. 44.85% and lowest ratio in F/Y 2004/05 i.e. 29.27%. NIBL's has highest ratio in F/Y 2003/04 i.e. 33.51% and 21.52% lowest ratio in F/Y 2002/03.

On the basis of mean ratios, it can be said that NIBL's capacity to mobilize its deposits on total investment is not so good as its mean ratio is lower than that of NABIL. On the other hand, observing the C.V of ratios, it can be said that NIBL's loan and advances ratio is more consistent than NABIL, because of its lower C.V. i.e. 14.12%.

From the above table, it can be concluded that NABIL's total deposit is more mobilized in investment than that of NIBL. Hence, it can be concluded that NIBL utilized its total deposit in loan and advances more than NABIL and in contrast, NABIL mobilized its total deposit in investment more than NIBL.

**c) Loan and Advances to total working fund ratio**

A commercial bank's working fund should play a very significant role in profit generation through fund mobilization. The ratio reflects the extent to which the banks are successful in mobilizing their total assets of loan and advances for the purpose of income generation. A high ratio indicates a better fund mobilization as loan and advances and vice-versa.

The ratio is calculated by dividing loan advances by total working fund. The following ratio shows the ratio of loan and advances to total working fund.

**Table: 4.8**

**Loan and advances to total working fund ratio (%)**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	46.83	48.91	61.60	57.87	57.04	54.45	5.63	10.33
<b>NIBL</b>	64.03	53.79	62.22	59.90	62.65	60.52	3.62	5.98

*(Source: Appendix –II)*

Above table no 4.8 shows that NABIL's ratio has a fluctuating trend. It has the highest ratio in the F/Y 2004/05 i.e. 61.60% and the lowest ratio is 46.83% in F/Y 2002/03. In case of NIBL also it has a fluctuating trend; it maintained the highest ratio in F/Y 2002/03 i.e.64.03% and the lowest in F/Y 2003/04 i.e.53.79%

From the above analysis, it is concluded that NIBL has highest mean ratio than NABIL. It is clear that NIBL is not in weak condition to mobilize its working fund as loan and advance than NABIL. The coefficient of variation of NIBL is high consistent than that of NABIL i.e. C.V. of NIBL is 5.98% and C.V. of NABIL is 10.33%

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

This ratio reflects the extent to which the banks are successful in mobilizing their total working fund on different types of government securities to maximize the income. All the deposits of the bank should no be utilized in loan and liquidity point of view, Therefore, commercial banks seem to be interested to invite their deposit by purchasing government securities. A high ratio shows that better mobilization of funds as investment on government securities and vice-versa. This ratio is calculated by dividing investment on government securities by total working fund and this ratio of NABIL and NIBL is presented in the following table.

**Table: 4.9**

**Investment on government securities to total working fund ratio (%)**

Banks	Fiscal Year					Mean	S.D.	C.V. %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	21.67	21.93	14.05	10.31	17.64	17.11	4.47	26.12
<b>NIBL</b>	4.44	15.10	11.97	11.82	11.80	11.03	3.52	31.95

*(Source: Appendix –II)*

The above comparative table shows that the ratio of both banks is fluctuating trend in the study period. The mean ratio of NABIL is more than NIBL i.e. 17.11% >11.03%.

The comparison mean ratio of NABIL and NIBL reveals that NABIL is strong to mobilize their working funds as investment in government securities. The coefficient of variation of NIBL's is higher than that of NABIL i.e.31.95% >26.12%. It indicates that NIBL's ratios are less consistent than that of NABIL. Likewise NIBL's variability between ratios during the study period is greater than that of NABIL.

From the above analysis, it can be concluded that NABIL has invested its more portion of working fund on government securities than NIBL.

**e) Investment on Shares and Debentures to Total Working Fund Ratio (%)**

Investment on shares and debentures to working fund ratio reflects the extent to which banks are successful to mobilize their working fund in purchasing shares and debentures of other companies to generate income and utilize extra fund. The high ratio indicates the more portion of working fund investment on share and debenture and vice-versa.

**Table: 4.10**

**Investment on shares and debentures to total working fund ratio Percentage**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
NABIL	0.13	0.13	1.50	0.14	0.25	0.43	0.53	124.86
NIBL	0.15	0.10	0.11	0.09	0.14	0.118	0.023	19.36

*(Source: Appendix –II)*

From the above comparative table, it is found that the NABIL and NIBL have invested nominal percentage to total working fund into shares and debentures of other companies. NABIL ratios are in rising trend but NIBL ratios are in a fluctuating trend showing the lack of efficient and uniform investment policy.

The comparison of mean ratios of NABIL and NIBL, it reveals that NABIL has invested higher amount in shares and debenture than that of NIBL. Moreover, C.V. of NABIL is highest than of the NIBL i.e. 124.86 % >19.36%. Higher C.V. of NABIL ratio states that its ratios are less consistent than of NIBL

**4.1.3 Analysis of the profitability position of the banks**

The main objectives of commercial banks are to earn profit providing different types of banking services to its customers. To meet various objectives, like to have a good liquidity position, meet fixed internal obligation, overcome the future contingencies, grab hidden investment opportunities, expand banking transactions in different places, finance government in need of development funds etc a commercial bank must have to earn sufficient profit.



Of course, profitability ratios are the best indicators of overall efficiency. These ratios are calculated to measure the operating efficiency and overall performance of the financial institution. Here, mainly those ratios represented and analyzed which are related with profit as well as fund mobilization. Through the fall ratios, effort has been made to measure the profit earning capacity of NABIL in comparison to NIBL. The following ratios are calculated under this profitability ratio topic:

**a) Return on Loan and Advances Ratio**

This ratio measures the earning capacity of the commercial banks through its fund mobilization as loan and advances. A high ratio indicates greater success to mobilize fund as loan and advances and vice versa.

This ratio calculated by dividing net profit by total amount of loan and advances. The following table 4.11 shows the return on loan and advances ratio of NABIL and NIBL of study period.

**Table: 4.11**  
**Return on Loan and Advances Ratio Percentage**

Banks	Fiscal Year					Mean	S.D.	C.V.%
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	5.37	5.56	4.90	4.92	4.34	5.02	0.43	8.66
<b>NIBL</b>	2.02	2.14	2.29	1.85	2.04	2.07	0.15	7.0

*(Source: Appendix –III)*

From the above comparative table, it shows that the ratios of both NABIL and NIBL are in fluctuating trend. During the study period, the highest ratio of NABIL is in F/Y 2003/04 i.e.5.56% and the lowest ratio is 4.34% in F/Y 2006/07. In case of NIBL, the highest ratio is 2.29% in F/Y 2004/05 and the lowest ratio is 1.85% in F/Y 2005/06.

On the other hand, when the mean ratios are observed, NABIL has higher ratio than NIBL (i.e. 5.02% >2.07%).Likewise, high C.V. of NABIL i.e. 8.65% indicates high variability of ratios than that of NIBL. Moreover, NABIL's significantly high C.V. shows its less homogeneous ratios during the study period.

In conclusion it can be said that NIBL to be failure to earn high return on its loan and advances in comparison to the NABIL. So, NIBL has to invest their fund in productive sector to increase return ratio.

**b) Return on Equity Ratio (ROE)**

Equity capital of any bank is its owned capital. The prime objectives of any bank is wealth maximization or in other words to earn high profit and there by, maximizing return on its equity capital. ROE is the measuring the role of profitability of bank. It reflects the extent to which the bank has been successful to mobilize or utilize it equity capital. A high ratio indicates higher success to mobilize its owned capital (equity) and vice versa. This ratio is calculated by dividing net profit by total equity capital including paid up capital, P/L a/c, various reserves, general loan loss provision etc. This ratio has been shown in the following table.

**Table: 4.12**  
**Return on equity (%)**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	31.67	30.73	31.29	33.88	32.76	32.06	1.12	3.5
<b>NIBL</b>	18.3	20.94	19.68	24.77	26.68	22.07	3.15	4.30

*(Source: Appendix –III)*

From the above table shows, that the return on equity ratios of both banks are fluctuating trend for the year of study period. NABIL has maintained highest ratio i.e. 33.88% in F/Y 2005/06 and the lowest ratio i.e. 30.73% in F/Y 2003/04. Similarly, NIBL has highest ratio i.e. 26.68% in F/Y 2006/07 and lowest ratio i.e. 18.3% in F/Y 2002/03.

On the basis of mean ratio, it can be said that NABIL hasn't been weaker to earn high profit to it's SH's in comparison to NIBL which can be viewed by the higher mean ratio i.e. 32.06>22.07. The coefficient of variation of NIBL is higher than NABIL i.e. 14.30%>3.50% which indicates that NIBL has low degree of stability than that of NABIL. Thus, it can be concluded that NIBL has not been able to earn high profit through the efficient utilization of its owned capital. Moreover, its low C.V. shows its

quite homogenous ratios during the study period, which shows efficiency investment policy for the mobilization of capital resources.

**c) Total Interest Earned to Total outside Asset Ratio**

The outside assets have played a significant role in commercial banks as a main asset which includes loan and advances, investment on government securities, investment on share and debentures and all other types in investment. A high ratio indicates high earning on total outside assets and vice versa.

This ratio is calculated by dividing total interest earned by total outside assets. The ratio of NABIL and NIBL over the study period has been tabulated below.

**Table: 4.13**

**Total Interest Earned to Total outside Asset Ratio (%)**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	7.38	7.14	7.21	6.86	6.48	7.01	0.29	4.22
<b>NIBL</b>	6.15	6.65	6.31	6.38	6.66	6.43	0.19	3.08

*(Source: Appendix –III)*

From the above comparative table both banks ratio's are in fluctuating trend during the period under study. On the other hand, when mean ratios are observed, NIBL seems to have earned lower amount of interest on their outside assets in comparison to NABIL i.e.6.43<7.01%. Moreover, C.V. of NIBL is significantly lower than that of NABIL i.e. 3.08<4.22%.

**4.1.4 Risk Ratios**

The possibility of risk makes bank's investment a challenging task. Bank has to take risk to get return on investment. The risk taken is satisfied by the increase in profit. A bank has to take high risk if the expects high return on its investment. So, the banks operating for high profit have to accept the risk and manage it efficiently. Through following ratios efforts has been make to measure the level of risk essential in the NABIL and NIBL comparatively.

### a) Liquidity Risk Ratio

The liquidity risk of the bank defines its liquidity need for deposit. The ratio of cash and bank balance to total deposit is the indicator of bank liquidity needed. The cash and bank balance are the most liquid assets and they are considered as banks liquidity sources and deposits as the liquidity needed. A higher liquidity indicates less risk and less profitable bank and vice versa.

This ratio is calculated by dividing total cash and bank balance by total deposits. The following table shows the liquidity ratio of NABIL and NIBL in comparison.

**Table: 4.14**  
**Liquidity risk ratio (%)**

Banks	Fiscal Year					Mean	S.D.	C.V %
	2002/03	2003/04	2004/05	2005/06	2006/07			
<b>NABIL</b>	8.51	6.87	3.83	3.26	5.99	5.7	2.06	36.07
<b>NIBL</b>	11.69	10.65	9.40	12.34	9.97	10.8	1.08	10.00

*(Source: Appendix –IV)*

From the above table shows that the liquidity risk ratios of both banks have fluctuating trend. In case of NABIL, its highest ratio is 8.51% in F/Y 2002/03 and the lowest ratio is 3.26% in F/Y 2004/05. Whereas, the NIBL has maintained the highest ratio is 12.34% in F/Y 2005/06 and the lowest ratio is 9.40% in F/Y 2004/05.

The mean ratio of NIBL is higher than that of NABIL i.e.  $10.8 > 5.7\%$ . But, the C.V of NABIL is higher than that of NIBL i.e.  $36.07 > 10.00\%$ . It indicates that NIBL's liquidity risk ratios are less variable than that of NABIL.

From the above analysis, it can be said that has NIBL maintains higher liquidity which means it operates with lower risk, which decrease profitability. Whereas NABIL has maintained low liquidity policy proved by higher coefficient of variation.

## b) Credit Risk Ratio

Bank utilizes its collected funds in providing credit to different sectors. There is risk of default or non-repayment of loan. While making investment, bank examines the credit risk ratio shows the proportion of non-performing assets (NPAs) in the total loan and advances of a bank. But due to unavailability of the relevant data, here we presented the credit risk as the ratio of total loan and advances to total assets. The following table shows the credit risk ratio of NABIL and NIBL in comparison.

**Table: 4.15**  
**Credit risk ratio (%)**

<b>Banks</b>	<b>Fiscal Year</b>					<b>Mean</b>	<b>S.D.</b>	<b>C.V %</b>
	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>			
<b>NABIL</b>	46.68	48.90	61.60	57.87	57.04	54.42	5.76	10.42
<b>NIBL</b>	64.03	53.79	62.23	59.89	62.65	60.52	3.45	5.77

*(Source: Appendix –IV)*

The above table shows that both banks have fluctuating trend. In case of NABIL, its ratio reached to 61.6% in 2004/05 and lowest ratio i.e. 46.68% in F/Y 2002/03 whereas the ratio of NIBL subject to highest i.e. 64.03% in F/Y 2002/03 and the lowest i.e.53.79% in F/Y 2003/04.

On the basis of mean ratio, it can be said that credit of NABIL is lower than NIBL i.e.  $54.42 < 60.52\%$ . On the other hand, it has higher C.V. than NIBL i.e.  $10.42 > 5.77\%$  which shows that NABIL's credit risk ratios are more variable than that of NIBL. From the above analysis, it can be concluded that the degree of credit risk is higher and its risk ratios are more variable.

### 4.1.5 Growth Ratios

Growth ratios are analyzed and interpreted which are directly related to the fund mobilization and investment of a commercial bank. It represents how well the commercial banks are maintaining their economic and financial position. Under this topics four types of growth ratio are studied which are as follows:

1. Growth ratio of total deposit
2. Growth ratio of loan and advances
3. Growth ratio of total investment

**a) Growth ratio of Total Deposit**

This ratio is calculated by dividing the difference between the last period figure and base year figure by the base year figure then by dividing the number of observations. The high ratio generally indicates better performance of a banks and vice-versa.

**Table: 4.16**  
**Growth ratios of total deposits (%)**

(Rs. in million)

Banks	Fiscal Year					Growth rates
	2002/03	2003/04	2004/05	2005/06	2006/07	
<b>NABIL</b>	13447.65	14119.03	14586.61	19347.40	23342.29	14.72
<b>NIBL</b>	7922.75	11524.75	14254.57	18927.30	24488.85	41.82

(Source: Annual Reports)

The above table shows that the growth ratio of total deposits of NIBL is higher than that of NABIL. The growth ratio of NIBL's total deposit is 41.82% whereas the same of the NABIL is 14.72%. It indicates that NIBL is highly successful in increasing deposit funds in comparison to NABIL.

**b) Growth ratio of Loan and Advances**

**Table: 4.17**  
**Growth Ratios of Loan and Advances (%)**

(Rs. in million)

Banks	Fiscal Year					Growth rates
	2002/03	2003/04	2004/05	2005/06	2006/07	
<b>NABIL</b>	7755.90	8189.99	10586.17	12922.54	15545.78	20.09
<b>NIBL</b>	7772.14	7130.13	10126.05	12776.21	17286.43	24.48

(Source: Annual Reports)

The above comparative table reveals that the growth ratio of loan and advances in case of NIBL are significantly higher than NABIL. It indicates that NIBL is more successful in utilizing its collection fund as loan and advances in comparison to

NABIL. From the above analysis it can be said that the performance of NIBL to grant loan and advance in compare to NABIL is better year-by-year.

**c) Growth ratio of Total Investment**

**Table: 4.18**  
**Growth Ratios of Total Investment (%)**

(Rs. in million)

Banks	Fiscal Year					Growth rates
	2002/03	2003/04	2004/05	2005/06	2006/07	
<b>NABIL</b>	6031.17	5836.07	4269.66	6178.53	8945.31	9.66
<b>NIBL</b>	1705.24	3862.48	3934.19	5602.87	6505.66	56.30

(Source: Annual Reports)

The above table reveals that the growth ratio of investment of NIBL is higher than the NABIL. The growth ratio of NIBL's investment is 56.30% whereas the same of the NABIL is 9.66%. It indicates that NIBL performance is better on investment of different sectors in comparison to NABIL.

**d) Growth ratio of Net Profit**

**Table: 4.19**  
**Growth Ratios of Net Profit (%)**

(Rs. in million)

Banks	Fiscal Year					Growth rates
	2002/03	2003/04	2004/05	2005/06	2006/07	
<b>NABIL</b>	416.25	455.32	518.63	635.262	673.96	12.38
<b>NIBL</b>	116.82	152.67	232.15	350.54	501.40	65.84

(Source: Annual Reports)

The above comparative table reveals that the growth ratio of net profit of NIBL is higher than that of NABIL (i.e. 65.84% > 12.38%). It indicates that NABIL has to invest large amount in various secured and more profitable sectors in comparison to NIBL.

## 4.2 Statistical Analysis

In this topic, some statistical tools such as co-efficient of correlation analysis between different variables, trend analysis of deposit, loan and advances, investment and net profit as well as hypothesis test (t-statistical) are used to achieve the objectives of the study. They are presented below:

### 4.2.1 Co-efficient of correlation analysis

Under this topic, Karl's person coefficient of correlation is used to find out the relationship between deposit and loan and advances, total deposit and total investment and net profit and total outside assets.

#### a) Co-efficient of correlation between deposit and loan and advances

Deposits have played very important role in performance of a commercial bank and similarly loan and advances are very important to mobilize the collected deposits. Co-efficient of correlation between deposit and loan and advances measure the degree of relationship between these two variables. In this analysis, deposit is independent variable (x) and loan and advances are dependent variable (y). The main objective of computing 'r' between these two variables is to justify whether deposits are significantly used as loan and advances in proper way or not.

The following table shows the value of r,  $r^2$ , P. Er. and 6 P.E. between total deposit and loan and advances of NABIL and NIBL during the study period.

**Table: 4.20**

#### **Co-relation between Deposit and Loan and Advances**

<b>Banks</b>	<b>Évaluation Critierions</b>			
	<b>r</b>	<b>r<sup>2</sup></b>	<b>P.E.</b>	<b>6 P.E.</b>
<b>NABIL</b>	0.9672	0.9355	0.0195	0.1168
<b>NIBL</b>	0.9940	0.9880	0.0036	0.0217

*(Source: Appendix –V)*

From the above table, it has been seen that correlation between deposit and loan and advances is 0.9672 in case of NABIL. It means higher positive relation between two variables. True value of coefficient of determination ( $r^2$ ) is 0.9355 and it means



93.55% of variation of the dependent variable (loan and advances) has been explained by the independent variable (deposit). Similarly, considering the value of 'r' i.e. 0.9672 and comparing it with 6.P.E.r. i.e. 0.1168. Since, the value of r is higher than 6P.E., the value of 'r' is significant. In other word, there is statistically significant relationship between deposit and loan and advances in the case of NABIL.

Likewise, in the case of the NIBL, the coefficient of correlation between deposit (independent variables) and loan and advances (dependent variable) is 0.9940 which indicates high positive correlation between two variables. Similarly, the value of coefficient of determination ( $r^2$ ) is found to be 0.9880, which shows that 98.80% variation in the dependent variable, loans and advances, has been explained by the independent variable, deposits. Moreover, considering the 6.P.E. i.e. 0.0217, which is less than 'r', the relationship between deposit and loan and advances is significant.

In conclusion from the above analysis of NABIL and NIBL, there is a positive relationship between deposits and loan and advances. The relationship is significant and the value  $r^2$  shows high degree of explanation. This indicates that both banks are successful to mobilize their deposits in proper way as loan and advances.

**b) Co-efficient of correlation between deposit and total investment**

Co-efficient of correlation between deposit and total investment measures the degree of relationship between these two variables. The purpose of calculating this analysis is to find out whether deposit is significantly used as investment or not. Here, deposit is independent variable (x) and total investment is dependent variable (y).

**Table: 4.21**

**Correlation between Deposit and Total Investment**

Banks	Evaluation Criteria			
	r	$r^2$	P.E.	6 P.E.
NABIL	0.8233	0.6778	0.0972	0.5831
NIBL	0.9670	0.9351	0.0196	0.1175

*(Source: Appendix –V)*

From the above table in case of NABIL it is found that coefficient of correlation between deposit (independent) and total investment (dependent) value of 'r' is 0.8233, which shows the positive relationship between these two variables. Moreover, the value of coefficient of determination ' $r^2$ ' it is 0.6778 which indicates that 67.78% of the variation in the dependent variable, total investment is explained by the independent variable, deposit. Similarly, comparing 'r' with 6.P.E. , it is found that 'r' is much greater than 6P.E. that reveals there is significant relationship between deposit and total investment.

Similarly, the coefficient of correlation between deposit and total investment in case of NIBL is found to be 0.9670, which shows the positive relation between these two variables. Again considering the value of coefficient of determination ( $r^2$ ), 0.9351 which means that 93.51% variation in the dependent variable, investment is explained by the independent variable, deposit. Comparing 'r' with 6.P.E., r is much greater than value 6 P.E. that reveals there is significant relationship between deposit investments.

In conclusion, NABIL and NIBL have the positive correlation between deposit and total investment. The relationship is significant and the value of  $r^2$  shows high percent in the dependent variables, investment which has been explained by the independent variable, deposit. While considering P.E., the both banks are higher than six times probable error. They have significant relation between these two variables.

#### **4.2.2 Trend Analysis and Projection for next five years**

This topic is to analyze the trend of deposit collection, its utilization and net profit of NABIL and NIBL. To utilize deposits, a commercial bank may grant loan and advances and invest some of the funds in government securities and shares and debentures of other companies. The topic analyzes the trend of deposit, loan and advances, total investment and net profit are forecasting for next five years. The projections are based on the following assumption.

- The main assumption is that other things will remain unchanged.
- The forecast will be true only when the limitation of least square method is carried out.
- The bank will in present stage.

- Nepal Rastra Bank will not change its guidelines to commercial banks.
- The economy will remain in the present stage.

**a) Trend Analysis of total deposit**

The trend values of deposit of NABIL and NIBL for five year from 2002/03 to 2006/07 are given below and forecast for next two years from 2007/08 to 2008/09 is done. Regarding this topic, an effort has been made to calculate the trend values of deposit of NABIL and NIBL: (*Appendix –VI*)

$$Y_{\text{NABIL}} = 9463.30 + 2501.76 X$$

$$Y_{\text{NIBL}} = 3263.18 + 4053.48 X$$

**Table: 4.22**

**Trend value of total deposit of NABIL and NIBL**

(Rs. in million)

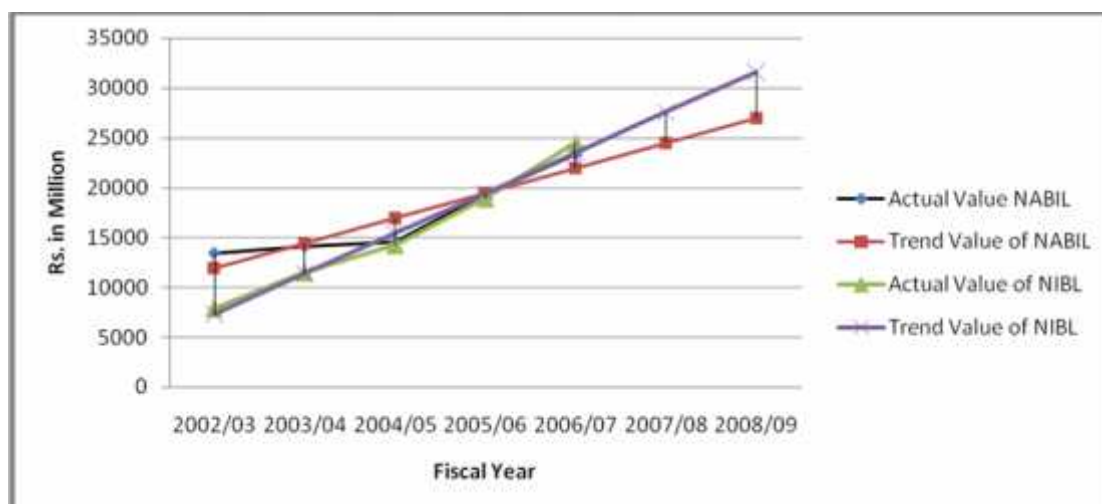
Fiscal Year	NABIL		NIBL	
	Actual	Trend	Actual	Trend
2002/03	13447.65	11965.07	7922.75	7316.66
2003/04	14119.03	14466.83	11524.67	11370.15
2004/05	14586.61	16968.60	14254.57	15423.63
2005/06	19347.40	19470.36	18927.30	19477.11
2006/07	23342.29	21972.12	24488.85	23530.59
2007/08		24473.89		27584.08
2008/09		26975.65		31637.56

(Source: *Appendix –VI*)

The table shows that the trend value of total deposit of both banks follows increasing trend. The table depicts that the total deposit in the fiscal year 2008/09 and 2009/10 of NABIL will be Rs. 24473.89 millions and Rs. 26975.68 millions respectively. Similarly, NIBL will have Rs. 27584.08 millions and Rs. 31367.56 millions deposits in the fiscal year 2008/09 and 2009/10 respectively. The regression equation shows that the deposits of NABIL increases by Rs. 2501.76 millions and that of NIBL increases by Rs. 4053.48 millions per year if the other variable remains constant.

**Figure 4.1**

**Trend value of total deposit of NABIL and NIBL**



**b) Trend Analysis of Loan and Advance**

Here the trend value of loan and advances of NABIL and NIBL have been calculated for five years from 2002/03 to 2006/07 and forecast for two years till 2008/09 has also been done. The regression lines of loan and advance on year are; (*Appendix –VI*)

$$Y_{NABIL} = 4906.42 + 2031.22 X$$

$$Y_{NIBL} = 2015.79 + 2867.47 X$$

**Table: 4.23**

**Trend value of Loan and Advances of NABIL and NIBL**

(Rs. in million)

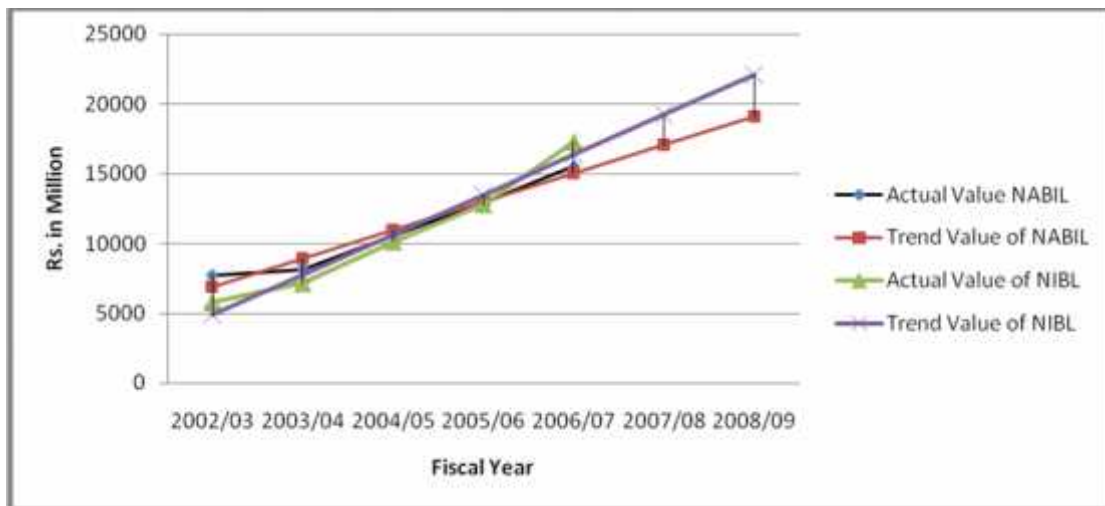
Fiscal Year	NABIL		NIBL	
	Actual	Trend	Actual	Trend
2002/03	7755.95	6937.64	5772.14	4883.26
2003/04	8189.99	8968.87	7130.13	7750.73
2004/05	10586.17	11000.09	10126.05	10618.19
2005/06	12922.54	13031.31	12776.21	13485.66
2006/07	15545.78	15062.53	17286.43	16353.12
2007/08		17093.75		19220.59
2008/09		19124.97		22088.06

(Source: *Appendix –VI*)

The above comparative table reveals that the trend value of loan and advances of both banks are in increasing trend. The loan and advances of NABIL in 2007/08 and 2009/10 will be Rs 17093.75 millions and Rs. 19124.97 millions respectively. Similarly, the loan and advances of NIBL in the same period will be Rs. 19220.59 millions and Rs. 22088.06 millions respectively. Likewise, the loans and advances of NABIL increases by Rs. 2031.22 millions and that of NIBL increases by Rs. 2867.47 millions per year if the other variables remain constant. From the above analysis, it is clear that NIBL will be successful to loan and advances amount in comparison to NABIL.

**Figure 4.2**

**Trend value of Loan and Advances of NABIL and NIBL**



**c) Trend Analysis of Total Investment**

Let the dependent Variable, Total Investment be denoted by Y and the independent variable, Year be denoted by X. Then, the regression equation of Total Investment on Year is given by; (*Appendix –VI*)

$$Y_{NABIL} = 4400.93 + 617.07 X$$

$$Y_{NIBL} = 919.71 + 1134.13 X$$

**Table: 4.24**

**Trend value of Total Investment of NABIL and NIBL**

(Rs. in million)

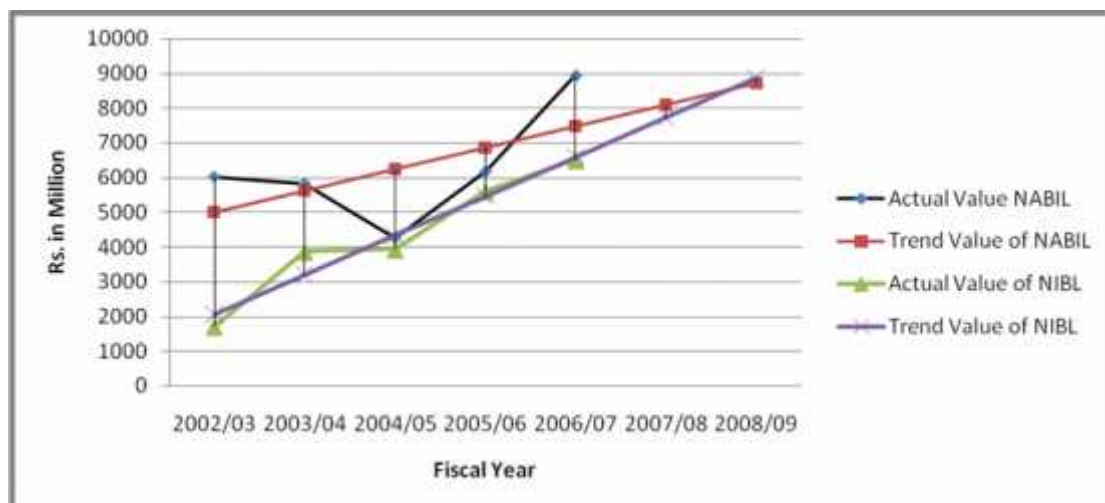
Fiscal Year	NABIL		NIBL	
	Actual	Trend	Actual	Trend
2002/03	6031.17	5018.00	1705.24	2053.84
2003/04	5836.07	5635.07	3862.48	3187.97
2004/05	4269.66	6252.15	3934.19	4322.09
2005/06	6178.53	6869.22	5602.87	5456.22
2006/07	8945.31	7486.30	6505.68	6590.35
2007/08		8103.37		7724.47
2008/09		8720.45		8858.60

(Source: Appendix –VI)

The table shows that the estimated value of total investment of NABIL will be Rs. 8103.37 millions and Rs. 8720.45 millions and in the fiscal year 2008/09 and 2009/10 respectively. Similarly, the predicted value of total investment of NIBL will be Rs. 7724.47 millions and Rs. 8858.60 millions in the same period. The regression line of investment on time period indicates that investment has positive relationship with the time period and thus in each year, the investment of NABIL increases by Rs. 617.07 millions and that of NIBL increases by Rs. 1134.13 millions.

**Figure 4.3**

**Trend value of Total Investment of NABIL and NIBL**



#### d) Trend Analysis of Net profit

Under this topic the trend value of net profit for five years from 2002/03 to 2006/07 have been calculated and forecast for next two years from 2007/08 to 2008/09. The following table shows the trend value of net profit for five years from 2002/03 to 2006/07 of NABIL and NIBL.

$$Y_{\text{NABIL}} = 331.28 + 69.54 X$$

$$Y_{\text{NIBL}} = -19.39 + 96.70 X$$

**Table: 4.24**

#### **Trend value of Net Profit of NABIL and NIBL**

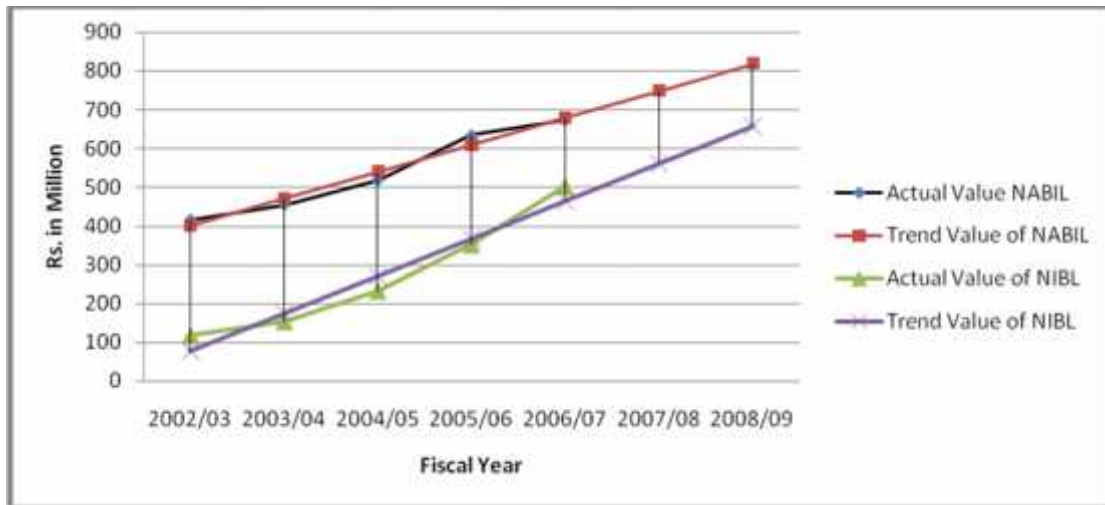
(Rs. in million)

Fiscal Year	NABIL		NIBL	
	Actual	Trend	Actual	Trend
2002/03	416.25	400.81	116.82	77.31
2003/04	455.32	470.35	152.67	174.01
2004/05	518.63	539.88	232.15	270.71
2005/06	635.26	609.42	350.54	367.42
2006/07	673.96	678.96	501.40	464.12
2007/08		748.49		560.82
2008/09		818.03		657.53

(Source: Appendix –VI)

The table shows that the estimated net profit of NABIL for the fiscal year 2007/08 and 2008/09 will be Rs. 748.49 millions and Rs. 818.03 millions respectively. Similarly, the net profit for the same period of NIBL will be Rs. 560.82 millions and Rs. 657.53 millions respectively. However, the regression equation shows that the net profit of NABIL increases by Rs. 69.54 millions and the net profit of NIBL increases by Rs. 96.70 millions per year if the other variable remains constant. From the trend analysis it can be concluded that NABIL's net profit trend is comparatively better than that of the NIBL.

**Figure 4.4**  
**Trend value of Net Profit of NABIL and NIBL**



### 4.2.3 Test of Hypothesis

It is an assumption about the population, which may or may not be true; to determine whether it is true or not by taking or not by taking some sample with followed some procedure is called testing of hypothesis. The test of hypothesis discloses the fact whether the difference between the computed statistic and hypothetical parameter is significant.

#### a) Test of hypothesis on loan and advances to total deposit ratio

Here, mean ratio of loan and advances to total deposit of NABIL and NIBL are taken and carried out t-test of significance difference. Let loan & advances to total deposit of NABIL and NIBL be X and Y respectively.



**Table: 4.26**

**Hypothesis Test on Loan and Advances to Total Deposit Ratio**

Year	X	x = (X-64.33)	x <sup>2</sup>	Y	y = (Y-68.77)	y <sup>2</sup>
2002/03	57.68	-6.65	44.22	72.86	4.09	16.73
2003/04	58.01	-6.32	39.94	61.87	-6.9	47.61
2004/05	72.57	8.24	67.90	71.04	2.27	5.15
2005/06	66.79	2.46	6.05	67.50	-1.27	1.61
2006/07	66.60	2.27	5.15	70.59	1.82	3.31
		Σx= 0	Σx <sup>2</sup> = 163.26		Σy= 0.01	Σy <sup>2</sup> = 74.41

**We know that,**

$$S^2 = \frac{1}{n_1 + n_2 - 2} \left\{ \sum x^2 - \left( \frac{\sum x}{n} \right)^2 + \sum y^2 - \left( \frac{\sum y}{n} \right)^2 \right\}$$

$$S^2 = \frac{1}{5 + 5 - 2} \left\{ 163.26 - \left( \frac{0}{5} \right)^2 + 74.41 - \left( \frac{0.01}{5} \right)^2 \right\}$$

$$= \frac{1}{8} \{ 163.26 - 0 + 74.41 - 0.000004 \}$$

$$= 29.70$$

Here,

Null Hypothesis (H<sub>0</sub>): u<sub>x</sub>=u<sub>y</sub> i.e. There is no significant difference between mean ratios of loan and advances to total deposit of NABIL and NIBL

Alternative hypothesis (H<sub>1</sub>): u<sub>x</sub>≠u<sub>y</sub> i.e. There is significant different between mean ratios of loan & advances to total deposit of NABIL and NIBL

Under H<sub>0</sub>, the test- statistical is:

$$t = \frac{X - Y}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad \text{with ..... d. f = } n_1 + n_2 - 2$$

$$= \frac{64.33 - 68.77}{\sqrt{29.70 \left( \frac{1}{5} + \frac{1}{5} \right)}}$$

$$= \frac{-4.44}{3.4467}$$

$$= -1.29$$

The calculated value of  $t = -1.29$

Tabulated value of 't' (two-tailed test) at 5% level of  $(n_1+n_2-2)$  d.f. i.e. 8 d.f. is 2.306

**Decision:-**

Since the calculated value of  $t$  i.e. 1.29 is lower than its tabulated value i.e. 2.306 at 5%.  $H_0$  is accepted, i.e. there is no significant difference between mean ratio of loan & advances to total deposit of NABIL & NIBL.

**b) Test of hypothesis of total investment to total deposit of NABIL and NIBL**

Here, mean ratio of total investment to total deposit of NABIL and NIBL are taken and carried out t-test of significance difference. Let total investment to total deposit of NABIL and NIBL be X and Y respectively.

**Table: 4.27**

**Hypothesis test on total investment to total deposit of NABIL and NIBL**

Year	X	X = (x-37.14)	X <sup>2</sup>	Y	Y = (y-27.76)	Y <sup>2</sup>
2002/03	44.85	7.71	59.44	21.52	-6.24	38.93
2003/04	41.33	4.19	17.55	33.51	5.75	33.06
2004/05	29.27	-7.87	61.93	27.60	-0.16	0.025
2005/06	31.93	-5.21	27.14	29.60	1.84	3.38
2006/07	38.32	1.18	1.39	26.57	-1.19	1.416
	185.7	$\sum x=0$	$\sum x^2= 167.45$	138.8	$\sum Y=0$	$\sum y^2= 76.81$

We know that,

$$\begin{aligned}
 S^2 &= \frac{1}{n_1 + n_2 - 2} \left\{ \sum x^2 - \left( \frac{\sum x}{n} \right)^2 + \sum y^2 - \left( \frac{\sum y}{n} \right)^2 \right\} \\
 &= \frac{1}{5 + 5 - 2} \left\{ 167.45 - \left( \frac{0}{5} \right)^2 + 76.81 - \left( \frac{0}{5} \right)^2 \right\} \\
 &= \frac{1}{8} \{ 167.45 + 76.81 \} \\
 &= 30.53
 \end{aligned}$$

Here,

Null Hypothesis ( $H_0$ ):  $\mu_x = \mu_y$  i.e. There is no significant difference between mean ratios of total investment to total deposit of NABIL and NIBL

Alternative hypothesis ( $H_1$ ):  $\mu_x \neq \mu_y$  i.e. There is significant difference between mean ratios of total investment to total deposit of NABIL and NIBL

Under  $H_0$ , the test- statistical is:

$$\begin{aligned}
 t &= \frac{X - Y}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad \text{with ..... d. f = } n_1 + n_2 - 2 \\
 &= \frac{37.14 - 27.76}{30.53 \left( \frac{1}{5} + \frac{1}{5} \right)} \\
 &= \frac{9.38}{12.21} \\
 &= 0.768
 \end{aligned}$$

The calculated value of  $|t| = 0.768$

Tabulated value of 't' (two-tailed test) at 5% level of  $(n_1 + n_2 - 2)$  d.f. i.e. 8 d.f. is 2.306

**Decision:-**

Since the calculated value of  $t$  i.e. 1.44 is lower than its tabulated value i.e. 2.306 at 5%.  $H_0$  is accepted, i.e. there is no significant difference between mean ratio of total investment & total deposit of NABIL & NIBL.

**4.1 Major Findings of the Study**

The preceding chapter have discussed and explored the facts and matters for the various parts of the study. Analytical part, which is the heart of the study, makes an analysis of various aspects of the investment policy of commercial banks by using some of important financial as well as statistical tools.

Having completed the basic analysis required for the study, the final and most important task of the researcher is to enlist finding issues and gaps of the study and give suggestions for further improvement. This would be meaningful to the top management of the banks to initiate action and achieve the desire result. The objective of the researcher is only to point errors and mistakes but also to correct them and give directions for further growth and improvement.

The major findings of the study that are derived on the basis of financial and statistical data analysis of NABIL and NIBL, which are presented below:

**4.1.1 Findings from the Liquidity Ratios Analysis**

- The mean ratio of NABIL and NIBL are 0.92:1 and 0.91:1 respectively. However, both banks remained unsuccessful to meet the benchmark of 2:1 and faced the problem while meeting its obligation.
- The mean ratio of cash and bank balance to current assets of NIBL is 11.26%, which is higher than that of NABIL (5.75%). NIBL has the practice of keeping more of its current assets in the form of cash than NABIL.
- The mean ratio of cash and bank balance to total deposit ratio of NIBL is 10.81%, which is higher than that of NABIL (5.69%). NIBL's ratios are more consistent in comparison to NABIL.

- 20.52% of the current assets of NABIL has been invested in government securities, whereas only 13.03% of the current assets of NIBL has been invested in government securities.
- The mean ratio of loan and advances to current assets ratio of NIBL is 71.58%, which is higher than that of NABIL (64.65%), and also the NIBL's ratio is more consistent than that of NABIL.

#### **4.1.2 Finding from the Asset Management Ratio**

The asset management ratios of NABIL and NIBL reveal that:

- NIBL mobilized 68.77% of its total deposit as loans and advances, whereas NABIL mobilized 64.33% of its total deposit as loans and advances. However, the ratio of NABIL is less consistent than that of NIBL.
- NABIL and NIBL utilized 37.14% and 27.76% of the total deposit in investment respectively. However, the ratio of NABIL is slightly more inconsistent than the ratio of NIBL.
- The mean ratio of loan and advances to total working fund of NIBL is 60.52%, which is higher than that of NABIL (54.45%) and NIBL's ratios are more consistent than that of NABIL in comparison.
- The mean ratio of investment on government securities to total working fund of NABIL is 17.01%, which is higher than that of NIBL (11.03%). NABIL's ratios are less variable in comparison to NIBL.
- The mean ratio of investment on share and debenture to total working fund of NABIL is 0.43%, which is higher than that of NIBL (0.118%). NIBL has very nominal investment on shares & debentures of other companies. Also, NABIL's ratios are less uniform in comparison to NIBL.

#### **4.1.3 Finding from the Profitability Ratios**

The profitability ratio of NABIL and NIBL reveals that:

- The mean ratio of return on loan and advances of NIBL is 5.02%, which is lower than that of NABIL (2.07%). Also, NIBL's variability between ratios is lower than that of NABIL.

- The shareholder of NABIL enjoyed more return on their investment than NIBIL's shareholder. The mean ratio of return on equity (ROE) of NABIL is 32.06%, which has been found higher than that of NIBIL (22.07%).
- The mean ratio of total interest earned to total outside asset of NIBIL is 6.43%, which is slightly lower than that of NABIL (7.01%). However, NIBIL's ratios are more uniform than that of NABIL.

#### **4.1.4 Finding from the Risk Ratios**

- The risk ratios of NABIL and NIBIL reveal that the average liquidity risk ratio of NIBIL (10.8) is higher than that of NABIL (5.7) and NIBIL's ratios are less variable in comparison to NABIL.
- The mean ratio of credit risk ratio of NIBIL (60.52%) is higher than that of NABIL (54.42%) and NIBIL's ratios are more homogenous than that of NABIL.

#### **4.1.5 Finding from the Growth Ratios**

The growth ratios of NABIL and NIBIL reveal that:

- The total deposit of NIBIL increased by 41.82% whereas the total deposit of NABIL increased by 14.72% per year within the five fiscal year.
- Growth ratio of loan and advances of NABIL is 20.09%, which is lower than that of NIBIL (24.48%).
- Growth ratio of total investment of NABIL is 9.66%, which is far lower than that of NIBIL (56.30%).
- Similarly, growth ratio of net profit of NABIL is 12.38%, which is far lower than that of NIBIL (65.84%).

#### **4.1.6 Finding from the Co-efficient of correlation analysis**

Co-efficient of correlation analysis between different variables of NABIL and NIBIL shows that:

- Co-efficient of correlation between deposit and loan and advances of both banks has positive value and near to 1. The value of 'r' of NABIL (0.9672) is slightly lower than that of NIBIL (0.9940). In case of both banks it has been found that there is significant relationship between deposit and loan and

advances. The increase and decrease of total deposit of the bank strong affects the volume of loan and advances.

- Co-efficient of correlation between deposit and total investment of both banks has positive relationship. The value of 'r' of NIBL (0.9670) is slightly higher than that of NABIL (0.8233). In case of both banks it has been found that there is no significant relationship between deposits and total investment during the study period.

#### **4.1.7 Finding from the Trend Analysis**

Trend analysis of deposit, loan and advances, total investment and net profit and projection for next five years of NABIL and NIBL shows that:

- The trend values of total deposit of both banks are found to be in increasing trend. The predicted total deposit of NABIL and NIBL in the fiscal year 2008/09 is Rs. 26975.65 millions and Rs. 31637.56 millions respectively.
- The trend values of loan and advances of both banks have been seen to be in increasing trend. The trend value of NABIL in 2008/09 will be Rs 19124.97 million and trend value of NIBL in 2008/09 will be Rs 22088.06 million
- The trend value of total investment of both banks is in increasing trend. The predicted total investment of NABIL is Rs. 8720.45 million and that of NIBL is Rs. 8858.60 million in the fiscal year 2008/09.
- The trend values of net profit of both banks are found to be in increasing trend. The trend net profit of NABIL in the fiscal year 2008/09 is Rs. 818.03 million and that of NIBL is Rs. 657.53 million in the same period.

#### **4.1.8 Finding from the Test of Hypothesis**

From the test of significant regarding the parameter of the population has been found that:

- There is no significant difference between mean ratio of loan and advances to total deposit NABIL and NIBL.
- There is no significant difference between mean ratio of loan and advances to total deposit NABIL and NIBL.

## **CHAPTER- V**

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

#### **5.1 Summary**

Banking sector plays an important role in the economic development of the country. Commercial banks are one of the vital aspects of this sector, which deals in the process of channelized the available resources in the needed sector. Financial institutions like banks are necessity to collect scattered saving and put them into productive channels. In the absence of such institutions it is possible that the saving will not be safety and profitably utilized within the economy. It will be diverted aboard or channelized into unproductive conspicuous consumption including real estate speculation.

Investment is a very well known and prestigious word in financial term. It is always true that all people want to invest their money in the best firm of good return may be both favorable and unfavorable. It is conceptually the investment of the collected fund or wealth like income. It is the most important factor from the point of view of shareholders and bank management. For this, commercial bank have to pay due consideration while formulating investment policy. A healthy development of any commercial bank depends upon its investment policy. A good investment policy attracts both borrowers and lenders, which helps to increase the volume of quality deposits, loans and investment. The major source of income of a bank is interest income from loan and investment and fee based income.

Many of commercial banks have been established in our country within a short period of time. Commercial banks must follow the rule and regulations as well as different directions issued by central bank and ministry of finance while mobilization the funds or the commercial banks should invest its funds only those securities which are legal. The main objective of this study is to examine & evaluate the investment policy of NABIL & NIBL banks and suggest to improve the investment policy of the bank.



The study is based on the secondary data from F/Y 2002/2003 to 2006/2007. The data have been basically obtained from annual reports and financial statements, official records, periodicals, journals and bulletins, various published reports and relevant unpublished master's thesis. Besides this, personal contacts with the bank personnel have also been made.

In this study, the word investment is conceptualized as the investment of income, savings or other collected funds. Investment policy is a one fact of the overall spectrum of policies that guide bank's investment operations and it ensures efficient allocation of fund to achieve the sustainable economic development of the nation.

The objective of the commercial bank is to earn more profit by investing or granting loan and advance into profitable and marketable sector. But commercial banks should be careful while performing the credit creation function. The banks should never invest its funds in those securities, which are too much fluctuating. 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 investing policy is not significant for the promotion of commercial saving of a backward country like Nepal.

Major findings from secondary data include the liquidity position of NIBL is comparatively better than NABIL; NIBL manages the resources more efficiently than NABIL; the profit of NABIL is higher than NABIL; the amount of risk associated with the various banking operations of NIBL is higher than NABIL; the power of expansion and growth of the banks business NABIL is higher than NIBL; co-efficient of correlation between deposit and loan & advances of NABIL has been found slightly lower than NIBL; co-efficient of correlation between deposit and total investment of NIBL has been found slightly lower than NABIL. Trend analysis of loan and advances & net profit of both banks are found increasing trend but the trend value of total deposit & total investment of NABIL is in decreeing trend. In case of NIBL, is in increasing trend.

Both banks are recommended to collect more amounts a deposit through large variety of deposit scheme and facilities, cumulative deposit scheme, prize bonds scheme, gift

cheque, recurring deposit scheme (life insurance), and monthly interest scheme. Similarly, customization of credit card, provide facility of transfer money to their home who live in foreign country. The minimum amount needed to open on account should be minimizes so that it will attract other small depositors.

NABIL is recommended to increase cash and bank balance to meet current obligations and loan demand. Both banks are recommended to invest more funds in government securities instead of keeping them idle and implement a sound collection policy including procedures. NABIL is recommended to follow liberal lending policy and invest more percentage amount of total deposit in loan and advances. Both banks need to form a committee to identify to improve its profitability. Both banks should remember interest rate while forming investment policy to get maximum profit.

## **5.2 Conclusion**

Joint venture banks are also among the major commercial banks that contributing to the economic development of the country. The conclusion derived from the comparative study of the investment policy of Nepal Investment Bank Ltd. and Nabil Bank Ltd. reveals that:

- a) As shown the liquidity position of both banks has satisfactory. The liquidity position of NIBL is comparatively better than NABIL. NIBL has the highest cash and bank balance to total deposit ratio and loan and advances to current assets ratio than NABIL. But NABIL investing position of current assets as govt. securities is higher than NIBL. At last we can conclude that NIBL has maintained moderate investment policy in liquidity position.
- b) The analysis also depicts that the total investment to total deposit, investment on govt. securities to working fund and investment on shares and debentures to total working funds ratio are highest in NABIL but NABIL's capacity to mobilize its loan and advances to total working fund and loan and advances to total deposit is not so good than NIBL. Finally it can be concluded that asset management position of NABIL is less effective in comparison to NIBL.
- c) From this analysis it can be concluded that the profitability position of NABIL is better than NIBL. It has highest return on loan and advances ratio,

total interest earned to total deposit asset ratio and return on equity than NIBL. NIBL has not maintained better position in comparison to NABIL.

- d) From the risk ratios point of views, it can be concluded that NIBL has higher degree of liquidity risk and credit risk in comparison to NABIL.
- e) From the analysis of growth ratio, NABIL has lower growth rate on total deposits, loan & advances, total investment and net profit than NIBL. Therefore NIBL has successfully collected and utilized fund amount of its customer than NABIL.
- f) From this study it can be concluded that in NABIL and NIBL, there is positive relationship between deposit & loan and advance. The relation between deposit & loan and advances is significant. The both banks are successful to mobilize their deposit in proper way as loan and advance whereas, relation between deposit and total investment there is no significant different between the both banks.
- g) From the study it can be concluded that the trend analysis of total deposit, total investment, loan and advances and net profit of both the banks are in increasing trend.
- h) The hypothesis test on loan & advances to total deposit, and total investment to total deposit shows that there is no significant difference between mean ratio of loan & advances to total deposit and total investment to total deposit of NABIL and NIBL.

### **5.3 Recommendations**

Suggestions help to take corrective actions in their activities in future. On the base of analysis and findings of the study, following recommendations can advanced to overcome weakness and efficiency and to improve fund mobilization and investment policy of NABIL and NIBL.

#### **Increase deposits ratio**

The commercial bank's main source of fund is collecting deposit from public, who don't need that fund recently. Without enough deposit collection, banks cannot operate effectively. The growth rate of the deposits of NIBL's is higher than that of NABIL, so it is suggested to attract depositors through variety of deposits schemes &

facilities like cumulative deposit scheme, prize bonds schemes, gift cheque scheme, recurring deposit scheme (life insurance), monthly interest scheme etc.

### **Increase investment in government securities**

NABIL has not invested more money in government securities than that of NIBL. Investment on those securities issued by government i.e. treasury bills, development bonds, saving certificates are free of risk and highly liquid in nature and have very lower yield than other companies' securities. This also helps to maintain the sound portfolio of the bank. It is better in regard to safety than other means of investment. So both banks are strongly recommended to invest more funds in govt. securities.

### **Increase loan & advances**

From the above study, NABIL has not properly used their existing funds as loan and advances. The largest item of the bank in the asset side is loan and advances. If it is neglected, than it could be the main cause of liquidity crisis in the bank and one of the main reasons for a banks failure. So NABIL is strongly recommend to improve the efficiency in utilizing the deposits in loan and advances for generating the profit.

### **Increase investment in shares & debentures of the other company**

It is good to investment more on share and debenture as it encourage financial and non –financial companies. It has been found that NABIL's investment on share and debenture to total working fund ratios are higher than that of NIBL. So, NIBL bank is suggested to invest its more funds in share & debenture of other different companies. So, it can get either dividend from the existing hares & capital gain after selling those shares & debentures in capital market after holding for some time.

### **Liberal Lending policy and sound credit collection policy**

Loan & advances are the main source of income and also utilization resources of commercial banks. Negligence in administrating these assets could be the cause of liquidity crisis in the bank and one of the main reasons of bank failure. When the bank grants loan & advances, it must be collected after a certain period. But now days there are many difficulties in recovery loan and advances and large amount of loan is blocked as non performing assets and which sometime reduce income. So it is essential to exercise a suitable mechanism through with the overdue loan can be

recovered within time. To fulfill this purpose both banks are suggested the special "Loan Recovery Act" should be enacted. Therefore both banks follow liberal policy when sanctioning loan & advances with sufficient guarantee and implement a sound collection policy including procedure which rapid identification of bad debtor loans, immediate contact with borrower, continual follow up and a legal procedure if required.

### **Increase profit**

Profitability is the main indicator of the financial performance of every business organization & is essential for the survival and growth of banks. But over the study period, NABIL and NIBL are seen unable to earn a satisfactory level of profit. So, both banks are recommended more to earn profit and adopt various measures to improve its profitability.

### **Investment vision**

Portfolio management is very important for each and every investor's. Forming the efficient and optimal portfolios can minimize the risk. Both banks have been increasing total investment in every year and total investment amount size of NIBL is higher in comparison to NABIL. So, portfolio conditions of NABIL as well as NIBL should be examined carefully from time to time and alternation should be made to maintain equilibrium in the portfolio of loans & investment & make continuous efforts to explore new, competitive and high yielding investment opportunities to optimize the return.

### **Extend branches over the country**

Both NIBL & NABIL do not have branches in the rural area of the country. Its branches are limited only to the urban areas only. Therefore, both banks are recommended to open branches in rural areas to help in economic development of the country. HMG/G has also encouraged the joint venture banks to expand banking service in rural areas and communities without making unfavorable impact in their profit.

Both NABIL & NIBL banks are taken as the one of the most leading joint venture bank in Nepal. It is the one of the most successful bank in Nepal. Today is the world

of the competition is growing day by day in the banking sector. It must mobilize its deposits and other fund to profitable, secured and marketable sector so that it can earn a handsome profit as well as it should be secured and can convert into cash whenever needed.

In the light of growing competition in the banking sector, the business of the bank should be customer oriented. The bank is recommended to adopt new technology and services or innovator in introducing many new products such as SWIFT, ATM card , international credit card, locker services, lending against gold and silver services, 24 hours service, holiday banking etc. The bank should involve in different kind of social and community development activities. The bank ha been able to provide more personalized services and a better environment for its customer, it is an effective tool to attract and retain the customers.

An 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. NABIL Bank has achieved a success in banking sector in term of market share and profitability compared to NIBL because of its reliable and professional services.

In other to collection much funds, both banks are not to be surrounded and limited only big clients i.e. multinational companies, large industries, manufacturing companies, NGOs and INGOs etc. It should also cater the lower and middle level people too.

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

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



## APPENDIX – I

### Liquidity Ratio

#### A) Current Assets to Current Liabilities

(Rs in million)

FY	NABIL			NIBL		
	Current Assets	Current Liabilities	Ratio (Time)	Current Assets	Current Liabilities	Ratio (Time)
2002/03	13868.30	15248.43	0.91	7517.89	8375.70	0.89
2003/04	14244.04	15263.80	0.93	11144.33	12526.45	0.89
2004/05	14969.38	15528.69	0.96	13967.78	15093.89	0.92
2005/06	20640.70	20420.37	1.01	17906.12	19364.69	0.92
2006/07	20322.65	25196.34	0.80	23582.10	24912.72	0.94

#### B) Cash and Bank Balance to Current Assets

(Rs in million)

FY	NABIL			NIBL		
	Cash & Bank Balance	Current Assets	Ratio (%)	Cash & Bank Balance	Current Assets	Ratio (%)
2002/03	1144.77	13868.30	8.25	926.53	7517.89	12.32
2003/04	970.49	14244.04	6.82	1,226.92	11144.33	11.00
2004/05	559.38	14969.38	3.74	1,340.50	13967.78	9.60
2005/06	630.238	20640.70	3.05	2336.521	17906.12	13.04
2006/07	1399.825	20322.65	6.89	2441.514	23582.10	10.35

**C) Cash and Bank Balance to Total Deposit Ratio****(Rs in million)**

FY	NABIL			NIBL		
	Cash & Bank Balance	Total Deposit	Ratio (Time)	Cash & Bank Balance	Total Deposit	Ratio (Time)
2002/03	1144.77	13447.65	8.51	926.53	7,922.75	11.69
2003/04	970.49	14119.03	6.87	1,226.92	11,524.67	10.65
2004/05	559.38	14586.61	3.83	1,340.50	14,254.60	9.40
2005/06	630.238	19347.40	3.26	2336.521	18927.30	12.34
2006/07	1399.825	23342.285	5.99	2441.514	24488.85	9.97

**D) Investment on Govt. Securities to Current Asset Ratio****(Rs in million)**

FY	NABIL			NIBL		
	Investment on Govt. Sec.	Current Assets	Ratio (Time)	Investment on Govt. Sec.	Current Assets	Ratio (Time)
2002/03	3588.77	13868.30	25.88	400.00	7517.89	5.32
2003/04	3672.63	14244.04	25.78	2001.10	11,144.33	17.96
2004/05	2413.94	14969.38	16.13	1948.50	13967.78	13.95
2005/06	2301.463	20640.70	11.15	2522.30	17906.12	14.09
2006/07	4808.348	20322.65	23.66	3256.40	23582.10	13.81

**E) Loan & Advance to Current Assets Ratio****(Rs in million)**

FY	NABIL			NIBL		
	Loan & Advances	Current Assets	Ratio (Time)	Loan & Advances	Current Assets	Ratio (Time)
2002/03	7755.90	13868.30	55.93	5772.14	7517.89	76.78
2003/04	8189.99	14244.04	57.50	7130.13	11144.33	63.98
2004/05	10586.17	14969.38	70.72	10126.05	13967.78	72.50
2005/06	12922.54	20640.70	62.61	12776.208	17906.12	71.35
2006/07	15545.78	20322.65	76.49	17286.43	23582.10	73.30

## APPENDIX-II

### Asset Management Ratio

#### A) Loan & Advances to Total Deposit Ratio

(Rs in million)

FY	NABIL			NIBL		
	Loan & Advances	Total Deposit	Ratio (Time)	Loan & Advances	Total Deposit	Ratio (Time)
2002/03	7755.95	13447.65	57.68	5772.14	7922.75	72.86
2003/04	8189.99	14119.03	58.01	7130.13	11524.67	61.87
2004/05	10586.17	14586.61	72.57	10126.05	14254.57	71.04
2005/06	12922.54	19347.40	66.79	12776.208	18927.30	67.50
2006/07	15545.78	23342.285	66.60	17286.43	24488.85	70.59

#### B) Total Investment to Total Deposit Ratio

(Rs in million)

FY	NABIL			NIBL		
	Total Investment	Total Deposit	Ratio (Time)	Total Investment	Total Deposit	Ratio (Time)
2002/03	6031.17	13447.65	44.85	1705.24	7922.75	21.52
2003/04	5836.07	14119.03	41.33	3862.48	11524.75	33.51
2004/05	4269.66	14586.61	29.27	3934.19	14254.57	27.60
2005/06	6178.533	19347.40	31.93	5602.87	18927.30	29.60
2006/07	8945.31	23342.285	38.32	6505.68	24488.85	26.57

**C) Loan & Advances to Total Working Fund Ratio****(Rs in million)**

FY	NABIL			NIBL		
	Loan & Advances	Working Fund	Ratio (Time)	Loan & Advances	Working Fund	Ratio (Time)
2002/03	7755.95	16562.61	46.83	5772.14	9014.24	64.03
2003/04	8189.99	16745.61	48.91	7130.13	13255.50	53.79
2004/05	10586.17	17186.33	61.60	10126.05	16274.06	62.22
2005/06	12922.54	22329.97	57.87	12776.208	21330.137	59.90
2006/07	15545.78	27253.39	57.04	17286.43	27590.85	62.65

**D) Investment on Govt. Securities to Total Working Fund Ratio****(Rs in million)**

FY	NABIL			NIBL		
	Investment on Govt. Sec.	Working Fund	Ratio (Time)	Investment on Govt. Sec.	Working Fund	Ratio (Time)
2002/03	3588.77	16562.61	21.67	400.00	9014.24	4.44
2003/04	3672.63	16745.61	21.93	2001.10	13255.50	15.10
2004/05	2413.94	17186.33	14.05	1948.50	16274.06	11.97
2005/06	2301.463	22329.97	10.31	2522.30	21330.137	11.82
2006/07	4808.348	27253.39	17.64	3256.40	27590.85	11.80

**E) Investment on Shares and Debentures to Total Working Fund Ratio****(Rs in million)**

FY	NABIL			NIBL		
	Investment on Shares & Debentures	Total Deposit	Ratio (Time)	Investment on Shares & Debentures	Total Deposit	Ratio (Time)
2002/03	22.22	16562.61	0.13	13.89	9014.24	0.15
2003/04	22.22	16745.61	0.13	13.89	13255.50	0.10
2004/05	27.36	1828.36	1.50	17.74	16274.06	0.11
2005/06	27.563	19347.40	0.14	17.74	18927.30	0.09
2006/07	57.853	23342.285	0.25	35.235	24488.85	0.14

## APPENDIX - III

### Profitability Ratios

#### A) Return on Loan and advances

(Rs in million)

FY	NABIL			NIBL		
	Net Profit	Loan & Advances	Ratio (Time)	Net Profit	Loan & Advances	Ratio (Time)
2002/03	416.25	7755.95	5.37	116.82	5772.14	2.02
2003/04	455.32	8189.99	5.56	152.67	7130.13	2.14
2004/05	518.63	10586.17	4.90	232.15	10126.05	2.29
2005/06	635.262	12922.54	4.92	350.54	12776.208	1.85
2006/07	673.96	5545.78	4.34	501.40	17286.43	2.04

#### B) Net Profit to Equity Ratio

(Rs in million)

FY	NABIL			NIBL		
	Net Profit	Equity	Ratio (%)	Net Profit	Total Equity	Ratio (%)
2002/03	416.235	1314.187	31.67	116.817	638.54	18.29
2003/04	455.31	1481.68	30.72	152.67	729.047	20.94
2004/05	518.635	1657.63	31.29	232.15	1180.17	19.67
2005/06	635.262	1875	33.88	350.536	1415.45	24.76
2006/07	673.959	2057.05	32.76	501.398	1878.12	26.70

**C) Total Interest Earned To Total Outside Assets****(Rs in million)**

<b>FY</b>	<b>NABIL</b>			<b>NIBL</b>		
	<b>Total Interest Earned</b>	<b>Total Outside Assets</b>	<b>Ratio (%)</b>	<b>Total Interest Earned</b>	<b>Total Outside Assets</b>	<b>Ratio (%)</b>
2002/03	1017.87	13787.125	7.38	459.5	7477.4	6.15
2003/04	1001.61	14025.94	7.15	713.4	10992.6	6.45
2004/05	1068.746	13053.4	8.18	886.8	14060.24	6.30
2005/06	1310.00	19101.07	6.86	1172.42	18379.08	6.38
2006/07	1587.76	24491.08	6.48	1584.98	23792.1	6.66

## APPENDIX - IV

### A) Credit Risk ratio

(Rs in million)

FY	NABIL			NIBL		
	Loan and Advances	Total Assets	Ratio (Time)	Loan and Advances	Total Assets	Ratio (Time)
2002/03	7755.95	16562.62	46.68	5772.14	9014.25	64.03
2003/04	8189.99	16745.48	48.90	7130.125	13255.5	53.79
2004/05	10586.17	17186.33	61.60	10126.05	16274.06	62.23
2005/06	12922.54	22329.97	57.87	12776.2	21330.14	59.89
2006/07	15545.78	27253.39	57.04	17286.43	27590.85	62.65

## APPENDIX - V

### A) Calculation of Correlation coefficient of Loans & Advances (LA) and Deposit of NABIL Bank

Fiscal Year	Deposit X	LA Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$x^2$	$y^2$	xy
2003/04	13447.65	7755.95	-3520.946	-3244	12397061	10524418	11422428
2004/05	14119.03	8189.99	-2849.566	-2810	8120026.4	7896640	8007554
2005/06	14586.61	10586.17	-2381.986	-414	5673857.3	171326	985942
2006/07	19347.4	12922.54	2378.804	1922	5658708.5	3695829	4573141
2007/08	23342.29	15545.78	6373.694	4546	40623975	20663334	28972863
<b>Total</b>	<b>84842.98</b>	<b>55000</b>			<b>72473628</b>	<b>42951548</b>	<b>53961927.65</b>

i) Calculation of Mean

$$\begin{array}{l} \text{For Deposit} \\ \text{Mean } \bar{X} = X/5 = 16968.596 \end{array} \qquad \begin{array}{l} \text{For Loans and Advances (LA)} \\ \bar{Y} = Y/5 = 11000.09 \end{array}$$

ii) Calculation of Correlation Coefficient between Deposit and Loans and advances

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{53961927.6}{\sqrt{72473628 \times 42951548}} = 0.9672$$

### B) Calculation of Correlation coefficient of Loans & Advances (LA) and Deposit of NIBL Bank

Fiscal Year	Deposit X	LA Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$x^2$	$y^2$	xy
2003/04	7922.75	5772.14	-7500.878	-4846	56263171	23484220	36349645
2004/05	11524.67	7130.13	-3898.958	-3488	15201873	12166577	13599807
2005/06	14254.57	10126.05	-1169.058	-492	1366696.6	242204	575343
2006/07	18927.30	12776.21	3503.672	2158	12275717	4657042	7560987
2007/08	24488.85	17286.43	9065.222	6668	82178250	44465398	60449058
<b>Total</b>	<b>77118.14</b>	<b>53090.96</b>			<b>167285708</b>	<b>85015440</b>	<b>118534839.7</b>

i) Calculation of Mean

$$\begin{array}{l} \text{For Deposit} \\ \text{Mean } \bar{X} = X/5 = 15423.628 \end{array} \qquad \begin{array}{l} \text{For Loans and Advances (LA)} \\ \bar{Y} = Y/5 = 10618.19 \end{array}$$

ii) Calculation of Correlation Coefficient between Deposit and Loans and advances

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{118534840}{\sqrt{167285708 \times 85015440}} = 0.9940$$

*Same process has been applied to calculate the correlation coefficient between deposit and investment.*





## APPENDIX - VI

### A) Calculation of Trend Value of Deposit on Year of NABIL Bank

Let Year 1 denotes fiscal year 2003/04, 2 denotes 2004/05, 3 denotes 2005/06 and so on.

Fiscal Year	Year X	Deposit Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$x^2$	$y^2$	xy
2003/04	1	13447.65	-2	-3521	4	12397061	7042
2004/05	2	14119.03	-1	-2850	1	8120026	2850
2005/06	3	14586.61	0	-2382	0	5673857	0
2006/07	4	19347.4	1	2379	1	5658708	2379
2007/08	5	23342.29	2	6374	4	40623975	12747
<b>Total</b>	<b>15</b>	<b>84843</b>			<b>10</b>	<b>72473628</b>	<b>25017.65</b>

i) Calculation of Mean

$$\begin{array}{l} \text{For Year} \\ \text{Mean } \bar{X} = X/5 = 3 \end{array} \qquad \begin{array}{l} \text{For Deposit} \\ \bar{Y} = Y/5 = 16968.60 \end{array}$$

ii) Calculation of Correlation Coefficient between Year and Deposit

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{25017.65}{\sqrt{10 \times 72473628}} = 0.9293$$

iii) Calculation of Standard Deviation ( )

For Year

$$\begin{aligned} \sigma_x &= \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{10}{5}} \\ &= 1.41 \end{aligned}$$

For Deposit

$$\begin{aligned} \sigma_y &= \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{72473628}{5}} \\ &= 3807.19 \end{aligned}$$

iv) Now the regression line of Deposit Y on Time X is given by;

$$\begin{aligned} Y - \bar{Y} &= \frac{r \sigma_y}{\sigma_x} (X - \bar{X}) \\ \text{or, } Y - 16969 &= \frac{0.93 \times 3807.19}{1.41} (X - 3) \\ \text{or, } Y - 16969 &= 2501.77 X - 7505.30 \\ \text{or, } Y &= 9463.30 + 2501.77 X \end{aligned}$$

v) Calculation of Trend Value of Total Deposit

Fiscal Year	Year (X)	a	b	Trend Value
2003/04	1	9463.30	2501.77	11965.07
2004/05	2	9463.30	2501.77	14466.83
2005/06	3	9463.30	2501.77	16968.60
2006/07	4	9463.30	2501.77	19470.36
2007/08	5	9463.30	2501.77	21972.13
2008/09	6	9463.30	2501.77	24473.89
2009/10	7	9463.30	2501.77	26975.66

### B) Calculation of Trend Value of Deposit on Year of NIBL Bank

Let Year 1 denotes fiscal year 2003/04, 2 denotes 2004/05, 3 denotes 2005/06 and so on.

Fiscal Year	Year X	Deposit Y	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$x^2$	$y^2$	xy
2003/04	1	7922.75	-2	-7501	4	56263171	15002
2004/05	2	11524.67	-1	-3899	1	15201873	3899
2005/06	3	14254.57	0	-1169	0	1366697	0
2006/07	4	18927.3	1	3504	1	12275717	3504
2007/08	5	24488.85	2	9065	4	82178250	18130
<b>Total</b>	<b>15</b>	<b>77118</b>			<b>10</b>	<b>167285708</b>	<b>40534.83</b>

i) Calculation of Mean

$$\text{Mean For Year } \bar{X} = X/5 = 3 \qquad \text{For Deposit } \bar{Y} = Y/5 = 15423.63$$

ii) Calculation of Correlation Coefficient between Year and Deposit

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} = \frac{40534.83}{\sqrt{40901}} = 0.9911$$

iii) Calculation of Standard Deviation ( )

For Year

$$s_x = \sqrt{\frac{\sum (x-\bar{x})^2}{N}} = \sqrt{\frac{10}{5}} = 1.41$$

For Deposit

$$s_y = \sqrt{\frac{\sum (y-\bar{y})^2}{N}} = \sqrt{\frac{167285708}{5}} = 5784.21$$

iv) Now the regression line of Deposit Y on Time X is given by;

$$Y - \bar{Y} = \frac{r \cdot s_y}{s_x} (X - \bar{X})$$

$$\text{or, } Y - 15424 = \frac{0.99 \cdot 5784.21}{1.41} (X - 3)$$

$$\text{or, } Y - 15424 = 4053.48 X - 12160.45$$

$$\text{or, } Y = 3263.18 + 4053.48 X$$

v) Calculation of Trend Value of Total Deposit

Fiscal Year	Year (X)	a	b	Trend Value
2003/04	1	3263.18	4053.48	7316.66
2004/05	2	3263.18	4053.48	11370.15
2005/06	3	3263.18	4053.48	15423.63
2006/07	4	3263.18	4053.48	19477.11
2007/08	5	3263.18	4053.48	23530.59
2008/09	6	3263.18	4053.48	27584.08
2009/10	7	3263.18	4053.48	31637.56

Same Process has been applied to predict the values of other Variables.

2501.77

-7505.30

9463.30

4053.48

-12160.45

3263.18